

**Jack Holliday**

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## **Analytical Report Number : 21-18170**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 22/10/2021 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 25/10/2021 |
| <b>Your order number:</b>   | S-RE6089/00005     | <b>Analysis completed by:</b>                          | 29/10/2021 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 29/10/2021 |
| <b>Samples Analysed:</b>    | 4 water samples    |                                                        |            |

**Signed:**

Karolina Marek  
PL Head of Reporting Team  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting  
leachates - 2 weeks from reporting  
waters - 2 weeks from reporting  
asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.

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## **Analytical Report Number : 22-72674**

|                             |                 |                                                        |            |
|-----------------------------|-----------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> |                 | <b>Samples received on:</b>                            | 21/07/2022 |
| <b>Your job number:</b>     |                 | <b>Samples instructed on/<br/>Analysis started on:</b> | 21/07/2022 |
| <b>Your order number:</b>   | S-RE6069-00005  | <b>Analysis completed by:</b>                          | 28/07/2022 |
| <b>Report Issue Number:</b> | 1               | <b>Report issued on:</b>                               | 28/07/2022 |
| <b>Samples Analysed:</b>    | 3 water samples |                                                        |            |

**Signed:**

*Izabela Wójcik*

Izabela Wójcik  
Reporting Specialist  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting  
leachates - 2 weeks from reporting  
waters - 2 weeks from reporting  
asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-72674

Your Order No: S-RE6069-00005

|                                          |       |                    |                         |               |               |               |
|------------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|
| Lab Sample Number                        |       |                    |                         | 2358030       | 2358031       | 2358032       |
| Sample Reference                         |       |                    |                         | BH510         | BH513         | MBS3          |
| Sample Number                            |       |                    |                         | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                         | 20/07/2022    | 20/07/2022    | 20/07/2022    |
| Time Taken                               |       |                    |                         | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |

#### General Inorganics

|                                        |      |       |           |       |       |       |
|----------------------------------------|------|-------|-----------|-------|-------|-------|
| Total Cyanide (Low Level 1 µg/l)       | µg/l | 1     | ISO 17025 | 6.4   | < 1.0 | 2.8   |
| Free Cyanide (Low Level 1 µg/l)        | µg/l | 1     | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| Thiocyanate as SCN                     | µg/l | 200   | ISO 17025 | 480   | < 200 | < 200 |
| Sulphate as SO <sub>4</sub>            | mg/l | 0.045 | ISO 17025 | 4050  | 1350  | 108   |
| Sulphide                               | µg/l | 5     | NONE      | < 5.0 | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH <sub>3</sub> | µg/l | 15    | ISO 17025 | 420   | 110   | 14000 |
| Total Suspended Solids                 | mg/l | 2     | ISO 17025 | 130   | 14    | 13    |

#### Total Phenols

|                            |      |    |           |      |      |      |
|----------------------------|------|----|-----------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |
|-----------------------|------|---|-----------|-------|-------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | < 5.0 |

|                      |      |      |           |        |        |        |
|----------------------|------|------|-----------|--------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 0.68   | 0.27   | 2.44   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | 0.18   | 0.02   | < 0.02 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | 0.2    | < 0.2  | < 0.2  |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 6.6    | 6.1    | 5.3    |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | 0.5    | < 0.2  | 0.2    |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 6.6    | 3.5    | 3.4    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 3.1    | 1      | 0.6    |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 12     | 11     | 6.1    |



Analytical Report Number: 22-72674

Your Order No: S-RE6069-00005

|                                          |       |                    |                         |               |               |               |
|------------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|
| Lab Sample Number                        |       |                    |                         | 2358030       | 2358031       | 2358032       |
| Sample Reference                         |       |                    |                         | BH510         | BH513         | MBS3          |
| Sample Number                            |       |                    |                         | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                         | 20/07/2022    | 20/07/2022    | 20/07/2022    |
| Time Taken                               |       |                    |                         | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                     |      |    |           |       |       |       |
|-----------------------------------------------------|------|----|-----------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 HS_1D_AL               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 HS_1D_AL               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 HS_1D_AL              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) HS+EH_1D_AL_#1_#2_MS | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |

|                                                    |      |    |           |       |       |       |
|----------------------------------------------------|------|----|-----------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 HS_1D_AR               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 HS_1D_AR               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 HS_1D_AR              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) HS+EH_1D_AR_#1_#2_MS | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number : 22-72674**

**Project / Site name:**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                   | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)  | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water           | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazine followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Monohydric phenols in water            | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Speciated EPA-16 PAHs in water         | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Sulphide in water                      | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                   | Determination of thiocyanate in water by discrete analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                      | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| Suspended solids in water              | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                        | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | ISO 17025            |
| BTEX and MTBE in water (Monoaromatics) | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                      | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water       | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Free cyanide (low level) in water      | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW.                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |

**For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.**

**For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.**

**Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.**

**Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.**



Analytical Report Number : 22-72674

Project / Site name:

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name | Analytical Method Description | Analytical Method Reference | Method number | Wet / Dry Analysis | Accreditation Status |
|----------------------|-------------------------------|-----------------------------|---------------|--------------------|----------------------|
|----------------------|-------------------------------|-----------------------------|---------------|--------------------|----------------------|

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| _       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |



Analytical Report Number: 21-18170  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089/00005

|                                          |               |                    |                         |               |
|------------------------------------------|---------------|--------------------|-------------------------|---------------|
| Lab Sample Number                        | 2057464       | 2057465            | 2057466                 | 2057467       |
| Sample Reference                         | BH510         | BH514              | WS506                   | MB34          |
| Sample Number                            | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Date Sampled                             | 22/10/2021    | 22/10/2021         | 22/10/2021              | 22/10/2021    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |               |

#### General Inorganics

|                                        |          |       |           |       |        |       |       |
|----------------------------------------|----------|-------|-----------|-------|--------|-------|-------|
| pH                                     | pH Units | N/A   | ISO 17025 | -     | 8.3    | -     | -     |
| Temperature on Receipt                 | °C       | 0.1   | NONE      | -     | 6.10   | -     | -     |
| Electrical Conductivity at 20 °C       | µS/cm    | 10    | ISO 17025 | -     | 860    | -     | -     |
| Turbidity                              | NTU      | 1     | NONE      | -     | 140    | -     | -     |
| Total Cyanide (Low Level 1 µg/l)       | µg/l     | 1     | ISO 17025 | 110   | 13     | 79    | 93    |
| Free Cyanide (Low Level 1 µg/l)        | µg/l     | 1     | ISO 17025 | < 1.0 | < 1.0  | 1.1   | < 1.0 |
| Thiocyanate as SCN                     | µg/l     | 200   | ISO 17025 | 490   | 1400   | < 200 | 240   |
| Sulphate as SO <sub>4</sub>            | mg/l     | 0.045 | ISO 17025 | 2540  | 179    | 99.9  | 138   |
| Sulphide                               | µg/l     | 5     | NONE      | < 5.0 | < 5.0  | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH <sub>3</sub> | µg/l     | 15    | ISO 17025 | 260   | 1200   | 1900  | 3800  |
| Redox Potential                        | mV       | -800  | NONE      | -     | 195.40 | -     | -     |
| Dissolved Oxygen                       | mg/l     | 1     | NONE      | -     | 8.7    | -     | -     |

#### Total Phenols

|                            |      |    |           |      |      |      |      |
|----------------------------|------|----|-----------|------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|--------|



Analytical Report Number: 21-18170  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089/00005

|                                          |       |                    |                         |               |               |               |               |
|------------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|---------------|
| Lab Sample Number                        |       |                    |                         | 2057464       | 2057465       | 2057466       | 2057467       |
| Sample Reference                         |       |                    |                         | BH510         | BH514         | WS506         | MB34          |
| Sample Number                            |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                         | 22/10/2021    | 22/10/2021    | 22/10/2021    | 22/10/2021    |
| Time Taken                               |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |               |
|                                          |       |                    |                         |               |               |               |               |

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |     |       |
|-----------------------|------|---|-----------|-------|-------|-----|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | 17  | < 5.0 |
| Chromium (III)        | µg/l | 1 | NONE      | 6.9   | 3.3   | 2.5 | 2.8   |

|                      |      |      |           |        |        |        |        |
|----------------------|------|------|-----------|--------|--------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 3.51   | 2.53   | 12.6   | 3.04   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | 0.23   | < 0.02 | 0.02   | < 0.02 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | 6.9    | 3.3    | 20     | 2.8    |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 18     | 3.6    | 17     | 8.4    |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | 0.5    | 0.3    | 0.3    | 0.4    |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 15     | 1.1    | 11     | 3.8    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 3.1    | 0.8    | 21     | 2.0    |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 15     | 11     | 1.1    | 18     |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                |      |    |           |       |       |       |       |
|--------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6   | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8   | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10  | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |

|                               |      |    |           |       |       |       |       |
|-------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7   | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8   | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10  | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number : 21-18170**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | NONE                 |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |
| Free cyanide (low level) in water        | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW.                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |



**Analytical Report Number : 21-18170**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)**

| Analytical Test Name           | Analytical Method Description                                                                    | Analytical Method Reference                   | Method number | Wet / Dry Analysis | Accreditation Status |
|--------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------|---------------|--------------------|----------------------|
| Temperature on Receipt (water) | Temperature of water upon receipt.                                                               | In-house method                               | L019-UK       | W                  | NONE                 |
| Turbidity of in water          | Determination of sample turbidity by colorimeter and comparison with standard reference samples. | In-house method based on Standard Method 8237 | L083-PL       | W                  | NONE                 |

**For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.**

**For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.**

**Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.**

**Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.**

## Sample Deviation Report



Analytical Report Number : 21-18170  
Project / Site name: Clarendon Phase 3B

| Sample ID | Other ID      | Sample Type | Lab Sample Number | Sample Deviation | Test Name                 | Test Ref | Test Deviation |
|-----------|---------------|-------------|-------------------|------------------|---------------------------|----------|----------------|
| BH514     | None Supplied | W           | 2057465           | c                | Dissolved Oxygen in water | L086-PL  | c              |

**Jack Holliday**

Keltbray Remediation Ltd  
St Andrew's House  
Portsmouth Road  
Esher  
KT10 9TA

**t:** 02076431000

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**t:** 01923 225404

**f:** 01923 237404

**e:** reception@i2analytical.com

## **Analytical Report Number : 21-22219**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 11/11/2021 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 11/11/2021 |
| <b>Your order number:</b>   | S RE6089 00005     | <b>Analysis completed by:</b>                          | 18/11/2021 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 18/11/2021 |
| <b>Samples Analysed:</b>    | 5 water samples    |                                                        |            |

**Signed:**

Agnieszka Czerwińska  
Technical Reviewer (Reporting Team)  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting  
leachates - 2 weeks from reporting  
waters - 2 weeks from reporting  
asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 21-22219  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

| Lab Sample Number                        |       |                    |                         | 2079108       | 2079109       | 2079110       | 2079111       | 2079112       |
|------------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|---------------|---------------|
| Sample Reference                         |       |                    |                         | BH510         | BH514         | BH513         | WS506         | MB35          |
| Sample Number                            |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                         | 10/11/2021    | 10/11/2021    | 10/11/2021    | 10/11/2021    | 10/11/2021    |
| Time Taken                               |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |               |               |

#### General Inorganics

|                                        |          |       |           |       |        |       |       |       |
|----------------------------------------|----------|-------|-----------|-------|--------|-------|-------|-------|
| pH                                     | pH Units | N/A   | ISO 17025 | -     | 8.1    | -     | -     | -     |
| Temperature on Receipt                 | °C       | 0.1   | NONE      | -     | 6.40   | -     | -     | -     |
| Electrical Conductivity at 20 °C       | µS/cm    | 10    | ISO 17025 | -     | 1000   | -     | -     | -     |
| Turbidity                              | NTU      | 1     | NONE      | -     | 200    | -     | -     | -     |
| Total Cyanide (Low Level 1 µg/l)       | µg/l     | 1     | ISO 17025 | 5.8   | 230    | < 1.0 | 120   | 4.9   |
| Free Cyanide (Low Level 1 µg/l)        | µg/l     | 1     | ISO 17025 | < 1.0 | 11     | < 1.0 | < 1.0 | < 1.0 |
| Thiocyanate as SCN                     | µg/l     | 200   | ISO 17025 | 310   | 3300   | 290   | 360   | < 200 |
| Sulphate as SO <sub>4</sub>            | mg/l     | 0.045 | ISO 17025 | 1970  | 210    | 2080  | 101   | 99.9  |
| Sulphide                               | µg/l     | 5     | NONE      | < 5.0 | < 5.0  | < 5.0 | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH <sub>3</sub> | µg/l     | 15    | ISO 17025 | 700   | 4100   | 1000  | 2400  | 24000 |
|                                        |          |       |           |       |        |       |       |       |
| Redox Potential                        | mV       | -800  | NONE      | -     | -31.60 | -     | -     | -     |
| Dissolved Oxygen                       | mg/l     | 1     | NONE      | -     | 2.1    | -     | -     | -     |

#### Total Phenols

|                            |      |    |           |      |      |      |      |    |
|----------------------------|------|----|-----------|------|------|------|------|----|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 | < 10 | 39 |
|----------------------------|------|----|-----------|------|------|------|------|----|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|--------|--------|

#### Heavy Metals / Metalloids

|                       |      |      |           |        |        |        |      |        |
|-----------------------|------|------|-----------|--------|--------|--------|------|--------|
| Chromium (hexavalent) | µg/l | 5    | ISO 17025 | < 5.0  | < 5.0  | < 5.0  | U/S* | < 5.0  |
| Chromium (III)        | µg/l | 1    | NONE      | 4.0    | 2.4    | 4.4    | U/S* | 2.1    |
|                       |      |      |           |        |        |        |      |        |
| Arsenic (dissolved)   | µg/l | 0.15 | ISO 17025 | 2.94   | 2.88   | 2.17   | 7.65 | 1.70   |
| Cadmium (dissolved)   | µg/l | 0.02 | ISO 17025 | 0.16   | < 0.02 | 0.04   | 0.03 | < 0.02 |
| Chromium (dissolved)  | µg/l | 0.2  | ISO 17025 | 4.0    | 2.4    | 4.4    | 13   | 2.1    |
| Copper (dissolved)    | µg/l | 0.5  | ISO 17025 | 6.1    | 2.4    | 7.3    | 24   | 6.6    |
| Lead (dissolved)      | µg/l | 0.2  | ISO 17025 | < 0.2  | 0.2    | 0.4    | 0.4  | 0.9    |
| Mercury (dissolved)   | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | 0.08 | 0.06   |
| Nickel (dissolved)    | µg/l | 0.5  | ISO 17025 | 9.8    | 3.0    | 5.8    | 15   | 3.0    |
| Selenium (dissolved)  | µg/l | 0.6  | ISO 17025 | 2.3    | 1.4    | 1.7    | 21   | 0.9    |
| Zinc (dissolved)      | µg/l | 0.5  | ISO 17025 | 14     | 6.1    | 16     | 5.3  | 8.4    |



Analytical Report Number: 21-22219  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

|                                          |       |                    |                         |               |               |               |               |               |
|------------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|---------------|---------------|
| Lab Sample Number                        |       |                    |                         | 2079108       | 2079109       | 2079110       | 2079111       | 2079112       |
| Sample Reference                         |       |                    |                         | BH510         | BH514         | BH513         | WS506         | MB35          |
| Sample Number                            |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                         | 10/11/2021    | 10/11/2021    | 10/11/2021    | 10/11/2021    | 10/11/2021    |
| Time Taken                               |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |               |               |



Analytical Report Number: 21-22219  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

| Lab Sample Number                        |       |                    |                         | 2079108       | 2079109       | 2079110       | 2079111       | 2079112       |
|------------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|---------------|---------------|
| Sample Reference                         |       |                    |                         | BH510         | BH514         | BH513         | WS506         | MB35          |
| Sample Number                            |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                         | 10/11/2021    | 10/11/2021    | 10/11/2021    | 10/11/2021    | 10/11/2021    |
| Time Taken                               |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |               |               |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                |      |    |           |       |       |       |       |       |
|--------------------------------|------|----|-----------|-------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6   | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8   | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10  | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |

|                               |      |    |           |       |       |       |       |       |
|-------------------------------|------|----|-----------|-------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7   | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8   | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10  | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample

\*U/S due to high variances between chromium (hexavalent) and chromium (dissolved) caused by method differences.



**Analytical Report Number : 21-22219**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | NONE                 |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |
| Free cyanide (low level) in water        | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW.                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |



**Analytical Report Number : 21-22219**

**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)**

| Analytical Test Name           | Analytical Method Description                                                                    | Analytical Method Reference                   | Method number | Wet / Dry Analysis | Accreditation Status |
|--------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------|---------------|--------------------|----------------------|
| Temperature on Receipt (water) | Temperature of water upon receipt.                                                               | In-house method                               | L019-UK       | W                  | NONE                 |
| Turbidity of in water          | Determination of sample turbidity by colorimeter and comparison with standard reference samples. | In-house method based on Standard Method 8237 | L083-PL       | W                  | NONE                 |

**For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.**

**For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.**

**Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.**

**Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.**

**Jack Holliday**

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## **Analytical Report Number : 21-24316**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 22/11/2021 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 22/11/2021 |
| <b>Your order number:</b>   | S RE6089 00005     | <b>Analysis completed by:</b>                          | 29/11/2021 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 29/11/2021 |
| <b>Samples Analysed:</b>    | 2 water samples    |                                                        |            |

**Signed:**

*Izabela Wójcik*

Izabela Wójcik  
Technical Reviewer (Reporting Team)  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 21-24316  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

|                                          |  |  |  |               |                                               |
|------------------------------------------|--|--|--|---------------|-----------------------------------------------|
| Lab Sample Number                        |  |  |  | 2089958       | 2089959                                       |
| Sample Reference                         |  |  |  | BH510         | WS506                                         |
| Sample Number                            |  |  |  | None Supplied | None Supplied                                 |
| Depth (m)                                |  |  |  | None Supplied | None Supplied                                 |
| Date Sampled                             |  |  |  | 10/11/2021    | 10/11/2021                                    |
| Time Taken                               |  |  |  | None Supplied | None Supplied                                 |
| Analytical Parameter<br>(Water Analysis) |  |  |  | Units         | Limit of detection<br>Accreditation<br>Status |

#### General Inorganics

|                                        |      |       |           |       |       |
|----------------------------------------|------|-------|-----------|-------|-------|
| Total Cyanide (Low Level 1 µg/l)       | µg/l | 1     | ISO 17025 | 5.8   | 130   |
| Free Cyanide (Low Level 1 µg/l)        | µg/l | 1     | ISO 17025 | < 1.0 | < 1.0 |
| Thiocyanate as SCN                     | µg/l | 200   | ISO 17025 | 270   | 270   |
| Sulphate as SO <sub>4</sub>            | mg/l | 0.045 | ISO 17025 | 2670  | 132   |
| Sulphide                               | µg/l | 5     | NONE      | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH <sub>3</sub> | µg/l | 15    | ISO 17025 | 900   | 4700  |

#### Total Phenols

|                            |      |    |           |      |      |
|----------------------------|------|----|-----------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |
|------------------------|------|------|-----------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |
|-------------------|------|------|-----------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|

#### Heavy Metals / Metalloids

|                       |      |      |           |        |        |
|-----------------------|------|------|-----------|--------|--------|
| Chromium (hexavalent) | µg/l | 5    | ISO 17025 | < 5.0  | < 5.0  |
| Chromium (III)        | µg/l | 1    | NONE      | 5.1    | 11     |
|                       |      |      |           |        |        |
| Arsenic (dissolved)   | µg/l | 0.15 | ISO 17025 | 3.58   | 7.64   |
| Cadmium (dissolved)   | µg/l | 0.02 | ISO 17025 | 0.20   | 0.04   |
| Chromium (dissolved)  | µg/l | 0.2  | ISO 17025 | 5.1    | 11     |
| Copper (dissolved)    | µg/l | 0.5  | ISO 17025 | 8.9    | 35     |
| Lead (dissolved)      | µg/l | 0.2  | ISO 17025 | < 0.2  | 0.5    |
| Mercury (dissolved)   | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 |
| Nickel (dissolved)    | µg/l | 0.5  | ISO 17025 | 13     | 19     |
| Selenium (dissolved)  | µg/l | 0.6  | ISO 17025 | 2.9    | 23     |
| Zinc (dissolved)      | µg/l | 0.5  | ISO 17025 | 24     | 1.4    |



Analytical Report Number: 21-24316  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

|                                          |       |                    |                         |               |               |
|------------------------------------------|-------|--------------------|-------------------------|---------------|---------------|
| Lab Sample Number                        |       |                    |                         | 2089958       | 2089959       |
| Sample Reference                         |       |                    |                         | BH510         | WS506         |
| Sample Number                            |       |                    |                         | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                         | 10/11/2021    | 10/11/2021    |
| Time Taken                               |       |                    |                         | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |
|------------------------------------|------|---|-----------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                |      |    |           |       |       |
|--------------------------------|------|----|-----------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6   | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8   | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10  | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 | µg/l | 10 | NONE      | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 | µg/l | 10 | NONE      | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 | µg/l | 10 | NONE      | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 | µg/l | 10 | NONE      | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) | µg/l | 10 | NONE      | < 10  | < 10  |

|                               |      |    |           |       |       |
|-------------------------------|------|----|-----------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7   | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8   | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10  | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 | µg/l | 10 | NONE      | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 | µg/l | 10 | NONE      | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 | µg/l | 10 | NONE      | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 | µg/l | 10 | NONE      | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) | µg/l | 10 | NONE      | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number : 21-24316**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                   | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)  | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 *for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water           | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Monohydric phenols in water            | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Speciated EPA-16 PAHs in water         | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Sulphide in water                      | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                   | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                      | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                        | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | NONE                 |
| BTEX and MTBE in water (Monoaromatics) | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                      | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water       | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Free cyanide (low level) in water      | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW.                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |

**For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.**

**For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.**

**Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.**

**Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.**

# Sample Deviation Report



Analytical Report Number : 21-24316  
Project / Site name: Clarendon Phase 3B

| Sample ID | Other ID      | Sample Type | Lab Sample Number | Sample Deviation | Test Name                              | Test Ref | Test Deviation |
|-----------|---------------|-------------|-------------------|------------------|----------------------------------------|----------|----------------|
| BH510     | None Supplied | W           | 2089958           | c                | BTEX and MTBE in water (Monoaromatics) | L073B-PL | c              |
| BH510     | None Supplied | W           | 2089958           | c                | Hexavalent chromium in water           | L080-PL  | c              |
| BH510     | None Supplied | W           | 2089958           | c                | Ammonia as NH3 in water                | L082-PL  | c              |
| BH510     | None Supplied | W           | 2089958           | c                | Ammoniacal Nitrogen as N in water      | L082-PL  | c              |
| BH510     | None Supplied | W           | 2089958           | c                | Cr (III) in water                      | L080-PL  | c              |
| BH510     | None Supplied | W           | 2089958           | c                | Free cyanide (low level) in water      | L080-PL  | c              |
| BH510     | None Supplied | W           | 2089958           | c                | Low level total cyanide in water       | L080-PL  | c              |
| BH510     | None Supplied | W           | 2089958           | c                | Metals in water by ICP-MS (dissolved)  | L012-PL  | c              |
| BH510     | None Supplied | W           | 2089958           | c                | Sulphate in water                      | L039-PL  | c              |
| BH510     | None Supplied | W           | 2089958           | c                | Sulphide in water                      | L029-PL  | c              |
| WS506     | None Supplied | W           | 2089959           | c                | BTEX and MTBE in water (Monoaromatics) | L073B-PL | c              |
| WS506     | None Supplied | W           | 2089959           | c                | Hexavalent chromium in water           | L080-PL  | c              |
| WS506     | None Supplied | W           | 2089959           | c                | Ammonia as NH3 in water                | L082-PL  | c              |
| WS506     | None Supplied | W           | 2089959           | c                | Ammoniacal Nitrogen as N in water      | L082-PL  | c              |
| WS506     | None Supplied | W           | 2089959           | c                | Cr (III) in water                      | L080-PL  | c              |
| WS506     | None Supplied | W           | 2089959           | c                | Free cyanide (low level) in water      | L080-PL  | c              |
| WS506     | None Supplied | W           | 2089959           | c                | Low level total cyanide in water       | L080-PL  | c              |
| WS506     | None Supplied | W           | 2089959           | c                | Metals in water by ICP-MS (dissolved)  | L012-PL  | c              |
| WS506     | None Supplied | W           | 2089959           | c                | Sulphate in water                      | L039-PL  | c              |
| WS506     | None Supplied | W           | 2089959           | c                | Sulphide in water                      | L029-PL  | c              |

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## **Analytical Report Number : 21-25971**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 29/11/2021 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 30/11/2021 |
| <b>Your order number:</b>   | S RE6089 00005     | <b>Analysis completed by:</b>                          | 07/12/2021 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 07/12/2021 |
| <b>Samples Analysed:</b>    | 4 water samples    |                                                        |            |

**Signed:**

Joanna Wawrzeczek  
Technical Reviewer (Reporting Team)  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting  
leachates - 2 weeks from reporting  
waters - 2 weeks from reporting  
asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 21-25971  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

| Lab Sample Number                        |  |  |  | 2099466       | 2099467            | 2099468                 | 2099469       |
|------------------------------------------|--|--|--|---------------|--------------------|-------------------------|---------------|
| Sample Reference                         |  |  |  | BH510         | BH514              | BH513                   | MB35          |
| Sample Number                            |  |  |  | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Depth (m)                                |  |  |  | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Date Sampled                             |  |  |  | 26/11/2021    | 26/11/2021         | 26/11/2021              | 26/11/2021    |
| Time Taken                               |  |  |  | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Analytical Parameter<br>(Water Analysis) |  |  |  | Units         | Limit of detection | Accreditation<br>Status |               |

#### General Inorganics

|                                  |          |       |           |       |        |       |       |
|----------------------------------|----------|-------|-----------|-------|--------|-------|-------|
| pH                               | pH Units | N/A   | ISO 17025 | -     | 7.8    | -     | -     |
| Temperature on Receipt           | °C       | 0.1   | NONE      | -     | 6.40   | -     | -     |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | -     | 1800   | -     | -     |
| Turbidity                        | NTU      | 1     | NONE      | -     | 2700   | -     | -     |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 7.1   | 2800   | 7.5   | 11    |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | < 1.0 | 16     | 2.1   | < 1.0 |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | 400   | 100000 | 350   | 250   |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 2580  | 796    | 1610  | 135   |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0 | U/S*   | < 5.0 | U/S*  |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 650   | 34000  | 430   | 16000 |

|                  |      |      |      |   |       |   |   |
|------------------|------|------|------|---|-------|---|---|
| Redox Potential  | mV   | -800 | NONE | - | 26.20 | - | - |
| Dissolved Oxygen | mg/l | 1    | NONE | - | < 1.0 | - | - |

#### Total Phenols

|                            |      |    |           |      |    |      |      |
|----------------------------|------|----|-----------|------|----|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | 83 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|----|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|--------|

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |       |
|-----------------------|------|---|-----------|-------|-------|-------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 |

|                      |      |      |           |        |        |        |        |
|----------------------|------|------|-----------|--------|--------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 4.05   | 13.9   | 2.09   | 2.93   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | 0.09   | 0.03   | 0.03   | < 0.02 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | 3.8    | 1.5    | 4.2    | 2.9    |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 5.6    | 1.5    | 5.9    | 2.5    |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | < 0.2  | 0.9    |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 13     | 18     | 5.8    | 4.0    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 2.6    | 8.7    | 1.8    | 1.0    |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 8.0    | 2.3    | 16     | 9.1    |



Analytical Report Number: 21-25971  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

|                                          |       |                    |                         |               |               |               |               |
|------------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|---------------|
| Lab Sample Number                        |       |                    |                         | 2099466       | 2099467       | 2099468       | 2099469       |
| Sample Reference                         |       |                    |                         | BH510         | BH514         | BH513         | MB35          |
| Sample Number                            |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                         | 26/11/2021    | 26/11/2021    | 26/11/2021    | 26/11/2021    |
| Time Taken                               |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |               |
|                                          |       |                    |                         |               |               |               |               |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                     |      |    |           |       |       |       |       |
|-----------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 HS_1D_AL               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 HS_1D_AL               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 HS_1D_AL              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) HS+EH_1D_AL_#1_#2_MS | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |

|                                                    |      |    |           |       |       |       |       |
|----------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 HS_1D_AR               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 HS_1D_AR               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 HS_1D_AR              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | 48    | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | 65    | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | 38    | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) HS+EH_1D_AR_#1_#2_MS | µg/l | 10 | NONE      | < 10  | 150   | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample

\* Sample was oily.



**Analytical Report Number : 21-25971**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | NONE                 |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |
| Free cyanide (low level) in water        | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW.                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |



Analytical Report Number : 21-25971  
Project / Site name: Clarendon Phase 3B

**Water matrix abbreviations:**

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name           | Analytical Method Description                                                                    | Analytical Method Reference                   | Method number | Wet / Dry Analysis | Accreditation Status |
|--------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------|---------------|--------------------|----------------------|
| Temperature on Receipt (water) | Temperature of water upon receipt.                                                               | In-house method                               | L019-UK       | W                  | NONE                 |
| Turbidity of in water          | Determination of sample turbidity by colorimeter and comparison with standard reference samples. | In-house method based on Standard Method 8237 | L083-PL       | W                  | NONE                 |

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| -       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

## Sample Deviation Report



**Analytical Report Number : 21-25971**  
**Project / Site name: Clarendon Phase 3B**

| Sample ID | Other ID      | Sample Type | Lab Sample Number | Sample Deviation | Test Name                                | Test Ref      | Test Deviation |
|-----------|---------------|-------------|-------------------|------------------|------------------------------------------|---------------|----------------|
| BH510     | None Supplied | W           | 2099466           | c                | Ammonia as NH3 in water                  | L082-PL       | c              |
| BH510     | None Supplied | W           | 2099466           | c                | Ammoniacal Nitrogen as N in water        | L082-PL       | c              |
| BH513     | None Supplied | W           | 2099468           | c                | Ammonia as NH3 in water                  | L082-PL       | c              |
| BH513     | None Supplied | W           | 2099468           | c                | Ammoniacal Nitrogen as N in water        | L082-PL       | c              |
| BH514     | None Supplied | W           | 2099467           | c                | Ammonia as NH3 in water                  | L082-PL       | c              |
| BH514     | None Supplied | W           | 2099467           | c                | Ammoniacal Nitrogen as N in water        | L082-PL       | c              |
| BH514     | None Supplied | W           | 2099467           | c                | Dissolved Oxygen in water                | L086-PL       | c              |
| BH514     | None Supplied | W           | 2099467           | c                | Electrical conductivity at 20oC of water | L031-PL       | c              |
| BH514     | None Supplied | W           | 2099467           | c                | Redox Potential of waters                | L084-PL       | c              |
| BH514     | None Supplied | W           | 2099467           | c                | Turbidity of in water                    | L083-PL       | c              |
| BH514     | None Supplied | W           | 2099467           | c                | pH at 20oC in water (automated)          | L099-PL       | c              |
| Discharge | None Supplied | W           | 2099470           | c                | None Supplied                            | None Supplied | None Supplied  |
| MB35      | None Supplied | W           | 2099469           | c                | Ammonia as NH3 in water                  | L082-PL       | c              |
| MB35      | None Supplied | W           | 2099469           | c                | Ammoniacal Nitrogen as N in water        | L082-PL       | c              |

**Jack Holliday**

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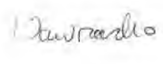
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## **Analytical Report Number : 21-25971**

Replaces Analytical Report Number: 21-25971, issue no. 1  
Client references/information amended.

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 29/11/2021 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 30/11/2021 |
| <b>Your order number:</b>   | S RE6089 00005     | <b>Analysis completed by:</b>                          | 14/12/2021 |
| <b>Report Issue Number:</b> | 2                  | <b>Report issued on:</b>                               | 14/12/2021 |
| <b>Samples Analysed:</b>    | 4 water samples    |                                                        |            |

  
**Signed:**

Joanna Wawrzeczko  
Technical Reviewer (Reporting Team)  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 21-25971  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

|                                          |               |                    |                         |               |
|------------------------------------------|---------------|--------------------|-------------------------|---------------|
| Lab Sample Number                        | 2099466       | 2099467            | 2099468                 | 2099469       |
| Sample Reference                         | BH510         | BH514              | BH513                   | MB36          |
| Sample Number                            | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Date Sampled                             | 26/11/2021    | 26/11/2021         | 26/11/2021              | 26/11/2021    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |               |

#### General Inorganics

|                                  |          |       |           |       |        |       |       |
|----------------------------------|----------|-------|-----------|-------|--------|-------|-------|
| pH                               | pH Units | N/A   | ISO 17025 | -     | 7.8    | -     | -     |
| Temperature on Receipt           | °C       | 0.1   | NONE      | -     | 6.40   | -     | -     |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | -     | 1800   | -     | -     |
| Turbidity                        | NTU      | 1     | NONE      | -     | 2700   | -     | -     |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 7.1   | 2800   | 7.5   | 11    |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | < 1.0 | 16     | 2.1   | < 1.0 |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | 400   | 100000 | 350   | 250   |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 2580  | 796    | 1610  | 135   |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0 | U/S*   | < 5.0 | U/S   |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 650   | 34000  | 430   | 16000 |

|                  |      |      |      |   |       |   |   |
|------------------|------|------|------|---|-------|---|---|
| Redox Potential  | mV   | -800 | NONE | - | 26.20 | - | - |
| Dissolved Oxygen | mg/l | 1    | NONE | - | < 1.0 | - | - |

#### Total Phenols

|                            |      |    |           |      |    |      |      |
|----------------------------|------|----|-----------|------|----|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | 83 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|----|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|--------|



Analytical Report Number: 21-25971  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

| Lab Sample Number                        |       |                    |                         | 2099466       | 2099467       | 2099468       | 2099469       |
|------------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|---------------|
| Sample Reference                         |       |                    |                         | BH510         | BH514         | BH513         | MB36          |
| Sample Number                            |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                         | 26/11/2021    | 26/11/2021    | 26/11/2021    | 26/11/2021    |
| Time Taken                               |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |               |

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |       |
|-----------------------|------|---|-----------|-------|-------|-------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 |

|                      |      |      |           |        |        |        |        |
|----------------------|------|------|-----------|--------|--------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 4.05   | 13.9   | 2.09   | 2.93   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | 0.09   | 0.03   | 0.03   | < 0.02 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | 3.8    | 1.5    | 4.2    | 2.9    |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 5.6    | 1.5    | 5.9    | 2.5    |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | < 0.2  | 0.9    |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 13     | 18     | 5.8    | 4.0    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 2.6    | 8.7    | 1.8    | 1.0    |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 8.0    | 2.3    | 16     | 9.1    |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                                |      |    |           |       |       |       |       |
|----------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 <sub>HS,1D,AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 <sub>HS,1D,AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 <sub>HS,1D,AL</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) <sub>HS+EH,1D,AL,#1,#2,MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |

|                                                               |      |    |           |       |       |       |       |
|---------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 <sub>HS,1D,AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 <sub>HS,1D,AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 <sub>HS,1D,AR</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | 48    | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | 65    | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | 38    | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) <sub>HS+EH,1D,AR,#1,#2,MS</sub> | µg/l | 10 | NONE      | < 10  | 150   | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample

\* Sample was oily.



**Analytical Report Number : 21-25971**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 *for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | NONE                 |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |
| Free cyanide (low level) in water        | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW.                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |



Analytical Report Number : 21-25971

Project / Site name: Clarendon Phase 3B

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name           | Analytical Method Description                                                                    | Analytical Method Reference                   | Method number | Wet / Dry Analysis | Accreditation Status |
|--------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------|---------------|--------------------|----------------------|
| Temperature on Receipt (water) | Temperature of water upon receipt.                                                               | In-house method                               | L019-UK       | W                  | NONE                 |
| Turbidity of in water          | Determination of sample turbidity by colorimeter and comparison with standard reference samples. | In-house method based on Standard Method 8237 | L083-PL       | W                  | NONE                 |

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| -       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

Analytical Report Number : 21-25971  
Project / Site name: Clarendon Phase 3B

| Sample ID | Other ID      | Sample Type | Lab Sample Number | Sample Deviation | Test Name                                | Test Ref      | Test Deviation |
|-----------|---------------|-------------|-------------------|------------------|------------------------------------------|---------------|----------------|
| BH510     | None Supplied | W           | 2099466           | c                | Ammonia as NH3 in water                  | L082-PL       | c              |
| BH510     | None Supplied | W           | 2099466           | c                | Ammoniacal Nitrogen as N in water        | L082-PL       | c              |
| BH513     | None Supplied | W           | 2099468           | c                | Ammonia as NH3 in water                  | L082-PL       | c              |
| BH513     | None Supplied | W           | 2099468           | c                | Ammoniacal Nitrogen as N in water        | L082-PL       | c              |
| BH514     | None Supplied | W           | 2099467           | c                | Ammonia as NH3 in water                  | L082-PL       | c              |
| BH514     | None Supplied | W           | 2099467           | c                | Ammoniacal Nitrogen as N in water        | L082-PL       | c              |
| BH514     | None Supplied | W           | 2099467           | c                | Dissolved Oxygen in water                | L086-PL       | c              |
| BH514     | None Supplied | W           | 2099467           | c                | Electrical conductivity at 20oC of water | L031-PL       | c              |
| BH514     | None Supplied | W           | 2099467           | c                | Redox Potential of waters                | L084-PL       | c              |
| BH514     | None Supplied | W           | 2099467           | c                | Turbidity of in water                    | L083-PL       | c              |
| BH514     | None Supplied | W           | 2099467           | c                | pH at 20oC in water (automated)          | L099-PL       | c              |
| Discharge | None Supplied | W           | 2099470           | c                | None Supplied                            | None Supplied | None Supplied  |
| MB36      | None Supplied | W           | 2099469           | c                | Ammonia as NH3 in water                  | L082-PL       | c              |
| MB36      | None Supplied | W           | 2099469           | c                | Ammoniacal Nitrogen as N in water        | L082-PL       | c              |

**Jack Holliday**

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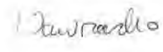
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## **Analytical Report Number : 21-28144**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 03/12/2021 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 10/12/2021 |
| <b>Your order number:</b>   | S-RE6089 00005     | <b>Analysis completed by:</b>                          | 16/12/2021 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 16/12/2021 |
| <b>Samples Analysed:</b>    | 4 water samples    |                                                        |            |

  
**Signed:**

Joanna Wawrzeczko  
Technical Reviewer (Reporting Team)  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 21-28144  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089 00005

|                                          |               |                    |                      |               |               |               |
|------------------------------------------|---------------|--------------------|----------------------|---------------|---------------|---------------|
| Lab Sample Number                        | 2111125       |                    |                      | 2111126       | 2111127       | 2111128       |
| Sample Reference                         | BH510         |                    |                      | BH514         | BH513         | WS506         |
| Sample Number                            | None Supplied |                    |                      | None Supplied | None Supplied | None Supplied |
| Depth (m)                                | None Supplied |                    |                      | None Supplied | None Supplied | None Supplied |
| Date Sampled                             | 02/12/2021    |                    |                      | 02/12/2021    | 02/12/2021    | 02/12/2021    |
| Time Taken                               | None Supplied |                    |                      | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation Status |               |               |               |

#### General Inorganics

|                                  |          |       |           |       |       |       |       |
|----------------------------------|----------|-------|-----------|-------|-------|-------|-------|
| pH                               | pH Units | N/A   | ISO 17025 | -     | 7.7   | -     | -     |
| Temperature on Receipt           | oC       | 0.1   | NONE      | -     | 6.20  | -     | -     |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | -     | 1100  | -     | -     |
| Turbidity                        | NTU      | 1     | NONE      | -     | 38000 | -     | -     |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | < 1.0 | 230   | < 1.0 | 91    |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | < 1.0 | 5.4   | < 1.0 | < 1.0 |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | 830   | 16000 | 220   | 300   |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 1960  | 282   | 2280  | 124   |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 850   | 9600  | 550   | 2000  |

|                  |      |      |      |   |        |   |   |
|------------------|------|------|------|---|--------|---|---|
| Redox Potential  | mV   | -800 | NONE | - | 144.90 | - | - |
| Dissolved Oxygen | mg/l | 1    | NONE | - | 6.3    | - | - |

#### Total Phenols

|                            |      |    |           |      |      |      |      |
|----------------------------|------|----|-----------|------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|--------|

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |      |
|-----------------------|------|---|-----------|-------|-------|-------|------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 | U/S* |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | < 5.0 | U/S* |

|                      |      |      |           |        |        |        |        |
|----------------------|------|------|-----------|--------|--------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 2.43   | 4.99   | 1.24   | 17.3   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | 0.03   | 0.04   | 0.03   | 0.02   |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | 4.2    | 3.3    | 4.3    | 25     |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 13     | 3.9    | 6.3    | 32     |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | 0.3    | < 0.2  | < 0.2  | 0.5    |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 7.6    | 6.3    | 4.6    | 12     |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 2.5    | 3.2    | 1.3    | 11     |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 9.3    | 2.7    | 11     | 3.4    |



Analytical Report Number: 21-28144  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089 00005

|                                          |               |                    |                         |               |
|------------------------------------------|---------------|--------------------|-------------------------|---------------|
| Lab Sample Number                        | 2111125       | 2111126            | 2111127                 | 2111128       |
| Sample Reference                         | BH510         | BH514              | BH513                   | WS506         |
| Sample Number                            | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Date Sampled                             | 02/12/2021    | 02/12/2021         | 02/12/2021              | 02/12/2021    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |               |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                                |      |    |           |       |       |       |       |
|----------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 <sub>HS 1D AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 <sub>HS 1D AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 <sub>HS 1D AL</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 <sub>EH 1D AL #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 <sub>EH 1D AL #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 <sub>EH 1D AL #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 <sub>EH 1D AL #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) <sub>HS+EH 1D AL #1 #2 MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |

|                                                               |      |    |           |       |       |       |       |
|---------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 <sub>HS 1D AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 <sub>HS 1D AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 <sub>HS 1D AR</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 <sub>EH 1D AR #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 <sub>EH 1D AR #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 <sub>EH 1D AR #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 <sub>EH 1D AR #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) <sub>HS+EH 1D AR #1 #2 MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample

\*U/S due to high variances between chromium (hexavalent) and chromium (dissolved)  
caused by method differences. Sample was yellow.



**Analytical Report Number : 21-28144**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 for the determination of trace elements in water by ICP-MS.  | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | NONE                 |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |
| Free cyanide (low level) in water        | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW.                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |



**Analytical Report Number : 21-28144**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name           | Analytical Method Description                                                                    | Analytical Method Reference                   | Method number | Wet / Dry Analysis | Accreditation Status |
|--------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------|---------------|--------------------|----------------------|
| Temperature on Receipt (water) | Temperature of water upon receipt.                                                               | In-house method                               | L019-UK       | W                  | NONE                 |
| Turbidity of in water          | Determination of sample turbidity by colorimeter and comparison with standard reference samples. | In-house method based on Standard Method 8237 | L083-PL       | W                  | NONE                 |

**For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.**

**For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.**

**Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.**

**Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.**

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| -       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

# Sample Deviation Report



Analytical Report Number : 21-28144  
Project / Site name: Clarendon Phase 3B

| Sample ID | Other ID      | Sample Type | Lab Sample Number | Sample Deviation | Test Name                                | Test Ref | Test Deviation |
|-----------|---------------|-------------|-------------------|------------------|------------------------------------------|----------|----------------|
| BH510     | None Supplied | W           | 2111125           | c                | BTEX and MTBE in water (Monoaromatics)   | L073B-PL | c              |
| BH510     | None Supplied | W           | 2111125           | c                | Hexavalent chromium in water             | L080-PL  | c              |
| BH510     | None Supplied | W           | 2111125           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH510     | None Supplied | W           | 2111125           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH510     | None Supplied | W           | 2111125           | c                | Cr (III) in water                        | L080-PL  | c              |
| BH510     | None Supplied | W           | 2111125           | c                | Free cyanide (low level) in water        | L080-PL  | c              |
| BH510     | None Supplied | W           | 2111125           | c                | Low level total cyanide in water         | L080-PL  | c              |
| BH510     | None Supplied | W           | 2111125           | c                | Metals in water by ICP-MS (dissolved)    | L012-PL  | c              |
| BH510     | None Supplied | W           | 2111125           | c                | Sulphate in water                        | L039-PL  | c              |
| BH510     | None Supplied | W           | 2111125           | c                | Sulphide in water                        | L029-PL  | c              |
| BH513     | None Supplied | W           | 2111127           | c                | BTEX and MTBE in water (Monoaromatics)   | L073B-PL | c              |
| BH513     | None Supplied | W           | 2111127           | c                | Hexavalent chromium in water             | L080-PL  | c              |
| BH513     | None Supplied | W           | 2111127           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH513     | None Supplied | W           | 2111127           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH513     | None Supplied | W           | 2111127           | c                | Cr (III) in water                        | L080-PL  | c              |
| BH513     | None Supplied | W           | 2111127           | c                | Free cyanide (low level) in water        | L080-PL  | c              |
| BH513     | None Supplied | W           | 2111127           | c                | Low level total cyanide in water         | L080-PL  | c              |
| BH513     | None Supplied | W           | 2111127           | c                | Metals in water by ICP-MS (dissolved)    | L012-PL  | c              |
| BH513     | None Supplied | W           | 2111127           | c                | Sulphate in water                        | L039-PL  | c              |
| BH513     | None Supplied | W           | 2111127           | c                | Sulphide in water                        | L029-PL  | c              |
| BH514     | None Supplied | W           | 2111126           | c                | BTEX and MTBE in water (Monoaromatics)   | L073B-PL | c              |
| BH514     | None Supplied | W           | 2111126           | c                | Hexavalent chromium in water             | L080-PL  | c              |
| BH514     | None Supplied | W           | 2111126           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH514     | None Supplied | W           | 2111126           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH514     | None Supplied | W           | 2111126           | c                | Cr (III) in water                        | L080-PL  | c              |
| BH514     | None Supplied | W           | 2111126           | c                | Dissolved Oxygen in water                | L086-PL  | c              |
| BH514     | None Supplied | W           | 2111126           | c                | Electrical conductivity at 20oC of water | L031-PL  | c              |
| BH514     | None Supplied | W           | 2111126           | c                | Free cyanide (low level) in water        | L080-PL  | c              |
| BH514     | None Supplied | W           | 2111126           | c                | Low level total cyanide in water         | L080-PL  | c              |
| BH514     | None Supplied | W           | 2111126           | c                | Metals in water by ICP-MS (dissolved)    | L012-PL  | c              |
| BH514     | None Supplied | W           | 2111126           | c                | Redox Potential of waters                | L084-PL  | c              |
| BH514     | None Supplied | W           | 2111126           | c                | Sulphate in water                        | L039-PL  | c              |
| BH514     | None Supplied | W           | 2111126           | c                | Sulphide in water                        | L029-PL  | c              |
| BH514     | None Supplied | W           | 2111126           | c                | Turbidity of in water                    | L083-PL  | c              |
| BH514     | None Supplied | W           | 2111126           | c                | pH at 20oC in water (automated)          | L099-PL  | c              |
| WS506     | None Supplied | W           | 2111128           | c                | BTEX and MTBE in water (Monoaromatics)   | L073B-PL | c              |
| WS506     | None Supplied | W           | 2111128           | c                | Hexavalent chromium in water             | L080-PL  | c              |
| WS506     | None Supplied | W           | 2111128           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| WS506     | None Supplied | W           | 2111128           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| WS506     | None Supplied | W           | 2111128           | c                | Cr (III) in water                        | L080-PL  | c              |
| WS506     | None Supplied | W           | 2111128           | c                | Free cyanide (low level) in water        | L080-PL  | c              |
| WS506     | None Supplied | W           | 2111128           | c                | Low level total cyanide in water         | L080-PL  | c              |
| WS506     | None Supplied | W           | 2111128           | c                | Metals in water by ICP-MS (dissolved)    | L012-PL  | c              |
| WS506     | None Supplied | W           | 2111128           | c                | Sulphate in water                        | L039-PL  | c              |
| WS506     | None Supplied | W           | 2111128           | c                | Sulphide in water                        | L029-PL  | c              |

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## **Analytical Report Number : 21-28597**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 13/12/2021 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 13/12/2021 |
| <b>Your order number:</b>   | S RE6089 00005     | <b>Analysis completed by:</b>                          | 21/12/2021 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 21/12/2021 |
| <b>Samples Analysed:</b>    | 5 water samples    |                                                        |            |

**Signed:** 

Karolina Marek  
PL Head of Reporting Team  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting  
leachates - 2 weeks from reporting  
waters - 2 weeks from reporting  
asbestos - 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 21-28597  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

| Lab Sample Number                        |       |                    |                         | 2113710       | 2113711       | 2113712       | 2113713       | 2113714       |
|------------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|---------------|---------------|
| Sample Reference                         |       |                    |                         | BH510         | BH514         | BH513         | WS506         | MB37          |
| Sample Number                            |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                         | 10/12/2021    | 10/12/2021    | 10/12/2021    | 10/12/2021    | 10/12/2021    |
| Time Taken                               |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |               |               |

#### General Inorganics

|                                  |          |       |           |        |       |       |       |       |
|----------------------------------|----------|-------|-----------|--------|-------|-------|-------|-------|
| pH                               | pH Units | N/A   | ISO 17025 | 7.6    | 8.3   | -     | -     | -     |
| Temperature on Receipt           | °C       | 0.1   | NONE      | 5.60   | 5.60  | -     | -     | -     |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | 2500   | 1200  | -     | -     | -     |
| Turbidity                        | NTU      | 1     | NONE      | 400    | 1000  | -     | -     | -     |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 61     | 2700  | < 1.0 | 87    | < 1.0 |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | < 1.0  | 13    | < 1.0 | < 1.0 | < 1.0 |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | 720    | 35000 | < 200 | < 200 | 240   |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 1240   | 371   | 1890  | 177   | 134   |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0  | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 900    | 15000 | 450   | 630   | 2700  |
| Redox Potential                  | mV       | -800  | NONE      | 225.30 | 96.40 | -     | -     | -     |
| Dissolved Oxygen                 | mg/l     | 1     | NONE      | 1.8    | 2.8   | -     | -     | -     |

#### Total Phenols

|                            |      |    |           |      |      |      |      |      |
|----------------------------|------|----|-----------|------|------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|--------|--------|

#### Heavy Metals / Metalloids

|                       |      |      |           |        |        |        |        |        |
|-----------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Chromium (hexavalent) | µg/l | 5    | ISO 17025 | < 5.0  | < 5.0  | < 5.0  | 29     | < 5.0  |
| Chromium (III)        | µg/l | 5    | NONE      | < 5.0  | < 5.0  | < 5.0  | < 5.0  | < 5.0  |
| Arsenic (dissolved)   | µg/l | 0.15 | ISO 17025 | 2.75   | 7.53   | 1.82   | 16.2   | 3.15   |
| Cadmium (dissolved)   | µg/l | 0.02 | ISO 17025 | < 0.02 | 0.03   | 0.03   | 0.03   | 0.02   |
| Chromium (dissolved)  | µg/l | 0.2  | ISO 17025 | 2.6    | 1.7    | 2.5    | 25     | 2.2    |
| Copper (dissolved)    | µg/l | 0.5  | ISO 17025 | 2.6    | 1.5    | 3.8    | 13     | 5.0    |
| Lead (dissolved)      | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | < 0.2  | 0.4    | 0.6    |
| Mercury (dissolved)   | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Nickel (dissolved)    | µg/l | 0.5  | ISO 17025 | 8.7    | 9.9    | 6.1    | 7.3    | 3.7    |
| Selenium (dissolved)  | µg/l | 0.6  | ISO 17025 | 1.8    | 4.4    | 1.9    | 15     | 1.7    |
| Zinc (dissolved)      | µg/l | 0.5  | ISO 17025 | 6.1    | 1.3    | 11     | 2.8    | 24     |



Analytical Report Number: 21-28597  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

|                                          |       |                    |                         |               |               |               |               |               |
|------------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|---------------|---------------|
| Lab Sample Number                        |       |                    |                         | 2113710       | 2113711       | 2113712       | 2113713       | 2113714       |
| Sample Reference                         |       |                    |                         | BH510         | BH514         | BH513         | WS506         | MB37          |
| Sample Number                            |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                         | 10/12/2021    | 10/12/2021    | 10/12/2021    | 10/12/2021    | 10/12/2021    |
| Time Taken                               |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |               |               |



Analytical Report Number: 21-28597  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

|                                          |               |                    |                         |               |               |
|------------------------------------------|---------------|--------------------|-------------------------|---------------|---------------|
| Lab Sample Number                        | 2113710       | 2113711            | 2113712                 | 2113713       | 2113714       |
| Sample Reference                         | BH510         | BH514              | BH513                   | WS506         | MB37          |
| Sample Number                            | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Date Sampled                             | 10/12/2021    | 10/12/2021         | 10/12/2021              | 10/12/2021    | 10/12/2021    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |               |               |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                     |      |    |           |       |       |       |       |       |
|-----------------------------------------------------|------|----|-----------|-------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 HS_1D_AL               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 HS_1D_AL               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 HS_1D_AL              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) HS+EH_1D_AL_#1_#2_MS | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |

|                                                    |      |    |           |       |       |       |       |       |
|----------------------------------------------------|------|----|-----------|-------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 HS_1D_AR               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 HS_1D_AR               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 HS_1D_AR              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) HS+EH_1D_AR_#1_#2_MS | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number : 21-28597**

**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | NONE                 |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |
| Free cyanide (low level) in water        | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW.                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |



Analytical Report Number : 21-28597

Project / Site name: Clarendon Phase 3B

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name           | Analytical Method Description                                                                    | Analytical Method Reference                   | Method number | Wet / Dry Analysis | Accreditation Status |
|--------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------|---------------|--------------------|----------------------|
| Temperature on Receipt (water) | Temperature of water upon receipt.                                                               | In-house method                               | L019-UK       | W                  | NONE                 |
| Turbidity of in water          | Determination of sample turbidity by colorimeter and comparison with standard reference samples. | In-house method based on Standard Method 8237 | L083-PL       | W                  | NONE                 |

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| -       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

## Sample Deviation Report



**Analytical Report Number : 21-28597**  
**Project / Site name: Clarendon Phase 3B**

| Sample ID | Other ID      | Sample Type | Lab Sample Number | Sample Deviation | Test Name                                | Test Ref | Test Deviation |
|-----------|---------------|-------------|-------------------|------------------|------------------------------------------|----------|----------------|
| BH510     | None Supplied | W           | 2113710           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH510     | None Supplied | W           | 2113710           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH510     | None Supplied | W           | 2113710           | c                | Dissolved Oxygen in water                | L086-PL  | c              |
| BH510     | None Supplied | W           | 2113710           | c                | Electrical conductivity at 20oC of water | L031-PL  | c              |
| BH510     | None Supplied | W           | 2113710           | c                | Redox Potential of waters                | L084-PL  | c              |
| BH510     | None Supplied | W           | 2113710           | c                | Turbidity of in water                    | L083-PL  | c              |
| BH510     | None Supplied | W           | 2113710           | c                | pH at 20oC in water (automated)          | L099-PL  | c              |
| BH513     | None Supplied | W           | 2113712           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH513     | None Supplied | W           | 2113712           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH514     | None Supplied | W           | 2113711           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH514     | None Supplied | W           | 2113711           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH514     | None Supplied | W           | 2113711           | c                | Dissolved Oxygen in water                | L086-PL  | c              |
| BH514     | None Supplied | W           | 2113711           | c                | Electrical conductivity at 20oC of water | L031-PL  | c              |
| BH514     | None Supplied | W           | 2113711           | c                | Redox Potential of waters                | L084-PL  | c              |
| BH514     | None Supplied | W           | 2113711           | c                | Turbidity of in water                    | L083-PL  | c              |
| BH514     | None Supplied | W           | 2113711           | c                | pH at 20oC in water (automated)          | L099-PL  | c              |
| MB37      | None Supplied | W           | 2113714           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| MB37      | None Supplied | W           | 2113714           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| WS506     | None Supplied | W           | 2113713           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| WS506     | None Supplied | W           | 2113713           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |

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## **Analytical Report Number : 21-29816**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 17/12/2021 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 17/12/2021 |
| <b>Your order number:</b>   |                    | <b>Analysis completed by:</b>                          | 24/12/2021 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 24/12/2021 |
| <b>Samples Analysed:</b>    | 4 water samples    |                                                        |            |

**Signed:**

Zina Abdul Razzak  
Senior Quality Specialist  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 21-29816  
Project / Site name: Clarendon Phase 3B

|                                          |       |                    |                      |               |               |               |               |
|------------------------------------------|-------|--------------------|----------------------|---------------|---------------|---------------|---------------|
| Lab Sample Number                        |       |                    |                      | 2120595       | 2120596       | 2120597       | 2120598       |
| Sample Reference                         |       |                    |                      | BH510         | BH514         | BH513         | WS506         |
| Sample Number                            |       |                    |                      | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                      | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                      | 16/12/2021    | 16/12/2021    | 16/12/2021    | 16/12/2021    |
| Time Taken                               |       |                    |                      | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) |       |                    |                      |               |               |               |               |
|                                          | Units | Limit of detection | Accreditation Status |               |               |               |               |

#### General Inorganics

|                                  |          |       |           |       |       |       |       |
|----------------------------------|----------|-------|-----------|-------|-------|-------|-------|
| pH                               | pH Units | N/A   | ISO 17025 | -     | 8.1   | -     | -     |
| Temperature on Receipt           | oC       | 0.1   | NONE      | -     | 6.10  | -     | -     |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | -     | 950   | -     | -     |
| Turbidity                        | NTU      | 1     | NONE      | -     | 300   | -     | -     |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 33    | 470   | < 1.0 | 80    |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | 340   | 5600  | < 200 | 250   |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 2180  | 202   | 1670  | 165   |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 400   | 5100  | 460   | 1300  |

|                  |      |      |      |   |        |   |   |
|------------------|------|------|------|---|--------|---|---|
| Redox Potential  | mV   | -800 | NONE | - | 127.30 | - | - |
| Dissolved Oxygen | mg/l | 1    | NONE | - | 8.1    | - | - |

#### Total Phenols

|                            |      |    |           |      |      |      |      |
|----------------------------|------|----|-----------|------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|--------|



Analytical Report Number: 21-29816  
Project / Site name: Clarendon Phase 3B

|                                          |       |                    |                         |               |               |               |               |
|------------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|---------------|
| Lab Sample Number                        |       |                    |                         | 2120595       | 2120596       | 2120597       | 2120598       |
| Sample Reference                         |       |                    |                         | BH510         | BH514         | BH513         | WS506         |
| Sample Number                            |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                         | 16/12/2021    | 16/12/2021    | 16/12/2021    | 16/12/2021    |
| Time Taken                               |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |               |

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |      |
|-----------------------|------|---|-----------|-------|-------|-------|------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 | U/S* |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | < 5.0 | U/S* |

|                      |      |      |           |        |        |        |        |
|----------------------|------|------|-----------|--------|--------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 2.64   | 5.66   | 1.28   | 14.0   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | 0.34   | < 0.02 | 0.04   | 0.03   |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | 2.0    | 1.0    | 1.8    | 31     |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 16     | 3.7    | 9.1    | 17     |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | < 0.2  | 1.4    |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 13     | 2.1    | 5.0    | 9.7    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 2.5    | 0.9    | 1.3    | 23     |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 17     | 5.2    | 15     | 1.0    |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                                |      |    |           |       |       |       |       |
|----------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 <sub>HS,1D,AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 <sub>HS,1D,AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 <sub>HS,1D,AL</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) <sub>HS+EH,1D,AL,#1,#2,MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |

|                                                               |      |    |           |       |       |       |       |
|---------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 <sub>HS,1D,AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 <sub>HS,1D,AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 <sub>HS,1D,AR</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) <sub>HS+EH,1D,AR,#1,#2,MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample

\*U/S due to high variances between chromium (hexavalent) and chromium (dissolved) caused by method differences



**Analytical Report Number : 21-29816**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 *for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | NONE                 |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |
| Free cyanide (low level) in water        | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW.                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |



Analytical Report Number : 21-29816

Project / Site name: Clarendon Phase 3B

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name           | Analytical Method Description                                                                    | Analytical Method Reference                   | Method number | Wet / Dry Analysis | Accreditation Status |
|--------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------|---------------|--------------------|----------------------|
| Temperature on Receipt (water) | Temperature of water upon receipt.                                                               | In-house method                               | L019-UK       | W                  | NONE                 |
| Turbidity of in water          | Determination of sample turbidity by colorimeter and comparison with standard reference samples. | In-house method based on Standard Method 8237 | L083-PL       | W                  | NONE                 |

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| -       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

Analytical Report Number : 21-29816  
Project / Site name: Clarendon Phase 3B

| Sample ID | Other ID      | Sample Type | Lab Sample Number | Sample Deviation | Test Name                                | Test Ref | Test Deviation |
|-----------|---------------|-------------|-------------------|------------------|------------------------------------------|----------|----------------|
| BH510     | None Supplied | W           | 2120595           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH510     | None Supplied | W           | 2120595           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH513     | None Supplied | W           | 2120597           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH513     | None Supplied | W           | 2120597           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH514     | None Supplied | W           | 2120596           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH514     | None Supplied | W           | 2120596           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH514     | None Supplied | W           | 2120596           | c                | Dissolved Oxygen in water                | L086-PL  | c              |
| BH514     | None Supplied | W           | 2120596           | c                | Electrical conductivity at 20oC of water | L031-PL  | c              |
| BH514     | None Supplied | W           | 2120596           | c                | Redox Potential of waters                | L084-PL  | c              |
| BH514     | None Supplied | W           | 2120596           | c                | Turbidity of in water                    | L083-PL  | c              |
| BH514     | None Supplied | W           | 2120596           | c                | pH at 20oC in water (automated)          | L099-PL  | c              |
| WS506     | None Supplied | W           | 2120598           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| WS506     | None Supplied | W           | 2120598           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |

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## **Analytical Report Number : 21-30648**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 22/12/2021 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 22/12/2021 |
| <b>Your order number:</b>   | S-RE6089 00005     | <b>Analysis completed by:</b>                          | 31/12/2021 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 31/12/2021 |
| <b>Samples Analysed:</b>    | 5 water samples    |                                                        |            |

**Signed:** 

Karolina Marek  
PL Head of Reporting Team  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 21-30648  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089 00005

|                                          |               |                    |                      |  |               |               |               |               |
|------------------------------------------|---------------|--------------------|----------------------|--|---------------|---------------|---------------|---------------|
| Lab Sample Number                        | 2125025       |                    |                      |  | 2125026       | 2125027       | 2125028       | 2125029       |
| Sample Reference                         | BH510         |                    |                      |  | BH514         | BH513         | WS506         | MB38          |
| Sample Number                            | None Supplied |                    |                      |  | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                                | None Supplied |                    |                      |  | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             | 21/12/2021    |                    |                      |  | 21/12/2021    | 21/12/2021    | 21/12/2021    | 21/12/2021    |
| Time Taken                               | None Supplied |                    |                      |  | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation Status |  |               |               |               |               |

#### General Inorganics

|                                  |          |       |           |       |       |       |       |       |
|----------------------------------|----------|-------|-----------|-------|-------|-------|-------|-------|
| pH                               | pH Units | N/A   | ISO 17025 | -     | 8.0   | -     | -     | -     |
| Temperature on Receipt           | °C       | 0.1   | NONE      | -     | 5.00  | -     | -     | -     |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | -     | 1000  | -     | -     | -     |
| Turbidity                        | NTU      | 1     | NONE      | -     | 430   | -     | -     | -     |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 6.1   | 480   | < 1.0 | 97    | < 1.0 |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | 300   | 8400  | 220   | 310   | < 200 |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 2660  | 253   | 1970  | 101   | 102   |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 410   | 5300  | 510   | 2400  | 8500  |

|                  |      |      |      |   |        |   |   |   |
|------------------|------|------|------|---|--------|---|---|---|
| Redox Potential  | mV   | -800 | NONE | - | 108.30 | - | - | - |
| Dissolved Oxygen | mg/l | 1    | NONE | - | 2.4    | - | - | - |

#### Total Phenols

|                            |      |    |           |      |      |      |      |      |
|----------------------------|------|----|-----------|------|------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|--------|--------|

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |     |       |
|-----------------------|------|---|-----------|-------|-------|-------|-----|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 | 11  | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | < 5.0 | 9.8 | < 5.0 |

|                      |      |      |           |        |        |        |      |        |
|----------------------|------|------|-----------|--------|--------|--------|------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 2.85   | 4.88   | 1.62   | 12.7 | 2.39   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | 0.39   | < 0.02 | 0.06   | 0.04 | < 0.02 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | 3.8    | 2.5    | 3.1    | 20   | 2.6    |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 8.4    | 4.6    | 9.7    | 26   | 6.9    |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  | 0.7    | < 0.2  | 0.2  | 0.4    |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | 0.06 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 12     | 3.3    | 6.1    | 13   | 3.6    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 2.6    | 1.2    | 1.7    | 18   | 1.0    |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 10     | 8.3    | 9.7    | 1.6  | 8.5    |



Analytical Report Number: 21-30648  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089 00005

|                                          |               |                    |                         |               |               |
|------------------------------------------|---------------|--------------------|-------------------------|---------------|---------------|
| Lab Sample Number                        | 2125025       | 2125026            | 2125027                 | 2125028       | 2125029       |
| Sample Reference                         | BH510         | BH514              | BH513                   | WS506         | MB38          |
| Sample Number                            | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Date Sampled                             | 21/12/2021    | 21/12/2021         | 21/12/2021              | 21/12/2021    | 21/12/2021    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |               |               |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                                |      |    |           |       |       |       |       |       |
|----------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 <sub>HS_1D_AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 <sub>HS_1D_AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 <sub>HS_1D_AL</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 <sub>EH_1D_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 <sub>EH_1D_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 <sub>EH_1D_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 <sub>EH_1D_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) <sub>HS+EH_1D_AL_#1_#2_MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |

|                                                               |      |    |           |       |       |       |       |       |
|---------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 <sub>HS_1D_AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 <sub>HS_1D_AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 <sub>HS_1D_AR</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 <sub>EH_1D_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 <sub>EH_1D_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 <sub>EH_1D_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 <sub>EH_1D_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) <sub>HS+EH_1D_AR_#1_#2_MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number : 21-30648**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 *for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | NONE                 |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |
| Free cyanide (low level) in water        | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW.                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |



Analytical Report Number : 21-30648

Project / Site name: Clarendon Phase 3B

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name           | Analytical Method Description                                                                    | Analytical Method Reference                   | Method number | Wet / Dry Analysis | Accreditation Status |
|--------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------|---------------|--------------------|----------------------|
| Temperature on Receipt (water) | Temperature of water upon receipt.                                                               | In-house method                               | L019-UK       | W                  | NONE                 |
| Turbidity of in water          | Determination of sample turbidity by colorimeter and comparison with standard reference samples. | In-house method based on Standard Method 8237 | L083-PL       | W                  | NONE                 |

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| -       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |



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## **Analytical Report Number : 22-31440**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 06/01/2022 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 06/01/2022 |
| <b>Your order number:</b>   | S RE6089 00005     | <b>Analysis completed by:</b>                          | 13/01/2022 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 13/01/2022 |
| <b>Samples Analysed:</b>    | 4 water samples    |                                                        |            |

**Signed:** 

Karolina Marek  
PL Head of Reporting Team  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-31440  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

|                                          |               |                    |                      |               |               |               |
|------------------------------------------|---------------|--------------------|----------------------|---------------|---------------|---------------|
| Lab Sample Number                        | 2129745       |                    |                      | 2129746       | 2129747       | 2129748       |
| Sample Reference                         | BH510         |                    |                      | BH514         | BH513         | WS506         |
| Sample Number                            | None Supplied |                    |                      | None Supplied | None Supplied | None Supplied |
| Depth (m)                                | None Supplied |                    |                      | None Supplied | None Supplied | None Supplied |
| Date Sampled                             | 05/01/2022    |                    |                      | 05/01/2022    | 05/01/2022    | 05/01/2022    |
| Time Taken                               | None Supplied |                    |                      | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation Status |               |               |               |

#### General Inorganics

|                                  |          |       |           |       |       |       |       |
|----------------------------------|----------|-------|-----------|-------|-------|-------|-------|
| pH                               | pH Units | N/A   | ISO 17025 | -     | 8.2   | -     | -     |
| Temperature on Receipt           | °C       | 0.1   | NONE      | -     | 6.40  | -     | -     |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | -     | 920   | -     | -     |
| Turbidity                        | NTU      | 1     | NONE      | -     | 980   | -     | -     |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 70    | 500   | < 1.0 | 59    |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | 740   | 1700  | 220   | 290   |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 3190  | 178   | 1830  | 84.8  |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 320   | 3300  | 630   | 1400  |

|                  |      |      |      |   |        |   |   |
|------------------|------|------|------|---|--------|---|---|
| Redox Potential  | mV   | -800 | NONE | - | 151.70 | - | - |
| Dissolved Oxygen | mg/l | 1    | NONE | - | 10     | - | - |

#### Total Phenols

|                            |      |    |           |      |      |      |      |
|----------------------------|------|----|-----------|------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|--------|

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |      |
|-----------------------|------|---|-----------|-------|-------|-------|------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 | U/S* |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | 6.1   | U/S* |

|                      |      |      |           |        |        |        |        |
|----------------------|------|------|-----------|--------|--------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 3.43   | 2.75   | 1.29   | 14.2   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | 0.24   | < 0.02 | 0.05   | 0.03   |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | 4.7    | 1.6    | 6.1    | 23     |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 17     | 2.8    | 5.0    | 19     |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  | 0.2    | < 0.2  | 0.3    |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 18     | 1.7    | 4.3    | 5.9    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 3.3    | 0.7    | 1.3    | 19     |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 28     | < 0.5  | 11     | 1.5    |



Analytical Report Number: 22-31440  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

|                                          |               |                    |                         |               |
|------------------------------------------|---------------|--------------------|-------------------------|---------------|
| Lab Sample Number                        | 2129745       | 2129746            | 2129747                 | 2129748       |
| Sample Reference                         | BH510         | BH514              | BH513                   | WS506         |
| Sample Number                            | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Date Sampled                             | 05/01/2022    | 05/01/2022         | 05/01/2022              | 05/01/2022    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |               |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                                |      |    |           |       |       |       |       |
|----------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 <sub>HS_1D_AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 <sub>HS_1D_AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 <sub>HS_1D_AL</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 <sub>EH_1D_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 <sub>EH_1D_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 <sub>EH_1D_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 <sub>EH_1D_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) <sub>HS+EH_1D_AL_#1_#2_MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |

|                                                               |      |    |           |       |       |       |       |
|---------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 <sub>HS_1D_AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 <sub>HS_1D_AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 <sub>HS_1D_AR</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 <sub>EH_1D_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 <sub>EH_1D_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 <sub>EH_1D_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 <sub>EH_1D_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) <sub>HS+EH_1D_AR_#1_#2_MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample

\*U/S due to high variances between chromium (hexavalent) and chromium (dissolved) caused by method differences.



**Analytical Report Number : 22-31440**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 *for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | NONE                 |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |
| Free cyanide (low level) in water        | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW.                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |



Analytical Report Number : 22-31440

Project / Site name: Clarendon Phase 3B

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name           | Analytical Method Description                                                                    | Analytical Method Reference                   | Method number | Wet / Dry Analysis | Accreditation Status |
|--------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------|---------------|--------------------|----------------------|
| Temperature on Receipt (water) | Temperature of water upon receipt.                                                               | In-house method                               | L019-UK       | W                  | NONE                 |
| Turbidity of in water          | Determination of sample turbidity by colorimeter and comparison with standard reference samples. | In-house method based on Standard Method 8237 | L083-PL       | W                  | NONE                 |

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| -       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

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## **Analytical Report Number : 22-32603**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 13/01/2022 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 13/01/2022 |
| <b>Your order number:</b>   | S RE6089 00005     | <b>Analysis completed by:</b>                          | 26/01/2022 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 26/01/2022 |
| <b>Samples Analysed:</b>    | 5 water samples    |                                                        |            |

**Signed:**

Karolina Marek  
PL Head of Reporting Team  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting  
leachates - 2 weeks from reporting  
waters - 2 weeks from reporting  
asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-32603  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

|                                          |               |                    |                         |               |               |
|------------------------------------------|---------------|--------------------|-------------------------|---------------|---------------|
| Lab Sample Number                        | 2134969       | 2134970            | 2134971                 | 2134972       | 2134973       |
| Sample Reference                         | BH510         | BH514              | BH513                   | MB39          | WS506         |
| Sample Number                            | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Date Sampled                             | 12/01/2022    | 12/01/2022         | 12/01/2022              | 12/01/2022    | 12/01/2022    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |               |               |

#### General Inorganics

|                                        |          |       |           |       |       |       |       |       |
|----------------------------------------|----------|-------|-----------|-------|-------|-------|-------|-------|
| pH                                     | pH Units | N/A   | ISO 17025 | -     | 8.2   | -     | -     | -     |
| Temperature on Receipt                 | oC       | 0.1   | NONE      | -     | 5.00  | -     | -     | -     |
| Electrical Conductivity at 20 °C       | µS/cm    | 10    | ISO 17025 | -     | 930   | -     | -     | -     |
| Turbidity                              | NTU      | 1     | NONE      | -     | 480   | -     | -     | -     |
| Total Cyanide (Low Level 1 µg/l)       | µg/l     | 1     | ISO 17025 | 30    | 310   | 1.0   | 2.9   | 44    |
| Free Cyanide (Low Level 1 µg/l)        | µg/l     | 1     | ISO 17025 | 2.8   | 14    | < 1.0 | < 1.0 | < 1.0 |
| Thiocyanate as SCN                     | µg/l     | 200   | ISO 17025 | 270   | 1400  | 240   | < 200 | < 200 |
| Sulphate as SO <sub>4</sub>            | mg/l     | 0.045 | ISO 17025 | 1870  | 179   | 1510  | 130   | 68.0  |
| Sulphide                               | µg/l     | 5     | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH <sub>3</sub> | µg/l     | 15    | ISO 17025 | 120   | 2500  | 210   | 7100  | 1000  |

|                  |      |      |      |   |        |   |   |   |
|------------------|------|------|------|---|--------|---|---|---|
| Redox Potential  | mV   | -800 | NONE | - | 140.20 | - | - | - |
| Dissolved Oxygen | mg/l | 1    | NONE | - | 2.1    | - | - | - |

#### Total Phenols

|                            |      |    |           |      |      |      |      |      |
|----------------------------|------|----|-----------|------|------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|--------|--------|



Analytical Report Number: 22-32603  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

| Lab Sample Number                        | 2134969       | 2134970            | 2134971                 | 2134972       | 2134973       |
|------------------------------------------|---------------|--------------------|-------------------------|---------------|---------------|
| Sample Reference                         | BH510         | BH514              | BH513                   | MB39          | WS506         |
| Sample Number                            | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Date Sampled                             | 12/01/2022    | 12/01/2022         | 12/01/2022              | 12/01/2022    | 12/01/2022    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |               |               |

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |       |       |
|-----------------------|------|---|-----------|-------|-------|-------|-------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | 27    |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |

|                      |      |      |           |        |        |        |        |        |
|----------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 2.71   | 3.31   | 1.44   | 2.23   | 6.56   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | 0.39   | < 0.02 | 0.03   | 0.02   | < 0.02 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | 4.1    | 1.6    | 2.6    | 2.2    | 21     |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 14     | 1.9    | 8.5    | 7.7    | 14     |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | < 0.2  | < 0.2  | < 0.2  |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 11     | 1.2    | 4.1    | 4.9    | 5.1    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 2.4    | 0.7    | 1.3    | 1.4    | 14     |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 12     | 3.6    | 10     | 16     | 1.1    |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                     |      |    |           |       |       |       |       |       |
|-----------------------------------------------------|------|----|-----------|-------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 HS_1D_AL               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 HS_1D_AL               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 HS_1D_AL              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) HS+EH_1D_AL_#1_#2_MS | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |

|                                                    |      |    |           |       |       |       |       |       |
|----------------------------------------------------|------|----|-----------|-------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 HS_1D_AR               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 HS_1D_AR               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 HS_1D_AR              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) HS+EH_1D_AR_#1_#2_MS | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number : 22-32603**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW, GW, Hg=SW, PW, Al=SW, PW.                               | In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | NONE                 |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |
| Free cyanide (low level) in water        | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW.                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |



Analytical Report Number : 22-32603

Project / Site name: Clarendon Phase 3B

**Water matrix abbreviations:**

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name           | Analytical Method Description                                                                    | Analytical Method Reference                   | Method number | Wet / Dry Analysis | Accreditation Status |
|--------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------|---------------|--------------------|----------------------|
| Temperature on Receipt (water) | Temperature of water upon receipt.                                                               | In-house method                               | L019-UK       | W                  | NONE                 |
| Turbidity of in water          | Determination of sample turbidity by colorimeter and comparison with standard reference samples. | In-house method based on Standard Method 8237 | L083-PL       | W                  | NONE                 |

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| -       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

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## **Analytical Report Number : 22-34214**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 20/01/2022 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 20/01/2022 |
| <b>Your order number:</b>   | S RE6089 00005     | <b>Analysis completed by:</b>                          | 27/01/2022 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 27/01/2022 |
| <b>Samples Analysed:</b>    | 4 water samples    |                                                        |            |

**Signed:** 

Karolina Marek  
PL Head of Reporting Team  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting  
leachates - 2 weeks from reporting  
waters - 2 weeks from reporting  
asbestos - 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-34214  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

|                                          |       |                    |                      |               |               |               |               |
|------------------------------------------|-------|--------------------|----------------------|---------------|---------------|---------------|---------------|
| Lab Sample Number                        |       |                    |                      | 2143021       | 2143022       | 2143023       | 2143024       |
| Sample Reference                         |       |                    |                      | BH510         | BH514         | BH513         | WS506         |
| Sample Number                            |       |                    |                      | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                      | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                      | 19/01/2022    | 19/01/2022    | 19/01/2022    | 19/01/2022    |
| Time Taken                               |       |                    |                      | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation Status |               |               |               |               |
|                                          |       |                    |                      |               |               |               |               |

#### General Inorganics

|                                        |          |       |           |       |        |       |       |
|----------------------------------------|----------|-------|-----------|-------|--------|-------|-------|
| pH                                     | pH Units | N/A   | ISO 17025 | -     | 8.1    | -     | -     |
| Temperature on Receipt                 | °C       | 0.1   | NONE      | -     | 4.80   | -     | -     |
| Electrical Conductivity at 20 °C       | µS/cm    | 10    | ISO 17025 | -     | 840    | -     | -     |
| Turbidity                              | NTU      | 1     | NONE      | -     | 220    | -     | -     |
| Total Cyanide (Low Level 1 µg/l)       | µg/l     | 1     | ISO 17025 | 12    | 210    | < 1.0 | 42    |
| Free Cyanide (Low Level 1 µg/l)        | µg/l     | 1     | ISO 17025 | < 1.0 | < 1.0  | < 1.0 | < 1.0 |
| Thiocyanate as SCN                     | µg/l     | 200   | ISO 17025 | 230   | 3000   | < 200 | 220   |
| Sulphate as SO <sub>4</sub>            | mg/l     | 0.045 | ISO 17025 | 3270  | 198    | 1770  | 62.9  |
| Sulphide                               | µg/l     | 5     | NONE      | < 5.0 | < 5.0  | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH <sub>3</sub> | µg/l     | 15    | ISO 17025 | 620   | 2500   | 280   | 1800  |
|                                        |          |       |           |       |        |       |       |
| Redox Potential                        | mV       | -800  | NONE      | -     | 102.00 | -     | -     |
| Dissolved Oxygen                       | mg/l     | 1     | NONE      | -     | 4.4    | -     | -     |

#### Total Phenols

|                            |      |    |           |      |      |      |      |
|----------------------------|------|----|-----------|------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|--------|



Analytical Report Number: 22-34214  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

|                                          |               |                    |                         |               |
|------------------------------------------|---------------|--------------------|-------------------------|---------------|
| Lab Sample Number                        | 2143021       | 2143022            | 2143023                 | 2143024       |
| Sample Reference                         | BH510         | BH514              | BH513                   | WS506         |
| Sample Number                            | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Date Sampled                             | 19/01/2022    | 19/01/2022         | 19/01/2022              | 19/01/2022    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |               |

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |       |
|-----------------------|------|---|-----------|-------|-------|-------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | 8.3   | < 5.0 | 5.2   | 17    |

|                      |      |      |           |        |        |        |        |
|----------------------|------|------|-----------|--------|--------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 4.61   | 3.19   | 2.27   | 5.68   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | 0.18   | < 0.02 | 0.07   | 0.03   |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | 8.3    | 2.5    | 5.2    | 17     |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 8.9    | 2.5    | 5.3    | 18     |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | 0.3    | < 0.2  |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 12     | 1.2    | 5.0    | 6.9    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 3.1    | < 0.6  | 1.5    | 13     |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 14     | 3.6    | 22     | 3.9    |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                     |      |    |           |       |       |       |       |
|-----------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 HS_1D_AL               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 HS_1D_AL               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 HS_1D_AL              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) HS+EH_1D_AL_#1_#2_MS | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |

|                                                    |      |    |           |       |       |       |       |
|----------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 HS_1D_AR               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 HS_1D_AR               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 HS_1D_AR              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) HS+EH_1D_AR_#1_#2_MS | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number : 22-34214**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | NONE                 |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |
| Free cyanide (low level) in water        | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW.                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |



**Analytical Report Number : 22-34214**

**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name           | Analytical Method Description                                                                    | Analytical Method Reference                   | Method number | Wet / Dry Analysis | Accreditation Status |
|--------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------|---------------|--------------------|----------------------|
| Temperature on Receipt (water) | Temperature of water upon receipt.                                                               | In-house method                               | L019-UK       | W                  | NONE                 |
| Turbidity of in water          | Determination of sample turbidity by colorimeter and comparison with standard reference samples. | In-house method based on Standard Method 8237 | L083-PL       | W                  | NONE                 |

**For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.**

**For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.**

**Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.**

**Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.**

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| -       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

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## **Analytical Report Number : 22-35849-2A**

Replaces Analytical Report Number: 22-35849, issue no. 1  
Report format change.

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 27/01/2022 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 27/01/2022 |
| <b>Your order number:</b>   | S-RE6089 00005     | <b>Analysis completed by:</b>                          | 03/02/2022 |
| <b>Report Issue Number:</b> | 2A                 | <b>Report issued on:</b>                               | 03/02/2022 |
| <b>Samples Analysed:</b>    | 4 water samples    |                                                        |            |

**Signed:**

Joanna Wawrzeczko  
Technical Reviewer (Reporting Team)  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting  
leachates - 2 weeks from reporting  
waters - 2 weeks from reporting  
asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-35849-2A  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089 00005

| Lab Sample Number                        |       |                    |                         | 2152126       | 2152127       | 2152128       | 2152129       |
|------------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|---------------|
| Sample Reference                         |       |                    |                         | BH510         | BH514         | BH513         | MB40          |
| Sample Number                            |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                         | 26/01/2022    | 26/01/2022    | 26/01/2022    | 26/01/2022    |
| Time Taken                               |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |               |

#### General Inorganics

|                                        |          |       |           |       |       |       |       |
|----------------------------------------|----------|-------|-----------|-------|-------|-------|-------|
| pH                                     | pH Units | N/A   | ISO 17025 | -     | 8.1   | -     | -     |
| Temperature on Receipt                 | °C       | 0.1   | NONE      | -     | 5.50  | -     | -     |
| Electrical Conductivity at 20 °C       | µS/cm    | 10    | ISO 17025 | -     | 860   | -     | -     |
| Turbidity                              | NTU      | 1     | NONE      | -     | 8.9   | -     | -     |
| Total Cyanide (Low Level 1 µg/l)       | µg/l     | 1     | ISO 17025 | 6.4   | 330   | < 1.0 | < 1.0 |
| Free Cyanide (Low Level 1 µg/l)        | µg/l     | 1     | ISO 17025 | < 1.0 | 1.1   | < 1.0 | < 1.0 |
| Thiocyanate as SCN                     | µg/l     | 200   | ISO 17025 | 390   | 2800  | 320   | < 200 |
| Sulphate as SO <sub>4</sub>            | mg/l     | 0.045 | ISO 17025 | 2630  | 203   | 1730  | 142   |
| Sulphide                               | µg/l     | 5     | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH <sub>3</sub> | µg/l     | 15    | ISO 17025 | 420   | 3700  | 390   | 12000 |
| Total Suspended Solids                 | mg/l     | 2     | ISO 17025 | 82    | 780   | 66    | 170   |

|                  |      |      |      |   |       |   |   |
|------------------|------|------|------|---|-------|---|---|
| Redox Potential  | mV   | -800 | NONE | - | 50.70 | - | - |
| Dissolved Oxygen | mg/l | 1    | NONE | - | 6.9   | - | - |

#### Total Phenols

|                            |      |    |           |      |      |      |      |
|----------------------------|------|----|-----------|------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|--------|

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |       |
|-----------------------|------|---|-----------|-------|-------|-------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 |

|                      |      |      |           |        |        |        |        |
|----------------------|------|------|-----------|--------|--------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 4.85   | 3.18   | 2.16   | 1.72   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | 0.27   | < 0.02 | 0.06   | 0.03   |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | 4.7    | 2.1    | 2.9    | 3.3    |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 9.9    | 2.5    | 7.2    | 6.1    |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | 2.0    | < 0.2  | < 0.2  | 0.7    |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 16     | 3.2    | 5.7    | 5.4    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 3.7    | 1.6    | 1.9    | 1.0    |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 19     | 2.2    | 14     | 5.8    |



Analytical Report Number: 22-35849-2A

Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089 00005

|                                          |       |                    |                         |               |               |               |               |
|------------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|---------------|
| Lab Sample Number                        |       |                    |                         | 2152126       | 2152127       | 2152128       | 2152129       |
| Sample Reference                         |       |                    |                         | BH510         | BH514         | BH513         | MB40          |
| Sample Number                            |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                         | 26/01/2022    | 26/01/2022    | 26/01/2022    | 26/01/2022    |
| Time Taken                               |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |               |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                     |      |    |           |       |       |       |       |
|-----------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 HS_1D_AL               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 HS_1D_AL               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 HS_1D_AL              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) HS+EH_1D_AL_#1_#2_MS | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |

|                                                    |      |    |           |       |       |       |       |
|----------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 HS_1D_AR               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 HS_1D_AR               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 HS_1D_AR              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) HS+EH_1D_AR_#1_#2_MS | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number : 22-35849-2A**

**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazine followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| Suspended solids in water                | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | NONE                 |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |



Analytical Report Number : 22-35849-2A

Project / Site name: Clarendon Phase 3B

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name              | Analytical Method Description                                                                          | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Free cyanide (low level) in water | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW. | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Temperature on Receipt (water)    | Temperature of water upon receipt.                                                                     | In-house method                                                                                                 | L019-UK       | W                  | NONE                 |
| Turbidity of in water             | Determination of sample turbidity by colorimeter and comparison with standard reference samples.       | In-house method based on Standard Method 8237                                                                   | L083-PL       | W                  | NONE                 |

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| _       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |



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## **Analytical Report Number : 22-37288**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 03/02/2022 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 03/02/2022 |
| <b>Your order number:</b>   | S-RE6089 00005     | <b>Analysis completed by:</b>                          | 10/02/2022 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 14/02/2022 |
| <b>Samples Analysed:</b>    | 3 water samples    |                                                        |            |

**Signed:** 

Karolina Marek  
PL Head of Reporting Team  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-37288  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089 00005

|                                          |  |  |  |               |                    |                      |
|------------------------------------------|--|--|--|---------------|--------------------|----------------------|
| Lab Sample Number                        |  |  |  | 2159796       | 2159797            | 2159798              |
| Sample Reference                         |  |  |  | BH510         | BH514              | BH513                |
| Sample Number                            |  |  |  | None Supplied | None Supplied      | None Supplied        |
| Depth (m)                                |  |  |  | None Supplied | None Supplied      | None Supplied        |
| Date Sampled                             |  |  |  | 02/02/2022    | 02/02/2022         | 02/02/2022           |
| Time Taken                               |  |  |  | None Supplied | None Supplied      | None Supplied        |
| Analytical Parameter<br>(Water Analysis) |  |  |  | Units         | Limit of detection | Accreditation Status |

#### General Inorganics

|                                  |          |       |           |       |       |       |
|----------------------------------|----------|-------|-----------|-------|-------|-------|
| pH                               | pH Units | N/A   | ISO 17025 | -     | 8.3   | -     |
| Temperature on Receipt           | oC       | 0.1   | NONE      | -     | 6.40  | -     |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | -     | 930   | -     |
| Turbidity                        | NTU      | 1     | NONE      | -     | 150   | -     |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 7.2   | 220   | < 1.0 |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | 380   | 980   | < 200 |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 2690  | 173   | 1700  |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0 | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 620   | 1900  | 470   |
| Total Suspended Solids           | mg/l     | 2     | ISO 17025 | 18    | 2800  | 31    |

|                  |      |      |      |   |        |   |
|------------------|------|------|------|---|--------|---|
| Redox Potential  | mV   | -800 | NONE | - | 144.10 | - |
| Dissolved Oxygen | mg/l | 1    | NONE | - | 6.1    | - |

#### Total Phenols

|                            |      |    |           |      |      |      |
|----------------------------|------|----|-----------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|



Analytical Report Number: 22-37288  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089 00005

|                                          |       |                    |                         |               |               |               |
|------------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|
| Lab Sample Number                        |       |                    |                         | 2159796       | 2159797       | 2159798       |
| Sample Reference                         |       |                    |                         | BH510         | BH514         | BH513         |
| Sample Number                            |       |                    |                         | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                         | 02/02/2022    | 02/02/2022    | 02/02/2022    |
| Time Taken                               |       |                    |                         | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |
|-----------------------|------|---|-----------|-------|-------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | 5.1   | < 5.0 | < 5.0 |

|                      |      |      |           |        |        |        |
|----------------------|------|------|-----------|--------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 4.52   | 1.70   | 1.85   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | 0.16   | < 0.02 | 0.05   |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | 5.1    | 2.6    | 4.2    |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 7.6    | 2.1    | 4.9    |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  | 0.2    | < 0.2  |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 13     | 1.0    | 4.8    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 3.0    | 0.7    | 1.6    |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 13     | 1.9    | 11     |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                                     |      |    |           |       |       |       |
|---------------------------------------------------------------------|------|----|-----------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 <sub>HS, 1D, AL</sub>                  | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 <sub>HS, 1D, AL</sub>                  | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 <sub>HS, 1D, AL</sub>                 | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 <sub>EH, 1D, AL, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 <sub>EH, 1D, AL, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 <sub>EH, 1D, AL, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 <sub>EH, 1D, AL, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) <sub>HS+EH, 1D, AL, #1, #2, MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |

|                                                                    |      |    |           |       |       |       |
|--------------------------------------------------------------------|------|----|-----------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 <sub>HS, 1D, AR</sub>                  | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 <sub>HS, 1D, AR</sub>                  | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 <sub>HS, 1D, AR</sub>                 | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 <sub>EH, 1D, AR, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 <sub>EH, 1D, AR, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 <sub>EH, 1D, AR, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 <sub>EH, 1D, AR, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) <sub>HS+EH, 1D, AR, #1, #2, MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number : 22-37288**

**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 *for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| Suspended solids in water                | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | NONE                 |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |



Analytical Report Number : 22-37288

Project / Site name: Clarendon Phase 3B

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name              | Analytical Method Description                                                                          | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Free cyanide (low level) in water | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW. | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Temperature on Receipt (water)    | Temperature of water upon receipt.                                                                     | In-house method                                                                                                 | L019-UK       | W                  | NONE                 |
| Turbidity of in water             | Determination of sample turbidity by colorimeter and comparison with standard reference samples.       | In-house method based on Standard Method 8237                                                                   | L083-PL       | W                  | NONE                 |

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| _       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

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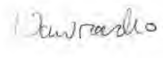
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## **Analytical Report Number : 22-39008**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 10/02/2022 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 10/02/2022 |
| <b>Your order number:</b>   | S-RE6089-00005     | <b>Analysis completed by:</b>                          | 18/02/2022 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 18/02/2022 |
| <b>Samples Analysed:</b>    | 5 water samples    |                                                        |            |

  
**Signed:**

Joanna Wawrzeczko  
Technical Reviewer (Reporting Team)  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-39008  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089-00005

|                                          |  |  |  |               |                    |                      |               |               |
|------------------------------------------|--|--|--|---------------|--------------------|----------------------|---------------|---------------|
| Lab Sample Number                        |  |  |  | 2169025       | 2169026            | 2169027              | 2169028       | 2169029       |
| Sample Reference                         |  |  |  | BH514         | BH513              | BH510                | WS506         | MB41          |
| Sample Number                            |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied | None Supplied |
| Depth (m)                                |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied | None Supplied |
| Date Sampled                             |  |  |  | 09/02/2022    | 09/02/2022         | 09/02/2022           | 09/02/2022    | 09/02/2022    |
| Time Taken                               |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) |  |  |  | Units         | Limit of detection | Accreditation Status |               |               |

#### General Inorganics

|                                  |          |       |           |        |       |       |       |       |
|----------------------------------|----------|-------|-----------|--------|-------|-------|-------|-------|
| pH                               | pH Units | N/A   | ISO 17025 | 8.3    | -     | -     | -     | -     |
| Temperature on Receipt           | oC       | 0.1   | NONE      | 6.70   | -     | -     | -     | -     |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | 2500   | -     | -     | -     | -     |
| Turbidity                        | NTU      | 1     | NONE      | 45     | -     | -     | -     | -     |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 19000  | 11    | 14    | 77    | 1.6   |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | 69     | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | 190000 | < 200 | < 200 | 230   | 520   |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 1500   | 1700  | 2250  | 157   | 127   |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0  | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 91000  | 82    | 650   | 530   | 17000 |
| Total Suspended Solids           | mg/l     | 2     | ISO 17025 | 300    | 55    | 38    | 70    | 83    |

|                  |      |      |      |       |   |   |   |   |
|------------------|------|------|------|-------|---|---|---|---|
| Redox Potential  | mV   | -800 | NONE | 58.40 | - | - | - | - |
| Dissolved Oxygen | mg/l | 1    | NONE | 4.8   | - | - | - | - |

#### Total Phenols

|                            |      |    |           |     |      |      |      |      |
|----------------------------|------|----|-----------|-----|------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | 430 | < 10 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|-----|------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | 0.94   | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | 1.40   | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | 0.78   | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |      |        |        |        |        |
|-------------------|------|------|-----------|------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | 3.12 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|------|--------|--------|--------|--------|



Analytical Report Number: 22-39008  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089-00005

| Lab Sample Number                        |       |                    |                         | 2169025       | 2169026       | 2169027       | 2169028       | 2169029       |
|------------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|---------------|---------------|
| Sample Reference                         |       |                    |                         | BH514         | BH513         | BH510         | WS506         | MB41          |
| Sample Number                            |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                         | 09/02/2022    | 09/02/2022    | 09/02/2022    | 09/02/2022    | 09/02/2022    |
| Time Taken                               |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |               |               |

#### Heavy Metals / Metalloids

|                       |      |   |           |      |       |       |       |       |
|-----------------------|------|---|-----------|------|-------|-------|-------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | U/S* | < 5.0 | < 5.0 | 30    | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | U/S* | < 5.0 | < 5.0 | < 5.0 | < 5.0 |

|                      |      |      |           |       |        |        |        |        |
|----------------------|------|------|-----------|-------|--------|--------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 19.5  | 2.25   | 4.88   | 16.8   | 3.25   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | 0.18  | 0.05   | 0.18   | 0.03   | < 0.02 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | 2.9   | 3.6    | 3.8    | 28     | 2.4    |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 22    | 8.9    | 13     | 25     | 6.0    |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2 | < 0.2  | < 0.2  | 0.4    | 0.4    |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | 0.05  | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 58    | 6.1    | 14     | 10     | 3.7    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 23    | 2.3    | 3.6    | 14     | 1.4    |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 4.1   | 15     | 14     | 8.8    | 15     |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                                |      |    |           |       |       |       |       |       |
|----------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 <sub>HS,1D,AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 <sub>HS,1D,AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 <sub>HS,1D,AL</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) <sub>HS+EH,1D,AL,#1,#2,MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |

|                                                               |      |    |           |       |       |       |       |       |
|---------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 <sub>HS,1D,AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 <sub>HS,1D,AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 <sub>HS,1D,AR</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) <sub>HS+EH,1D,AR,#1,#2,MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample

\*U/S due to high variances between chromium (hexavalent) and chromium (dissolved) caused by method differences. Sample was yellow.



**Analytical Report Number : 22-39008**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 *for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| Suspended solids in water                | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | NONE                 |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |



Analytical Report Number : 22-39008

Project / Site name: Clarendon Phase 3B

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name              | Analytical Method Description                                                                          | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Free cyanide (low level) in water | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW. | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Temperature on Receipt (water)    | Temperature of water upon receipt.                                                                     | In-house method                                                                                                 | L019-UK       | W                  | NONE                 |
| Turbidity of in water             | Determination of sample turbidity by colorimeter and comparison with standard reference samples.       | In-house method based on Standard Method 8237                                                                   | L083-PL       | W                  | NONE                 |

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| _       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

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## **Analytical Report Number : 22-40456**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 17/02/2022 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 17/02/2022 |
| <b>Your order number:</b>   | S-RE6089-00005     | <b>Analysis completed by:</b>                          | 25/02/2022 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 25/02/2022 |
| <b>Samples Analysed:</b>    | 4 water samples    |                                                        |            |

**Signed:** 

Karolina Marek  
PL Head of Reporting Team  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-40456  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089-00005

| Lab Sample Number                        |       |                    |                         | 2176916       | 2176917       | 2176918       | 2176919       |
|------------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|---------------|
| Sample Reference                         |       |                    |                         | BH514         | BH513         | BH510         | W506          |
| Sample Number                            |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                         | 16/02/2022    | 16/02/2022    | 16/02/2022    | 16/02/2022    |
| Time Taken                               |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |               |

#### General Inorganics

|                                  |          |       |           |       |       |       |       |
|----------------------------------|----------|-------|-----------|-------|-------|-------|-------|
| pH                               | pH Units | N/A   | ISO 17025 | 8.3   | -     | -     | -     |
| Temperature on Receipt           | °C       | 0.1   | NONE      | 5.30  | -     | -     | -     |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | 980   | -     | -     | -     |
| Turbidity                        | NTU      | 1     | NONE      | 13    | -     | -     | -     |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 120   | < 1.0 | 170   | 66    |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | 5.0   | < 1.0 | < 1.0 | < 1.0 |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | 12000 | < 200 | 220   | < 200 |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 249   | 1480  | 1560  | 182   |
| Sulphide                         | µg/l     | 5     | NONE      | 250   | < 5.0 | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 17000 | 160   | 180   | 440   |
| Total Suspended Solids           | mg/l     | 2     | ISO 17025 | 21000 | 44    | 67    | 20    |

|                  |      |      |      |         |   |   |   |
|------------------|------|------|------|---------|---|---|---|
| Redox Potential  | mV   | -800 | NONE | -149.00 | - | - | - |
| Dissolved Oxygen | mg/l | 1    | NONE | 2.8     | - | - | - |

#### Total Phenols

|                            |      |    |           |    |      |      |      |
|----------------------------|------|----|-----------|----|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | 24 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|----|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|--------|



Analytical Report Number: 22-40456  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089-00005

|                                          |               |                    |                         |               |
|------------------------------------------|---------------|--------------------|-------------------------|---------------|
| Lab Sample Number                        | 2176916       | 2176917            | 2176918                 | 2176919       |
| Sample Reference                         | BH514         | BH513              | BH510                   | W506          |
| Sample Number                            | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Date Sampled                             | 16/02/2022    | 16/02/2022         | 16/02/2022              | 16/02/2022    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |               |

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |       |
|-----------------------|------|---|-----------|-------|-------|-------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 | 49    |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 |

|                      |      |      |           |        |        |        |        |
|----------------------|------|------|-----------|--------|--------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 4.80   | 2.27   | 3.30   | 22.5   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | 0.03   | 0.03   | 0.17   | 0.03   |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | 2.2    | 2.9    | 3.2    | 40     |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 3.1    | 4.2    | 24     | 24     |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  | 0.2    | < 0.2  | 0.6    |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 2.8    | 5.2    | 14     | 9.2    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 1.5    | 1.6    | 2.2    | 23     |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 33     | 12     | 13     | 4.9    |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                                |      |    |           |       |       |       |       |
|----------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 <sub>HS,1D,AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 <sub>HS,1D,AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 <sub>HS,1D,AL</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) <sub>HS+EH,1D,AL,#1,#2,MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |

|                                                               |      |    |           |       |       |       |       |
|---------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 <sub>HS,1D,AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 <sub>HS,1D,AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 <sub>HS,1D,AR</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) <sub>HS+EH,1D,AR,#1,#2,MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number : 22-40456

Project / Site name: Clarendon Phase 3B

**Water matrix abbreviations:**

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 *for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| Suspended solids in water                | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | NONE                 |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |



Analytical Report Number : 22-40456

Project / Site name: Clarendon Phase 3B

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name              | Analytical Method Description                                                                          | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Free cyanide (low level) in water | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW. | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Temperature on Receipt (water)    | Temperature of water upon receipt.                                                                     | In-house method                                                                                                 | L019-UK       | W                  | NONE                 |
| Turbidity of in water             | Determination of sample turbidity by colorimeter and comparison with standard reference samples.       | In-house method based on Standard Method 8237                                                                   | L083-PL       | W                  | NONE                 |

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| _       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |



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## **Analytical Report Number : 22-42060**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 25/02/2022 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 25/02/2022 |
| <b>Your order number:</b>   | S RE6089 00005     | <b>Analysis completed by:</b>                          | 04/03/2022 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 04/03/2022 |
| <b>Samples Analysed:</b>    | 3 water samples    |                                                        |            |

**Signed:** 

Karolina Marek  
PL Head of Reporting Team  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-42060  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

|                                          |       |                    |                         |               |               |               |
|------------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|
| Lab Sample Number                        |       |                    |                         | 2186244       | 2186245       | 2186246       |
| Sample Reference                         |       |                    |                         | BH513         | BH510         | MB42          |
| Sample Number                            |       |                    |                         | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                         | 23/02/2022    | 23/02/2022    | 23/02/2022    |
| Time Taken                               |       |                    |                         | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |

#### General Inorganics

|                                        |      |       |           |       |       |       |
|----------------------------------------|------|-------|-----------|-------|-------|-------|
| Total Cyanide (Low Level 1 µg/l)       | µg/l | 1     | ISO 17025 | < 1.0 | 29    | 10    |
| Free Cyanide (Low Level 1 µg/l)        | µg/l | 1     | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| Thiocyanate as SCN                     | µg/l | 200   | ISO 17025 | < 200 | 340   | < 200 |
| Sulphate as SO <sub>4</sub>            | mg/l | 0.045 | ISO 17025 | 1650  | 2450  | 262   |
| Sulphide                               | µg/l | 5     | NONE      | < 5.0 | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH <sub>3</sub> | µg/l | 15    | ISO 17025 | < 15  | 130   | 2100  |
| Total Suspended Solids                 | mg/l | 2     | ISO 17025 | 9.0   | 42    | 110   |

#### Total Phenols

|                            |      |    |           |      |      |      |
|----------------------------|------|----|-----------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |
|-----------------------|------|---|-----------|-------|-------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | < 5.0 |

|                      |      |      |           |        |        |        |
|----------------------|------|------|-----------|--------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 2.83   | 5.95   | 1.55   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | 0.05   | 0.19   | < 0.02 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | 4.3    | 4.7    | 2.5    |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 6.0    | 16     | 5.9    |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | 0.4    |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 4.9    | 14     | 4.7    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 2.1    | 3.8    | 1.5    |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 11     | 12     | 16     |



Analytical Report Number: 22-42060  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

|                                          |       |                    |                         |               |               |               |
|------------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|
| Lab Sample Number                        |       |                    |                         | 2186244       | 2186245       | 2186246       |
| Sample Reference                         |       |                    |                         | BH513         | BH510         | MB42          |
| Sample Number                            |       |                    |                         | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                         | 23/02/2022    | 23/02/2022    | 23/02/2022    |
| Time Taken                               |       |                    |                         | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |
|                                          |       |                    |                         |               |               |               |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                                     |      |    |           |       |       |       |
|---------------------------------------------------------------------|------|----|-----------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 <sub>HS, 1D, AL</sub>                  | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 <sub>HS, 1D, AL</sub>                  | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 <sub>HS, 1D, AL</sub>                 | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 <sub>EH, 1D, AL, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 <sub>EH, 1D, AL, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 <sub>EH, 1D, AL, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 <sub>EH, 1D, AL, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) <sub>HS+EH, 1D, AL, #1, #2, MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |

|                                                                    |      |    |           |       |       |       |
|--------------------------------------------------------------------|------|----|-----------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 <sub>HS, 1D, AR</sub>                  | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 <sub>HS, 1D, AR</sub>                  | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 <sub>HS, 1D, AR</sub>                 | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 <sub>EH, 1D, AR, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 <sub>EH, 1D, AR, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 <sub>EH, 1D, AR, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 <sub>EH, 1D, AR, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) <sub>HS+EH, 1D, AR, #1, #2, MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number : 22-42060**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                   | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)  | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 for the determination of trace elements in water by ICP-MS.  | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water           | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Monohydric phenols in water            | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Speciated EPA-16 PAHs in water         | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Sulphide in water                      | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                   | Determination of thiocyanate in water by discrete analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                      | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| Suspended solids in water              | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                        | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | NONE                 |
| BTEX and MTBE in water (Monoaromatics) | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                      | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water       | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Free cyanide (low level) in water      | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW.                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |

**For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.**

**For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.**

**Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.**

**Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.**



**Analytical Report Number : 22-42060**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name | Analytical Method Description | Analytical Method Reference | Method number | Wet / Dry Analysis | Accreditation Status |
|----------------------|-------------------------------|-----------------------------|---------------|--------------------|----------------------|
|----------------------|-------------------------------|-----------------------------|---------------|--------------------|----------------------|

#### Information in Support of Analytical Results

##### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| _       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

## Sample Deviation Report



**Analytical Report Number : 22-42060**  
**Project / Site name: Clarendon Phase 3B**

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

| Sample ID | Other ID      | Sample Type | Lab Sample Number | Sample Deviation | Test Name                         | Test Ref | Test Deviation |
|-----------|---------------|-------------|-------------------|------------------|-----------------------------------|----------|----------------|
| BH510     | None Supplied | W           | 2186245           | c                | Ammonia as NH3 in water           | L082-PL  | c              |
| BH510     | None Supplied | W           | 2186245           | c                | Ammoniacal Nitrogen as N in water | L082-PL  | c              |
| BH513     | None Supplied | W           | 2186244           | c                | Ammonia as NH3 in water           | L082-PL  | c              |
| BH513     | None Supplied | W           | 2186244           | c                | Ammoniacal Nitrogen as N in water | L082-PL  | c              |
| MB42      | None Supplied | W           | 2186246           | c                | Ammonia as NH3 in water           | L082-PL  | c              |
| MB42      | None Supplied | W           | 2186246           | c                | Ammoniacal Nitrogen as N in water | L082-PL  | c              |



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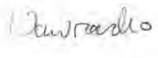
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## **Analytical Report Number : 22-43094**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 03/03/2022 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 03/03/2022 |
| <b>Your order number:</b>   | S-RE6089 00005     | <b>Analysis completed by:</b>                          | 10/03/2022 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 10/03/2022 |
| <b>Samples Analysed:</b>    | 4 water samples    |                                                        |            |

  
**Signed:**

Joanna Wawrzeczko  
Technical Reviewer (Reporting Team)  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-43094  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089 00005

|                                          |  |  |  |               |                    |                      |               |
|------------------------------------------|--|--|--|---------------|--------------------|----------------------|---------------|
| Lab Sample Number                        |  |  |  | 2191958       | 2191959            | 2191960              | 2191961       |
| Sample Reference                         |  |  |  | BH513         | BH510              | BH514B               | WS506         |
| Sample Number                            |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied |
| Depth (m)                                |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied |
| Date Sampled                             |  |  |  | 02/03/2022    | 02/03/2022         | 02/03/2022           | 02/03/2022    |
| Time Taken                               |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied |
| Analytical Parameter<br>(Water Analysis) |  |  |  | Units         | Limit of detection | Accreditation Status |               |

#### General Inorganics

|                                  |      |       |           |       |       |       |       |
|----------------------------------|------|-------|-----------|-------|-------|-------|-------|
| Total Cyanide (Low Level 1 µg/l) | µg/l | 1     | ISO 17025 | < 1.0 | 140   | 790   | 61    |
| Free Cyanide (Low Level 1 µg/l)  | µg/l | 1     | ISO 17025 | < 1.0 | 3.6   | 64    | < 1.0 |
| Thiocyanate as SCN               | µg/l | 200   | ISO 17025 | 370   | 440   | 33000 | 300   |
| Sulphate as SO4                  | mg/l | 0.045 | ISO 17025 | 1420  | 1940  | 789   | 140   |
| Sulphide                         | µg/l | 5     | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH3       | µg/l | 15    | ISO 17025 | 24    | 290   | 2400  | 660   |
| Total Suspended Solids           | mg/l | 2     | ISO 17025 | 17    | 61    | 3100  | 10    |

#### Total Phenols

|                            |      |    |           |      |      |      |      |
|----------------------------|------|----|-----------|------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|--------|

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |     |
|-----------------------|------|---|-----------|-------|-------|-------|-----|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 | U/S |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | 5.4   | < 5.0 | U/S |

|                      |      |      |           |        |        |       |      |
|----------------------|------|------|-----------|--------|--------|-------|------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 3.23   | 4.60   | 3.35  | 34.3 |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | 0.15   | 0.20   | 0.13  | 0.11 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | 4.7    | 5.4    | 2.7   | 42   |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 9.5    | 36     | 39    | 31   |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  | 0.3    | < 0.2 | 1.8  |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | 0.27  | 0.12 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 7.1    | 21     | 42    | 9.2  |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 2.9    | 4.6    | 21    | 37   |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 14     | 16     | 6.4   | 8.0  |



Analytical Report Number: 22-43094  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089 00005

|                                          |       |                    |                         |               |               |               |               |
|------------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|---------------|
| Lab Sample Number                        |       |                    |                         | 2191958       | 2191959       | 2191960       | 2191961       |
| Sample Reference                         |       |                    |                         | BH513         | BH510         | BH514B        | WS506         |
| Sample Number                            |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                         | 02/03/2022    | 02/03/2022    | 02/03/2022    | 02/03/2022    |
| Time Taken                               |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |               |
|                                          |       |                    |                         |               |               |               |               |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                                |      |    |           |       |       |       |       |
|----------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 <sub>HS 1D AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 <sub>HS 1D AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 <sub>HS 1D AL</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 <sub>EH 1D AL #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 <sub>EH 1D AL #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 <sub>EH 1D AL #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 <sub>EH 1D AL #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) <sub>HS+EH 1D AL #1 #2 MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |

|                                                               |      |    |           |       |       |       |       |
|---------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 <sub>HS 1D AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 <sub>HS 1D AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 <sub>HS 1D AR</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 <sub>EH 1D AR #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 <sub>EH 1D AR #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 <sub>EH 1D AR #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 <sub>EH 1D AR #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) <sub>HS+EH 1D AR #1 #2 MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number : 22-43094**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                   | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)  | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 *for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water           | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Monohydric phenols in water            | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Speciated EPA-16 PAHs in water         | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Sulphide in water                      | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                   | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                      | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| Suspended solids in water              | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                        | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | NONE                 |
| BTEX and MTBE in water (Monoaromatics) | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                      | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water       | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Free cyanide (low level) in water      | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW.                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |

**For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.**

**For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.**

**Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.**

**Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.**

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions |
|---------|--------------|
|---------|--------------|



Analytical Report Number : 22-43094

Project / Site name: Clarendon Phase 3B

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name | Analytical Method Description                                          | Analytical Method Reference | Method number | Wet / Dry Analysis | Accreditation Status |
|----------------------|------------------------------------------------------------------------|-----------------------------|---------------|--------------------|----------------------|
| HS                   | Headspace Analysis                                                     |                             |               |                    |                      |
| MS                   | Mass spectrometry                                                      |                             |               |                    |                      |
| FID                  | Flame Ionisation Detector                                              |                             |               |                    |                      |
| GC                   | Gas Chromatography                                                     |                             |               |                    |                      |
| EH                   | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |                             |               |                    |                      |
| CU                   | Clean-up - e.g. by Florisil®, silica gel                               |                             |               |                    |                      |
| 1D                   | GC - Single coil/column gas chromatography                             |                             |               |                    |                      |
| 2D                   | GC-GC - Double coil/column gas chromatography                          |                             |               |                    |                      |
| Total                | Aliphatics & Aromatics                                                 |                             |               |                    |                      |
| AL                   | Aliphatics                                                             |                             |               |                    |                      |
| AR                   | Aromatics                                                              |                             |               |                    |                      |
| #1                   | EH_2D_Total but with humics mathematically subtracted                  |                             |               |                    |                      |
| #2                   | EH_2D_Total but with fatty acids mathematically subtracted             |                             |               |                    |                      |
| _                    | Operator - understore to separate acronyms (exception for +)           |                             |               |                    |                      |
| +                    | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |                             |               |                    |                      |

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## **Analytical Report Number : 22-44648**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 10/03/2022 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 10/03/2022 |
| <b>Your order number:</b>   | S-RE6089-00005     | <b>Analysis completed by:</b>                          | 17/03/2022 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 17/03/2022 |
| <b>Samples Analysed:</b>    | 3 water samples    |                                                        |            |

**Signed:**

Karolina Marek  
PL Head of Reporting Team  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-44648  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089-00005

|                                          |  |  |  |               |                    |                      |
|------------------------------------------|--|--|--|---------------|--------------------|----------------------|
| Lab Sample Number                        |  |  |  | 2200242       | 2200243            | 2200244              |
| Sample Reference                         |  |  |  | BH513         | BH510              | MB43                 |
| Sample Number                            |  |  |  | None Supplied | None Supplied      | None Supplied        |
| Depth (m)                                |  |  |  | None Supplied | None Supplied      | None Supplied        |
| Date Sampled                             |  |  |  | 09/03/2022    | 09/03/2022         | 09/03/2022           |
| Time Taken                               |  |  |  | None Supplied | None Supplied      | None Supplied        |
| Analytical Parameter<br>(Water Analysis) |  |  |  | Units         | Limit of detection | Accreditation Status |

#### General Inorganics

|                                        |      |       |           |         |         |        |
|----------------------------------------|------|-------|-----------|---------|---------|--------|
| Total Cyanide (Low Level 1 µg/l)       | µg/l | 1     | ISO 17025 | < 1.0   | 31      | < 1.0  |
| Free Cyanide (Low Level 1 µg/l)        | µg/l | 1     | ISO 17025 | < 1.0   | < 1.0   | < 1.0  |
| Thiocyanate as SCN                     | µg/l | 200   | ISO 17025 | 1100    | 490     | < 200  |
| Sulphate as SO <sub>4</sub>            | µg/l | 45    | ISO 17025 | 1700000 | 3880000 | 147000 |
| Sulphate as SO <sub>4</sub>            | mg/l | 0.045 | ISO 17025 | 1700    | 3880    | 147    |
| Sulphide                               | µg/l | 5     | NONE      | < 5.0   | < 5.0   | < 5.0  |
| Ammoniacal Nitrogen as NH <sub>3</sub> | µg/l | 15    | ISO 17025 | 65      | 570     | 8300   |
| Total Suspended Solids                 | mg/l | 2     | ISO 17025 | 67      | 110     | 7.0    |

#### Total Phenols

|                            |      |    |           |      |      |      |
|----------------------------|------|----|-----------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |
|-----------------------|------|---|-----------|-------|-------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | 6.9   | < 5.0 |

|                      |      |      |           |        |        |        |
|----------------------|------|------|-----------|--------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 1.21   | 3.47   | 2.13   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | 0.03   | 0.22   | < 0.02 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | 4.3    | 6.9    | 3.3    |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 9.8    | 16     | 7.2    |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | 0.3    | 0.2    | 0.5    |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 5.7    | 17     | 4.2    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 1.4    | 3.7    | 1.6    |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 6.1    | 20     | 13     |



Analytical Report Number: 22-44648  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089-00005

|                                          |               |                    |                      |
|------------------------------------------|---------------|--------------------|----------------------|
| Lab Sample Number                        | 2200242       | 2200243            | 2200244              |
| Sample Reference                         | BH513         | BH510              | MB43                 |
| Sample Number                            | None Supplied | None Supplied      | None Supplied        |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied        |
| Date Sampled                             | 09/03/2022    | 09/03/2022         | 09/03/2022           |
| Time Taken                               | None Supplied | None Supplied      | None Supplied        |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation Status |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                     |      |    |           |       |       |       |
|-----------------------------------------------------|------|----|-----------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 HS_1D_AL               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 HS_1D_AL               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 HS_1D_AL              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) HS+EH_1D_AL_#1_#2_MS | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |

|                                                    |      |    |           |       |       |       |
|----------------------------------------------------|------|----|-----------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 HS_1D_AR               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 HS_1D_AR               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 HS_1D_AR              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) HS+EH_1D_AR_#1_#2_MS | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number : 22-44648**

**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                   | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)  | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW, GW, Hg=SW, PW, Al=SW, PW.                               | In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water           | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Monohydric phenols in water            | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Speciated EPA-16 PAHs in water         | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Sulphide in water                      | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                   | Determination of thiocyanate in water by discrete analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                      | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| Suspended solids in water              | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                        | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | ISO 17025            |
| BTEX and MTBE in water (Monoaromatics) | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                      | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water       | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Free cyanide (low level) in water      | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW.                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |

**For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.**

**For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.**

**Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 300C.**

**Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.**



Analytical Report Number : 22-44648

Project / Site name: Clarendon Phase 3B

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name | Analytical Method Description | Analytical Method Reference | Method number | Wet / Dry Analysis | Accreditation Status |
|----------------------|-------------------------------|-----------------------------|---------------|--------------------|----------------------|
|----------------------|-------------------------------|-----------------------------|---------------|--------------------|----------------------|

### Information in Support of Analytical Results

#### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| -       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

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## **Analytical Report Number : 22-46278**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 17/03/2022 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 17/03/2022 |
| <b>Your order number:</b>   | S-RE6089-00005     | <b>Analysis completed by:</b>                          | 22/03/2022 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 24/03/2022 |
| <b>Samples Analysed:</b>    | 3 water samples    |                                                        |            |

  
**Signed:**

Anna Goc  
Technical Reviewer (Reporting Team)  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-46278  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089-00005

|                                          |       |                    |                         |               |               |               |
|------------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|
| Lab Sample Number                        |       |                    |                         | 2208756       | 2208757       | 2208758       |
| Sample Reference                         |       |                    |                         | BH514B        | BH510         | BH513         |
| Sample Number                            |       |                    |                         | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                         | 16/03/2022    | 16/03/2022    | 16/03/2022    |
| Time Taken                               |       |                    |                         | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |
|                                          |       |                    |                         |               |               |               |

#### General Inorganics

|                                  |          |       |           |        |        |       |
|----------------------------------|----------|-------|-----------|--------|--------|-------|
| pH                               | pH Units | N/A   | ISO 17025 | 8.3    | -      | -     |
| Temperature on Receipt           | °C       | 0.1   | NONE      | 7.2    | -      | -     |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | 1500   | -      | -     |
| Turbidity                        | NTU      | 1     | NONE      | U/S*   | -      | -     |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 520    | 16     | < 1.0 |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | 2.1    | < 1.0  | < 1.0 |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | 18000  | 320    | 220   |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 537    | 3740** | 1830  |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0  | < 5.0  | < 5.0 |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 2100   | 920    | 270   |
| Total Suspended Solids           | mg/l     | 2     | ISO 17025 | 19000  | 130    | 97    |
| Redox Potential                  | mV       | -800  | NONE      | -161.8 | -      | -     |
| Dissolved Oxygen                 | mg/l     | 1     | NONE      | < 1.0  | -      | -     |

#### Total Phenols

|                            |      |    |           |    |      |      |
|----------------------------|------|----|-----------|----|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | 11 | < 10 | < 10 |
|----------------------------|------|----|-----------|----|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|



Analytical Report Number: 22-46278  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089-00005

|                                          |               |                    |                         |
|------------------------------------------|---------------|--------------------|-------------------------|
| Lab Sample Number                        | 2208756       | 2208757            | 2208758                 |
| Sample Reference                         | BH514B        | BH510              | BH513                   |
| Sample Number                            | None Supplied | None Supplied      | None Supplied           |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied           |
| Date Sampled                             | 16/03/2022    | 16/03/2022         | 16/03/2022              |
| Time Taken                               | None Supplied | None Supplied      | None Supplied           |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |
|-----------------------|------|---|-----------|-------|-------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | < 5.0 |

|                      |      |      |           |       |        |        |
|----------------------|------|------|-----------|-------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 1.15  | 3.49   | 1.03   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | 0.03  | 0.16   | 0.02   |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | 1.4   | 4.6    | 4.1    |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 6.3   | 17     | 6.6    |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2 | < 0.2  | < 0.2  |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | 0.5   | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 3.9   | 16     | 5.5    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 2.6   | 3.9    | 1.6    |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 1.2   | 9.1    | 7.8    |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                                |      |    |           |       |       |       |
|----------------------------------------------------------------|------|----|-----------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 <sub>HS_ID_AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 <sub>HS_ID_AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 <sub>HS_ID_AL</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 <sub>EH_ID_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 <sub>EH_ID_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 <sub>EH_ID_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 <sub>EH_ID_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) <sub>HS+EH_ID_AL_#1_#2_MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |

|                                                               |      |    |           |       |       |       |
|---------------------------------------------------------------|------|----|-----------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 <sub>HS_ID_AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 <sub>HS_ID_AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 <sub>HS_ID_AR</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 <sub>EH_ID_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 <sub>EH_ID_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 <sub>EH_ID_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 <sub>EH_ID_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) <sub>HS+EH_ID_AR_#1_#2_MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample

\*Analysis could not be completed due to sample matrix

\*\*Result was reported from high dilution and should be interpreted with care



**Analytical Report Number : 22-46278**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 *for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discrete analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| Suspended solids in water                | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | ISO 17025            |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |



**Analytical Report Number : 22-46278**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name              | Analytical Method Description                                                                          | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Free cyanide (low level) in water | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW. | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Temperature on Receipt (water)    | Temperature of water upon receipt.                                                                     | In-house method                                                                                                 | L019-UK       | W                  | NONE                 |
| Turbidity of in water             | Determination of sample turbidity by colorimeter and comparison with standard reference samples.       | In-house method based on Standard Method 8237                                                                   | L083-PL       | W                  | NONE                 |

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| -       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

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## **Analytical Report Number : 22-49337**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 01/04/2022 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 01/04/2022 |
| <b>Your order number:</b>   | S RE6089 00005     | <b>Analysis completed by:</b>                          | 08/04/2022 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 11/04/2022 |
| <b>Samples Analysed:</b>    | 4 water samples    |                                                        |            |

**Signed:**

Joanna Wawrzeczko  
Reporting Specialist  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

|                                                                                    |           |                           |
|------------------------------------------------------------------------------------|-----------|---------------------------|
| Standard sample disposal times, unless otherwise agreed with the laboratory, are : | soils     | - 4 weeks from reporting  |
|                                                                                    | leachates | - 2 weeks from reporting  |
|                                                                                    | waters    | - 2 weeks from reporting  |
|                                                                                    | asbestos  | - 6 months from reporting |

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-49337  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

|                                          |  |  |  |               |                    |                      |               |
|------------------------------------------|--|--|--|---------------|--------------------|----------------------|---------------|
| Lab Sample Number                        |  |  |  | 2224700       | 2224701            | 2224702              | 2224703       |
| Sample Reference                         |  |  |  | BH514B        | BH510              | BH513                | MB44          |
| Sample Number                            |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied |
| Depth (m)                                |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied |
| Date Sampled                             |  |  |  | 01/04/2022    | 01/04/2022         | 01/04/2022           | 01/04/2022    |
| Time Taken                               |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied |
| Analytical Parameter<br>(Water Analysis) |  |  |  | Units         | Limit of detection | Accreditation Status |               |

#### General Inorganics

|                                  |          |       |           |       |       |       |       |
|----------------------------------|----------|-------|-----------|-------|-------|-------|-------|
| pH                               | pH Units | N/A   | ISO 17025 | 8.4   | -     | -     | -     |
| Temperature on Receipt           | °C       | 0.1   | NONE      | 6.3   | -     | -     | -     |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | 1400  | -     | -     | -     |
| Turbidity                        | NTU      | 1     | NONE      | 32    | -     | -     | -     |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 220   | < 1.0 | 11    | < 1.0 |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | 4700  | 290   | 230   | 210   |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 341   | 1850  | 1700  | 126   |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 2800  | 580   | 650   | 15000 |
| Total Suspended Solids           | mg/l     | 2     | ISO 17025 | 16000 | 320   | 160   | 95    |

|                  |      |      |      |       |   |   |   |
|------------------|------|------|------|-------|---|---|---|
| Redox Potential  | mV   | -800 | NONE | 47.5  | - | - | - |
| Dissolved Oxygen | mg/l | 1    | NONE | < 1.0 | - | - | - |

#### Total Phenols

|                            |      |    |           |      |      |      |      |
|----------------------------|------|----|-----------|------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | 1.07   | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | 0.36   | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | 0.28   | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | 1.64   | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | 0.51   | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | 3      | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | 2.7    | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | 1.66   | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | 1.37   | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | 1.73   | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | 0.87   | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | 1.59   | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | 1.01   | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | 0.33   | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | 1.18   | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |      |        |        |        |
|-------------------|------|------|-----------|------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | 19.3 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|------|--------|--------|--------|



Analytical Report Number: 22-49337  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

|                                          |               |                    |                         |               |
|------------------------------------------|---------------|--------------------|-------------------------|---------------|
| Lab Sample Number                        | 2224700       | 2224701            | 2224702                 | 2224703       |
| Sample Reference                         | BH514B        | BH510              | BH513                   | MB44          |
| Sample Number                            | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Date Sampled                             | 01/04/2022    | 01/04/2022         | 01/04/2022              | 01/04/2022    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |               |

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |       |
|-----------------------|------|---|-----------|-------|-------|-------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 |

|                      |      |      |           |        |        |        |        |
|----------------------|------|------|-----------|--------|--------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 1.01   | 0.48   | 0.38   | 2.03   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | < 0.02 | 0.09   | 0.03   | < 0.02 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | < 0.2  | 0.2    |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 0.7    | 3.8    | 3.1    | 2.5    |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | < 0.2  | 0.4    |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 1.1    | 8.3    | 6.9    | 2.8    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 3.4    | 1.6    | 1.3    | 1      |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 2.5    | 11     | 6.9    | 9      |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                                |      |    |           |       |       |       |       |
|----------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 <sub>HS,1D,AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 <sub>HS,1D,AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 <sub>HS,1D,AL</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | 27    | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | 36    | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | 83    | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | 510   | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) <sub>HS+EH,1D,AL,#1,#2,MS</sub> | µg/l | 10 | NONE      | 660   | < 10  | < 10  | < 10  |

|                                                               |      |    |           |       |       |       |       |
|---------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 <sub>HS,1D,AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 <sub>HS,1D,AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 <sub>HS,1D,AR</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | 10    | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) <sub>HS+EH,1D,AR,#1,#2,MS</sub> | µg/l | 10 | NONE      | 10    | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number : 22-49337**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 *for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| Suspended solids in water                | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | ISO 17025            |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |



Analytical Report Number : 22-49337

Project / Site name: Clarendon Phase 3B

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name              | Analytical Method Description                                                                          | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Free cyanide (low level) in water | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW. | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Temperature on Receipt (water)    | Temperature of water upon receipt.                                                                     | In-house method                                                                                                 | L019-UK       | W                  | NONE                 |
| Turbidity of in water             | Determination of sample turbidity by colorimeter and comparison with standard reference samples.       | In-house method based on Standard Method 8237                                                                   | L083-PL       | W                  | NONE                 |

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| _       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

**Analytical Report Number : 22-49337**

**Project / Site name: Clarendon Phase 3B**

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

| Sample ID | Other ID      | Sample Type | Lab Sample Number | Sample Deviation | Test Name                 | Test Ref | Test Deviation |
|-----------|---------------|-------------|-------------------|------------------|---------------------------|----------|----------------|
| BH514B    | None Supplied | W           | 2224700           | c                | Dissolved Oxygen in water | L086-PL  | c              |

**Jack Holliday**

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## **Analytical Report Number : 22-52149 - 3A**

Replaces Analytical Report Number: 22-52149, issue no. 2  
Report format change.

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 14/04/2022 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 14/04/2022 |
| <b>Your order number:</b>   | D RE6089 00005     | <b>Analysis completed by:</b>                          | 04/05/2022 |
| <b>Report Issue Number:</b> | 3A                 | <b>Report issued on:</b>                               | 04/05/2022 |
| <b>Samples Analysed:</b>    | 4 water samples    |                                                        |            |

**Signed:**

Zina Abdul Razzak  
Senior Quality Specialist  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-52149  
Project / Site name: Clarendon Phase 3B

Your Order No: D RE6089 00005

|                                          |               |                    |                      |               |
|------------------------------------------|---------------|--------------------|----------------------|---------------|
| Lab Sample Number                        | 2240914       | 2241125            | 2241126              | 2241127       |
| Sample Reference                         | BH514B        | BH510              | BH513                | MB46          |
| Sample Number                            | None Supplied | None Supplied      | None Supplied        | None Supplied |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied        | None Supplied |
| Date Sampled                             | 13/04/2022    | 13/04/2022         | 13/04/2022           | 13/04/2022    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied        | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation Status |               |

#### General Inorganics

|                                  |          |       |           |       |       |       |       |
|----------------------------------|----------|-------|-----------|-------|-------|-------|-------|
| pH                               | pH Units | N/A   | ISO 17025 | 8.6   | -     | -     | -     |
| Temperature on Receipt           | °C       | 0.1   | NONE      | 6.8   | -     | -     | -     |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | 1000  | -     | -     | -     |
| Turbidity                        | NTU      | 1     | NONE      | 350   | -     | -     | -     |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 200   | 16    | < 1.0 | < 1.0 |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | 5.1   | < 1.0 | < 1.0 | < 1.0 |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | 2800  | 370   | 270   | 360   |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 233   | 2840  | 1690  | 138   |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 900   | 560   | < 15  | 10000 |
| Total Suspended Solids           | mg/l     | 2     | ISO 17025 | 15    | 110   | 96    | 85    |

|                  |      |      |      |        |   |   |   |
|------------------|------|------|------|--------|---|---|---|
| Redox Potential  | mV   | -800 | NONE | -216.4 | - | - | - |
| Dissolved Oxygen | mg/l | 1    | NONE | 2.5    | - | - | - |

#### Total Phenols

|                            |      |    |           |      |      |      |    |
|----------------------------|------|----|-----------|------|------|------|----|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 | 18 |
|----------------------------|------|----|-----------|------|------|------|----|

#### Speciated PAHs

|                        |      |      |           |      |        |        |        |
|------------------------|------|------|-----------|------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | 1.55 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | 0.59 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | 0.38 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | 0.53 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | 4.1  | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | 1.39 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | 7.95 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | 6.95 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | 3.96 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | 3.45 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | 4.38 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | 1.85 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | 3.97 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | 2.05 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | 0.65 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | 2.33 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |      |        |        |        |
|-------------------|------|------|-----------|------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | 46.1 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|------|--------|--------|--------|



Analytical Report Number: 22-52149  
Project / Site name: Clarendon Phase 3B

Your Order No: D RE6089 00005

|                                          |               |                    |                         |               |
|------------------------------------------|---------------|--------------------|-------------------------|---------------|
| Lab Sample Number                        | 2240914       | 2241125            | 2241126                 | 2241127       |
| Sample Reference                         | BH514B        | BH510              | BH513                   | MB46          |
| Sample Number                            | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Date Sampled                             | 13/04/2022    | 13/04/2022         | 13/04/2022              | 13/04/2022    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |               |

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |       |
|-----------------------|------|---|-----------|-------|-------|-------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 |

|                      |      |      |           |        |        |        |        |
|----------------------|------|------|-----------|--------|--------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 1.04   | 0.66   | 0.21   | 1.61   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | < 0.02 | 0.16   | < 0.02 | < 0.02 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | < 0.2  | < 0.2  |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 0.6    | 5.3    | 1.9    | 2.1    |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | < 0.2  | 0.4    |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 0.9    | 9      | 3.4    | 2.7    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 0.6    | 1.9    | 0.9    | 0.9    |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 1.5    | 12     | 15     | 16     |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                     |      |    |           |       |       |       |       |
|-----------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 HS_ID_AL               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 HS_ID_AL               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 HS_ID_AL              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 EH_ID_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 EH_ID_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 EH_ID_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 EH_ID_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) HS+EH_ID_AL_#1_#2_MS | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |

|                                                    |      |    |           |       |       |       |       |
|----------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 HS_ID_AR               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 HS_ID_AR               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 HS_ID_AR              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 EH_ID_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 EH_ID_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 EH_ID_AR_#1_#2_MS    | µg/l | 10 | NONE      | 21    | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 EH_ID_AR_#1_#2_MS    | µg/l | 10 | NONE      | 23    | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) HS+EH_ID_AR_#1_#2_MS | µg/l | 10 | NONE      | 44    | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number : 22-52149**

**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 *for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| Suspended solids in water                | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | ISO 17025            |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |



Analytical Report Number : 22-52149

Project / Site name: Clarendon Phase 3B

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name              | Analytical Method Description                                                                          | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Free cyanide (low level) in water | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW. | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Temperature on Receipt (water)    | Temperature of water upon receipt.                                                                     | In-house method                                                                                                 | L019-UK       | W                  | NONE                 |
| Turbidity of in water             | Determination of sample turbidity by colorimeter and comparison with standard reference samples.       | In-house method based on Standard Method 8237                                                                   | L083-PL       | W                  | NONE                 |

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| _       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

## Sample Deviation Report



**Analytical Report Number : 22-52149**

**Project / Site name: Clarendon Phase 3B**

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

| Sample ID | Other ID      | Sample Type | Lab Sample Number | Sample Deviation | Test Name                                | Test Ref | Test Deviation |
|-----------|---------------|-------------|-------------------|------------------|------------------------------------------|----------|----------------|
| BH510     | None Supplied | W           | 2241125           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH510     | None Supplied | W           | 2241125           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH510     | None Supplied | W           | 2241125           | c                | Settleable Solids in water               | L004-PL  | c              |
| BH510     | None Supplied | W           | 2241125           | c                | Suspended solids in water                | L004-PL  | c              |
| BH513     | None Supplied | W           | 2241126           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH513     | None Supplied | W           | 2241126           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH513     | None Supplied | W           | 2241126           | c                | Settleable Solids in water               | L004-PL  | c              |
| BH513     | None Supplied | W           | 2241126           | c                | Suspended solids in water                | L004-PL  | c              |
| BH514B    | None Supplied | W           | 2240914           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH514B    | None Supplied | W           | 2240914           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH514B    | None Supplied | W           | 2240914           | c                | Dissolved Oxygen in water                | L086-PL  | c              |
| BH514B    | None Supplied | W           | 2240914           | c                | Electrical conductivity at 20oC of water | L031-PL  | c              |
| BH514B    | None Supplied | W           | 2240914           | c                | Redox Potential of waters                | L084-PL  | c              |
| BH514B    | None Supplied | W           | 2240914           | c                | Settleable Solids in water               | L004-PL  | c              |
| BH514B    | None Supplied | W           | 2240914           | c                | Suspended solids in water                | L004-PL  | c              |
| BH514B    | None Supplied | W           | 2240914           | c                | Turbidity of in water                    | L083-PL  | c              |
| BH514B    | None Supplied | W           | 2240914           | c                | pH at 20oC in water (automated)          | L099-PL  | c              |
| MB46      | None Supplied | W           | 2241127           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| MB46      | None Supplied | W           | 2241127           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| MB46      | None Supplied | W           | 2241127           | c                | Settleable Solids in water               | L004-PL  | c              |
| MB46      | None Supplied | W           | 2241127           | c                | Suspended solids in water                | L004-PL  | c              |

**Jack Holliday**

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## **Analytical Report Number : 22-52149 - 3B**

Replaces Analytical Report Number: 22-52149, issue no. 2  
Result correction by laboratory.

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 14/04/2022 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 14/04/2022 |
| <b>Your order number:</b>   | D RE6089 00005     | <b>Analysis completed by:</b>                          | 04/05/2022 |
| <b>Report Issue Number:</b> | 3B                 | <b>Report issued on:</b>                               | 04/05/2022 |
| <b>Samples Analysed:</b>    | 1 water sample     |                                                        |            |

**Signed:**

Zina Abdul Razzak  
Senior Quality Specialist  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-52149  
Project / Site name: Clarendon Phase 3B

Your Order No: D RE6089 00005

|                                          |               |                    |                         |  |
|------------------------------------------|---------------|--------------------|-------------------------|--|
| Lab Sample Number                        | 2242400       |                    |                         |  |
| Sample Reference                         | BH514B        |                    |                         |  |
| Sample Number                            | Filtered      |                    |                         |  |
| Depth (m)                                | None Supplied |                    |                         |  |
| Date Sampled                             | 13/04/2022    |                    |                         |  |
| Time Taken                               | None Supplied |                    |                         |  |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |  |

#### General Inorganics

|                                  |          |       |           |       |
|----------------------------------|----------|-------|-----------|-------|
| pH                               | pH Units | N/A   | ISO 17025 | 8.3   |
| Temperature on Receipt           | °C       | 0.1   | NONE      | 6.8   |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | 820   |
| Turbidity                        | NTU      | 1     | NONE      | 2     |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 200   |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | 1.6   |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | 3000  |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 207   |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0 |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 890   |
| Total Suspended Solids           | mg/l     | 2     | ISO 17025 | -     |

|                  |      |      |      |       |
|------------------|------|------|------|-------|
| Redox Potential  | mV   | -800 | NONE | 168.7 |
| Dissolved Oxygen | mg/l | 1    | NONE | 8.4   |

#### Total Phenols

|                            |      |    |           |      |
|----------------------------|------|----|-----------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 |
|----------------------------|------|----|-----------|------|

#### Speciated PAHs

|                        |      |      |           |        |
|------------------------|------|------|-----------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |
|-------------------|------|------|-----------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 |
|-------------------|------|------|-----------|--------|



Analytical Report Number: 22-52149  
Project / Site name: Clarendon Phase 3B

Your Order No: D RE6089 00005

|                                          |               |                    |                         |  |
|------------------------------------------|---------------|--------------------|-------------------------|--|
| Lab Sample Number                        | 2242400       |                    |                         |  |
| Sample Reference                         | BH514B        |                    |                         |  |
| Sample Number                            | Filtered      |                    |                         |  |
| Depth (m)                                | None Supplied |                    |                         |  |
| Date Sampled                             | 13/04/2022    |                    |                         |  |
| Time Taken                               | None Supplied |                    |                         |  |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |  |

#### Heavy Metals / Metalloids

|                       |      |   |           |       |
|-----------------------|------|---|-----------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 |

|                      |      |      |           |        |
|----------------------|------|------|-----------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 1.32   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | < 0.02 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | < 0.2  |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 0.8    |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | 0.2    |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | 0.06   |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 1.2    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 1      |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | < 0.5  |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |
|------------------------------------|------|---|-----------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                     |      |    |           |       |
|-----------------------------------------------------|------|----|-----------|-------|
| TPH-CWG - Aliphatic >C5 - C6 HS_ID_AL               | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 HS_ID_AL               | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 HS_ID_AL              | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 EH_ID_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 EH_ID_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 EH_ID_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 EH_ID_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) HS+EH_ID_AL_#1_#2_MS | µg/l | 10 | NONE      | < 10  |

|                                                    |      |    |           |       |
|----------------------------------------------------|------|----|-----------|-------|
| TPH-CWG - Aromatic >C5 - C7 HS_ID_AR               | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 HS_ID_AR               | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 HS_ID_AR              | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 EH_ID_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aromatic >C12 - C16 EH_ID_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aromatic >C16 - C21 EH_ID_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aromatic >C21 - C35 EH_ID_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aromatic (C5 - C35) HS+EH_ID_AR_#1_#2_MS | µg/l | 10 | NONE      | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number : 22-52149**

**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 *for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| Suspended solids in water                | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | ISO 17025            |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |



Analytical Report Number : 22-52149

Project / Site name: Clarendon Phase 3B

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name              | Analytical Method Description                                                                          | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Free cyanide (low level) in water | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW. | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Temperature on Receipt (water)    | Temperature of water upon receipt.                                                                     | In-house method                                                                                                 | L019-UK       | W                  | NONE                 |
| Turbidity of in water             | Determination of sample turbidity by colorimeter and comparison with standard reference samples.       | In-house method based on Standard Method 8237                                                                   | L083-PL       | W                  | NONE                 |

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| _       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

## Sample Deviation Report



**Analytical Report Number : 22-52149**

**Project / Site name: Clarendon Phase 3B**

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

| Sample ID | Other ID | Sample Type | Lab Sample Number | Sample Deviation | Test Name                                | Test Ref | Test Deviation |
|-----------|----------|-------------|-------------------|------------------|------------------------------------------|----------|----------------|
| BH514B    | Filtered | W           | 2242400           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH514B    | Filtered | W           | 2242400           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH514B    | Filtered | W           | 2242400           | c                | Dissolved Oxygen in water                | L086-PL  | c              |
| BH514B    | Filtered | W           | 2242400           | c                | Electrical conductivity at 20oC of water | L031-PL  | c              |
| BH514B    | Filtered | W           | 2242400           | c                | Redox Potential of waters                | L084-PL  | c              |
| BH514B    | Filtered | W           | 2242400           | c                | Turbidity of in water                    | L083-PL  | c              |
| BH514B    | Filtered | W           | 2242400           | c                | pH at 20oC in water (automated)          | L099-PL  | c              |
| BH514B    | Filtered | W           | 2242400           | c                | Free cyanide (low level) in water        | L080-PL  | c              |
| BH514B    | Filtered | W           | 2242400           | c                | Low level total cyanide in water         | L080-PL  | c              |

**Jack Holliday**

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## **Analytical Report Number : 22-53798**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 25/04/2022 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 25/04/2022 |
| <b>Your order number:</b>   | S-RE6089-00005     | <b>Analysis completed by:</b>                          | 04/05/2022 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 04/05/2022 |
| <b>Samples Analysed:</b>    | 3 water samples    |                                                        |            |

**Signed:**

  
Adam Fenwick  
Technical Reviewer  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-53798  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089-00005

|                                          |  |  |  |               |                    |                      |
|------------------------------------------|--|--|--|---------------|--------------------|----------------------|
| Lab Sample Number                        |  |  |  | 2250727       | 2250728            | 2250729              |
| Sample Reference                         |  |  |  | BH514B        | BH510              | BH513                |
| Sample Number                            |  |  |  | None Supplied | None Supplied      | None Supplied        |
| Depth (m)                                |  |  |  | None Supplied | None Supplied      | None Supplied        |
| Date Sampled                             |  |  |  | 22/04/2022    | 22/04/2022         | 22/04/2022           |
| Time Taken                               |  |  |  | None Supplied | None Supplied      | None Supplied        |
| Analytical Parameter<br>(Water Analysis) |  |  |  | Units         | Limit of detection | Accreditation Status |

#### General Inorganics

|                                  |          |       |           |       |       |       |
|----------------------------------|----------|-------|-----------|-------|-------|-------|
| pH                               | pH Units | N/A   | ISO 17025 | 8.3   | -     | -     |
| Temperature on Receipt           | °C       | 0.1   | NONE      | 6.5   | -     | -     |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | 1000  | -     | -     |
| Turbidity                        | NTU      | 1     | NONE      | U/S   | -     | -     |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 180   | 8     | < 1.0 |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | 1.2   | < 1.0 | < 1.0 |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | 3700  | 410   | 330   |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 217   | 3610  | 1650  |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0 | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 1600  | 400   | 59    |
| Total Suspended Solids           | mg/l     | 2     | ISO 17025 | 27000 | 150   | 59    |

|                  |      |      |      |       |   |   |
|------------------|------|------|------|-------|---|---|
| Redox Potential  | mV   | -800 | NONE | 100.7 | - | - |
| Dissolved Oxygen | mg/l | 1    | NONE | < 1.0 | - | - |

#### Total Phenols

|                            |      |    |           |      |      |      |
|----------------------------|------|----|-----------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | 0.76   | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | 0.64   | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | 0.83   | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | 0.77   | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | 0.49   | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | 0.43   | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | 0.53   | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | 0.2    | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | 0.4    | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | 0.26   | < 0.01 | < 0.01 |
| Dibenzo(a,h)anthracene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | 0.29   | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |     |        |        |
|-------------------|------|------|-----------|-----|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | 5.6 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|-----|--------|--------|



Analytical Report Number: 22-53798  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089-00005

|                                          |               |                    |                      |
|------------------------------------------|---------------|--------------------|----------------------|
| Lab Sample Number                        | 2250727       | 2250728            | 2250729              |
| Sample Reference                         | BH514B        | BH510              | BH513                |
| Sample Number                            | None Supplied | None Supplied      | None Supplied        |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied        |
| Date Sampled                             | 22/04/2022    | 22/04/2022         | 22/04/2022           |
| Time Taken                               | None Supplied | None Supplied      | None Supplied        |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation Status |

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |
|-----------------------|------|---|-----------|-------|-------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | < 5.0 |

|                      |      |      |           |        |        |        |
|----------------------|------|------|-----------|--------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 1.09   | 0.58   | 0.27   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | 0.03   | 0.19   | 0.07   |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | < 0.2  | 0.9    | 0.3    |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 0.8    | 4.2    | 2      |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | 0.9    | 0.6    | 0.5    |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 1.5    | 11     | 3.6    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 1.1    | 3.4    | 1.5    |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 1.3    | 26     | 16     |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                                |      |    |           |       |       |       |
|----------------------------------------------------------------|------|----|-----------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 <sub>HS,1D,AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 <sub>HS,1D,AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 <sub>HS,1D,AL</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) <sub>HS+EH,1D,AL,#1,#2,MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |

|                                                               |      |    |           |       |       |       |
|---------------------------------------------------------------|------|----|-----------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 <sub>HS,1D,AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 <sub>HS,1D,AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 <sub>HS,1D,AR</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | 13    | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | 17    | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | 70    | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) <sub>HS+EH,1D,AR,#1,#2,MS</sub> | µg/l | 10 | NONE      | 100   | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number : 22-53798**

**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 *for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| Suspended solids in water                | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | ISO 17025            |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |



Analytical Report Number : 22-53798

Project / Site name: Clarendon Phase 3B

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name              | Analytical Method Description                                                                          | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Free cyanide (low level) in water | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW. | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Temperature on Receipt (water)    | Temperature of water upon receipt.                                                                     | In-house method                                                                                                 | L019-UK       | W                  | NONE                 |
| Turbidity of in water             | Determination of sample turbidity by colorimeter and comparison with standard reference samples.       | In-house method based on Standard Method 8237                                                                   | L083-PL       | W                  | NONE                 |

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| _       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

## Sample Deviation Report



**Analytical Report Number : 22-53798**

**Project / Site name: Clarendon Phase 3B**

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

| Sample ID | Other ID      | Sample Type | Lab Sample Number | Sample Deviation | Test Name                                | Test Ref | Test Deviation |
|-----------|---------------|-------------|-------------------|------------------|------------------------------------------|----------|----------------|
| BH510     | None Supplied | W           | 2250728           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH510     | None Supplied | W           | 2250728           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH513     | None Supplied | W           | 2250729           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH513     | None Supplied | W           | 2250729           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH514B    | None Supplied | W           | 2250727           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH514B    | None Supplied | W           | 2250727           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH514B    | None Supplied | W           | 2250727           | c                | Dissolved Oxygen in water                | L086-PL  | c              |
| BH514B    | None Supplied | W           | 2250727           | c                | Electrical conductivity at 20oC of water | L031-PL  | c              |
| BH514B    | None Supplied | W           | 2250727           | c                | Redox Potential of waters                | L084-PL  | c              |
| BH514B    | None Supplied | W           | 2250727           | c                | Turbidity of in water                    | L083-PL  | c              |
| BH514B    | None Supplied | W           | 2250727           | c                | pH at 20oC in water (automated)          | L099-PL  | c              |

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## **Analytical Report Number : 22-54946**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 28/04/2022 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 28/04/2022 |
| <b>Your order number:</b>   | S-RE6089-00005     | <b>Analysis completed by:</b>                          | 06/05/2022 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 06/05/2022 |
| <b>Samples Analysed:</b>    | 6 water samples    |                                                        |            |

**Signed:**

Joanna Wawrzeczko  
Reporting Specialist  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting  
leachates - 2 weeks from reporting  
waters - 2 weeks from reporting  
asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-54946  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089-00005

|                                          |       |                    |                         |               |               |               |               |               |
|------------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|---------------|---------------|
| Lab Sample Number                        |       |                    |                         | 2256524       | 2256525       | 2256526       | 2256527       | 2256528       |
| Sample Reference                         |       |                    |                         | BH514B        | BH510         | BH513         | MB46          | WS506         |
| Sample Number                            |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                         | 27/04/2022    | 27/04/2022    | 27/04/2022    | 27/04/2022    | 27/04/2022    |
| Time Taken                               |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |               |               |
|                                          |       |                    |                         |               |               |               |               |               |

#### General Inorganics

|                                  |          |       |           |       |       |       |       |       |
|----------------------------------|----------|-------|-----------|-------|-------|-------|-------|-------|
| pH                               | pH Units | N/A   | ISO 17025 | 8.4   | -     | -     | -     | -     |
| Temperature on Receipt           | °C       | 0.1   | NONE      | 6.7   | -     | -     | -     | -     |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | 1000  | -     | -     | -     | -     |
| Turbidity                        | NTU      | 1     | NONE      | 31    | -     | -     | -     | -     |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 110   | 7.7   | < 1.0 | 9     | 140   |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | 8.1   | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | 2200  | 370   | 300   | 290   | 680   |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 187   | 2660  | 1390  | 282   | 290   |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 1300  | 480   | 390   | 10000 | 2000  |
| Total Suspended Solids           | mg/l     | 2     | ISO 17025 | 5400  | 47    | 14    | 10    | 290   |

|                  |      |      |      |       |   |   |   |   |
|------------------|------|------|------|-------|---|---|---|---|
| Redox Potential  | mV   | -800 | NONE | 142.7 | - | - | - | - |
| Dissolved Oxygen | mg/l | 1    | NONE | < 1.0 | - | - | - | - |

#### Total Phenols

|                            |      |    |           |      |      |      |      |      |
|----------------------------|------|----|-----------|------|------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|--------|--------|



Analytical Report Number: 22-54946  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089-00005

|                                          |               |                    |                         |               |               |
|------------------------------------------|---------------|--------------------|-------------------------|---------------|---------------|
| Lab Sample Number                        | 2256524       | 2256525            | 2256526                 | 2256527       | 2256528       |
| Sample Reference                         | BH514B        | BH510              | BH513                   | MB46          | WS506         |
| Sample Number                            | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Date Sampled                             | 27/04/2022    | 27/04/2022         | 27/04/2022              | 27/04/2022    | 27/04/2022    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |               |               |

#### Heavy Metals / Metalloids

|                       |      |   |           |      |       |       |       |      |
|-----------------------|------|---|-----------|------|-------|-------|-------|------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | U/S* | < 5.0 | < 5.0 | < 5.0 | U/S* |
| Chromium (III)        | µg/l | 5 | NONE      | U/S* | < 5.0 | < 5.0 | < 5.0 | U/S* |

|                      |      |      |           |        |        |        |        |      |
|----------------------|------|------|-----------|--------|--------|--------|--------|------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 1.1    | 0.51   | 0.24   | 1.94   | 37.7 |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | < 0.02 | 0.12   | 0.04   | < 0.02 | 0.06 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | 4.7    | 3.8    | 4.7    | 0.7    | 21   |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 0.6    | 3.2    | 2.2    | 5.9    | 59   |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | < 0.2  | 0.8    | 5.4  |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.16 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 0.9    | 9      | 3.1    | 2.2    | 17   |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 0.7    | 2.8    | 1.1    | 1      | 26   |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 2.3    | 35     | 9      | 17     | 8    |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                     |      |    |           |       |       |       |       |       |
|-----------------------------------------------------|------|----|-----------|-------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 HS_1D_AL               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 HS_1D_AL               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 HS_1D_AL              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) HS+EH_1D_AL_#1_#2_MS | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |

|                                                    |      |    |           |       |       |       |       |       |
|----------------------------------------------------|------|----|-----------|-------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 HS_1D_AR               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 HS_1D_AR               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 HS_1D_AR              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) HS+EH_1D_AR_#1_#2_MS | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample

\*U/S due to high variances between chromium (hexavalent) and chromium (dissolved) caused by method differences.



Analytical Report Number: 22-54946  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089-00005

|                                          |       |                    |                         |               |
|------------------------------------------|-------|--------------------|-------------------------|---------------|
| Lab Sample Number                        |       |                    |                         | 2256816       |
| Sample Reference                         |       |                    |                         | BH514B        |
| Sample Number                            |       |                    |                         | Filtered      |
| Depth (m)                                |       |                    |                         | None Supplied |
| Date Sampled                             |       |                    |                         | 27/04/2022    |
| Time Taken                               |       |                    |                         | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |

#### General Inorganics

|                                  |          |       |           |       |
|----------------------------------|----------|-------|-----------|-------|
| pH                               | pH Units | N/A   | ISO 17025 | 8.6   |
| Temperature on Receipt           | °C       | 0.1   | NONE      | 6.3   |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | 960   |
| Turbidity                        | NTU      | 1     | NONE      | < 1.0 |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 110   |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | 5.2   |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | 2700  |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 197   |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0 |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 1200  |
| Total Suspended Solids           | mg/l     | 2     | ISO 17025 | -     |

|                  |      |      |      |       |
|------------------|------|------|------|-------|
| Redox Potential  | mV   | -800 | NONE | 121.7 |
| Dissolved Oxygen | mg/l | 1    | NONE | 10    |

#### Total Phenols

|                            |      |    |           |      |
|----------------------------|------|----|-----------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 |
|----------------------------|------|----|-----------|------|

#### Speciated PAHs

|                        |      |      |           |        |
|------------------------|------|------|-----------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |
|-------------------|------|------|-----------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 |
|-------------------|------|------|-----------|--------|



Analytical Report Number: 22-54946  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089-00005

|                                          |       |                    |                         |               |
|------------------------------------------|-------|--------------------|-------------------------|---------------|
| Lab Sample Number                        |       |                    |                         | 2256816       |
| Sample Reference                         |       |                    |                         | BH514B        |
| Sample Number                            |       |                    |                         | Filtered      |
| Depth (m)                                |       |                    |                         | None Supplied |
| Date Sampled                             |       |                    |                         | 27/04/2022    |
| Time Taken                               |       |                    |                         | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |

#### Heavy Metals / Metalloids

|                       |      |   |           |       |
|-----------------------|------|---|-----------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 |

|                      |      |      |           |        |
|----------------------|------|------|-----------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 1.33   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | < 0.02 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | 5      |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 57     |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | 0.16   |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | < 0.5  |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 2      |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 4.8    |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |
|------------------------------------|------|---|-----------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                     |      |    |           |       |
|-----------------------------------------------------|------|----|-----------|-------|
| TPH-CWG - Aliphatic >C5 - C6 HS_1D_AL               | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 HS_1D_AL               | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 HS_1D_AL              | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) HS+EH_1D_AL_#1_#2_MS | µg/l | 10 | NONE      | < 10  |

|                                                    |      |    |           |       |
|----------------------------------------------------|------|----|-----------|-------|
| TPH-CWG - Aromatic >C5 - C7 HS_1D_AR               | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 HS_1D_AR               | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 HS_1D_AR              | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aromatic >C12 - C16 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aromatic >C16 - C21 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aromatic >C21 - C35 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aromatic (C5 - C35) HS+EH_1D_AR_#1_#2_MS | µg/l | 10 | NONE      | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample

\*U/S due to high variances between chromium (hexavalent) and chromium (dissolved) caused by method differences.



**Analytical Report Number : 22-54946**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| Suspended solids in water                | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | ISO 17025            |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |



Analytical Report Number : 22-54946

Project / Site name: Clarendon Phase 3B

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name              | Analytical Method Description                                                                          | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Free cyanide (low level) in water | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW. | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Temperature on Receipt (water)    | Temperature of water upon receipt.                                                                     | In-house method                                                                                                 | L019-UK       | W                  | NONE                 |
| Turbidity of in water             | Determination of sample turbidity by colorimeter and comparison with standard reference samples.       | In-house method based on Standard Method 8237                                                                   | L083-PL       | W                  | NONE                 |

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| _       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

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## **Analytical Report Number : 22-55654**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 24/04/2022 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 03/05/2022 |
| <b>Your order number:</b>   | S-RE6089-00005     | <b>Analysis completed by:</b>                          | 09/05/2022 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 09/05/2022 |
| <b>Samples Analysed:</b>    | 1 water sample     |                                                        |            |

**Signed:**

*Pichura*

Edyta Pichura  
Quality Specialist  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-55654  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089-00005

|                                          |       |                    |                         |               |
|------------------------------------------|-------|--------------------|-------------------------|---------------|
| Lab Sample Number                        |       |                    |                         | 2260543       |
| Sample Reference                         |       |                    |                         | BH514B        |
| Sample Number                            |       |                    |                         | Filtered      |
| Depth (m)                                |       |                    |                         | None Supplied |
| Date Sampled                             |       |                    |                         | 22/04/2022    |
| Time Taken                               |       |                    |                         | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |

#### General Inorganics

|                                  |          |       |           |        |
|----------------------------------|----------|-------|-----------|--------|
| pH                               | pH Units | N/A   | ISO 17025 | 8.7    |
| Temperature on Receipt           | °C       | 0.1   | NONE      | 6.4    |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | 1000   |
| Turbidity                        | NTU      | 1     | NONE      | 5.9    |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 190    |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | 5.9    |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | 4000*  |
| Sulphate as SO4                  | µg/l     | 45    | ISO 17025 | 233000 |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 233    |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0  |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 1300   |

|                  |      |      |      |       |
|------------------|------|------|------|-------|
| Redox Potential  | mV   | -800 | NONE | 156.5 |
| Dissolved Oxygen | mg/l | 1    | NONE | 8.1   |

#### Total Phenols

|                            |      |    |           |      |
|----------------------------|------|----|-----------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 |
|----------------------------|------|----|-----------|------|

#### Speciated PAHs

|                        |      |      |           |        |
|------------------------|------|------|-----------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |
|-------------------|------|------|-----------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 |
|-------------------|------|------|-----------|--------|



Analytical Report Number: 22-55654  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089-00005

|                                          |               |                    |                         |  |
|------------------------------------------|---------------|--------------------|-------------------------|--|
| Lab Sample Number                        | 2260543       |                    |                         |  |
| Sample Reference                         | BH514B        |                    |                         |  |
| Sample Number                            | Filtered      |                    |                         |  |
| Depth (m)                                | None Supplied |                    |                         |  |
| Date Sampled                             | 22/04/2022    |                    |                         |  |
| Time Taken                               | None Supplied |                    |                         |  |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |  |

#### Heavy Metals / Metalloids

|                       |      |   |           |       |
|-----------------------|------|---|-----------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 |

|                      |      |      |           |        |
|----------------------|------|------|-----------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 0.63   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | 0.04   |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | 4.8    |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 4.5    |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | 0.7    |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 13     |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 1.6    |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 22     |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |
|------------------------------------|------|---|-----------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                                |      |    |           |       |
|----------------------------------------------------------------|------|----|-----------|-------|
| TPH-CWG - Aliphatic >C5 - C6 <sub>HS_1D_AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 <sub>HS_1D_AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 <sub>HS_1D_AL</sub>              | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 <sub>EH_1D_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 <sub>EH_1D_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 <sub>EH_1D_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 <sub>EH_1D_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) <sub>HS+EH_1D_AL_#1_#2_MS</sub> | µg/l | 10 | NONE      | < 10  |

|                                                               |      |    |           |       |
|---------------------------------------------------------------|------|----|-----------|-------|
| TPH-CWG - Aromatic >C5 - C7 <sub>HS_1D_AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 <sub>HS_1D_AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 <sub>HS_1D_AR</sub>              | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 <sub>EH_1D_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aromatic >C12 - C16 <sub>EH_1D_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aromatic >C16 - C21 <sub>EH_1D_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aromatic >C21 - C35 <sub>EH_1D_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aromatic (C5 - C35) <sub>HS+EH_1D_AR_#1_#2_MS</sub> | µg/l | 10 | NONE      | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample

\*Result was reported from high dilution and should be interpreted with care



**Analytical Report Number : 22-55654**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 *for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | ISO 17025            |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |
| Free cyanide (low level) in water        | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW.                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |



Analytical Report Number : 22-55654

Project / Site name: Clarendon Phase 3B

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name           | Analytical Method Description                                                                    | Analytical Method Reference                   | Method number | Wet / Dry Analysis | Accreditation Status |
|--------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------|---------------|--------------------|----------------------|
| Temperature on Receipt (water) | Temperature of water upon receipt.                                                               | In-house method                               | L019-UK       | W                  | NONE                 |
| Turbidity of in water          | Determination of sample turbidity by colorimeter and comparison with standard reference samples. | In-house method based on Standard Method 8237 | L083-PL       | W                  | NONE                 |

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| -       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

**Analytical Report Number : 22-55654**  
**Project / Site name: Clarendon Phase 3B**

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

| Sample ID | Other ID | Sample Type | Lab Sample Number | Sample Deviation | Test Name                                | Test Ref | Test Deviation |
|-----------|----------|-------------|-------------------|------------------|------------------------------------------|----------|----------------|
| BH514B    | Filtered | W           | 2260543           | c                | BTEX and MTBE in water (Monoaromatics)   | L073B-PL | c              |
| BH514B    | Filtered | W           | 2260543           | c                | Hexavalent chromium in water             | L080-PL  | c              |
| BH514B    | Filtered | W           | 2260543           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH514B    | Filtered | W           | 2260543           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH514B    | Filtered | W           | 2260543           | c                | Cr (III) in water                        | L080-PL  | c              |
| BH514B    | Filtered | W           | 2260543           | c                | Dissolved Oxygen in water                | L086-PL  | c              |
| BH514B    | Filtered | W           | 2260543           | c                | Electrical conductivity at 20oC of water | L031-PL  | c              |
| BH514B    | Filtered | W           | 2260543           | c                | Free cyanide (low level) in water        | L080-PL  | c              |
| BH514B    | Filtered | W           | 2260543           | c                | Low level total cyanide in water         | L080-PL  | c              |
| BH514B    | Filtered | W           | 2260543           | c                | Metals in water by ICP-MS (dissolved)    | L012-PL  | c              |
| BH514B    | Filtered | W           | 2260543           | c                | Redox Potential of waters                | L084-PL  | c              |
| BH514B    | Filtered | W           | 2260543           | c                | Sulphate in water                        | L039-PL  | c              |
| BH514B    | Filtered | W           | 2260543           | c                | Sulphide in water                        | L029-PL  | c              |
| BH514B    | Filtered | W           | 2260543           | c                | Turbidity of in water                    | L083-PL  | c              |
| BH514B    | Filtered | W           | 2260543           | c                | pH at 20oC in water (automated)          | L099-PL  | c              |

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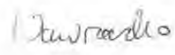
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## **Analytical Report Number : 22-56383**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 05/05/2022 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 05/05/2022 |
| <b>Your order number:</b>   | S-RE6089 00005     | <b>Analysis completed by:</b>                          | 12/05/2022 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 12/05/2022 |
| <b>Samples Analysed:</b>    | 4 water samples    |                                                        |            |

  
**Signed:**

Joanna Wawrzeczko  
Reporting Specialist  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting  
leachates - 2 weeks from reporting  
waters - 2 weeks from reporting  
asbestos - 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-56383  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089 00005

|                                          |  |  |  |               |                    |                         |               |
|------------------------------------------|--|--|--|---------------|--------------------|-------------------------|---------------|
| Lab Sample Number                        |  |  |  | 2264922       | 2264923            | 2264924                 | 2264925       |
| Sample Reference                         |  |  |  | BH514B        | BH510              | BH513                   | BH514B        |
| Sample Number                            |  |  |  | Unfiltered    | None Supplied      | None Supplied           | Filtered      |
| Depth (m)                                |  |  |  | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Date Sampled                             |  |  |  | 04/05/2022    | 04/05/2022         | 04/05/2022              | 04/05/2022    |
| Time Taken                               |  |  |  | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Analytical Parameter<br>(Water Analysis) |  |  |  | Units         | Limit of detection | Accreditation<br>Status |               |

#### General Inorganics

|                                        |          |       |           |       |       |       |       |
|----------------------------------------|----------|-------|-----------|-------|-------|-------|-------|
| pH                                     | pH Units | N/A   | ISO 17025 | 8.4   | -     | -     | 8.2   |
| Temperature on Receipt                 | °C       | 0.1   | NONE      | 5.8   | -     | -     | 5.8   |
| Electrical Conductivity at 20 °C       | µS/cm    | 10    | ISO 17025 | 940   | -     | -     | 970   |
| Turbidity                              | NTU      | 1     | NONE      | 2700  | -     | -     | 930   |
| Total Cyanide (Low Level 1 µg/l)       | µg/l     | 1     | ISO 17025 | 83    | 6.2   | < 1.0 | 86    |
| Free Cyanide (Low Level 1 µg/l)        | µg/l     | 1     | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Thiocyanate as SCN                     | µg/l     | 200   | ISO 17025 | 1300  | 280   | < 200 | 1300  |
| Sulphate as SO <sub>4</sub>            | mg/l     | 0.045 | ISO 17025 | 232   | 2700  | 1850  | 241   |
| Sulphide                               | µg/l     | 5     | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH <sub>3</sub> | µg/l     | 15    | ISO 17025 | 3700  | 660   | 640   | 1200  |
| Total Suspended Solids                 | mg/l     | 2     | ISO 17025 | 6200  | 35    | 12    | -     |

|                  |      |      |      |       |   |   |       |
|------------------|------|------|------|-------|---|---|-------|
| Redox Potential  | mV   | -800 | NONE | -86.4 | - | - | -48.8 |
| Dissolved Oxygen | mg/l | 1    | NONE | 7.3   | - | - | 3.8   |

#### Total Phenols

|                            |      |    |           |      |      |      |      |
|----------------------------|------|----|-----------|------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|--------|



Analytical Report Number: 22-56383  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089 00005

|                                          |               |                    |                         |               |
|------------------------------------------|---------------|--------------------|-------------------------|---------------|
| Lab Sample Number                        | 2264922       | 2264923            | 2264924                 | 2264925       |
| Sample Reference                         | BH514B        | BH510              | BH513                   | BH514B        |
| Sample Number                            | Unfiltered    | None Supplied      | None Supplied           | Filtered      |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Date Sampled                             | 04/05/2022    | 04/05/2022         | 04/05/2022              | 04/05/2022    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |               |

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |       |
|-----------------------|------|---|-----------|-------|-------|-------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 |

|                      |      |      |           |        |        |        |        |
|----------------------|------|------|-----------|--------|--------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 1.33   | 0.59   | 0.27   | 1.63   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | < 0.02 | 0.12   | 0.03   | < 0.02 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | 0.2    | < 0.2  | < 0.2  | 0.2    |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | < 0.5  | 2.6    | 1      | 3.5    |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | < 0.2  | < 0.2  |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 1.7    | 9.8    | 5.8    | 2.4    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 1.6    | 4.8    | 1.3    | 2      |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 1.6    | 12     | 14     | 2.3    |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                     |      |    |           |       |       |       |       |
|-----------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 HS_1D_AL               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 HS_1D_AL               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 HS_1D_AL              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) HS+EH_1D_AL_#1_#2_MS | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |

|                                                    |      |    |           |       |       |       |       |
|----------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 HS_1D_AR               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 HS_1D_AR               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 HS_1D_AR              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) HS+EH_1D_AR_#1_#2_MS | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number : 22-56383**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| Suspended solids in water                | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | ISO 17025            |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |



**Analytical Report Number : 22-56383**

**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name              | Analytical Method Description                                                                          | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Free cyanide (low level) in water | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW. | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Temperature on Receipt (water)    | Temperature of water upon receipt.                                                                     | In-house method                                                                                                 | L019-UK       | W                  | NONE                 |
| Turbidity of in water             | Determination of sample turbidity by colorimeter and comparison with standard reference samples.       | In-house method based on Standard Method 8237                                                                   | L083-PL       | W                  | NONE                 |

**For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.**

**For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.**

**Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.**

**Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.**

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| _       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

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## **Analytical Report Number : 22-58010**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 12/05/2022 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 12/05/2022 |
| <b>Your order number:</b>   | S-RE6089 00005     | <b>Analysis completed by:</b>                          | 19/05/2022 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 19/05/2022 |
| <b>Samples Analysed:</b>    | 6 water samples    |                                                        |            |

**Signed:**

Adam Fenwick  
Technical Reviewer  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-58010  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089 00005

|                                          |  |  |  |               |                    |                      |               |               |               |
|------------------------------------------|--|--|--|---------------|--------------------|----------------------|---------------|---------------|---------------|
| Lab Sample Number                        |  |  |  | 2273563       | 2273564            | 2273565              | 2273566       | 2273567       | 2273568       |
| Sample Reference                         |  |  |  | BH514B        | BH510              | BH513                | W5506         | MB47          | BH514B        |
| Sample Number                            |  |  |  | Unfiltered    | None Supplied      | None Supplied        | None Supplied | None Supplied | Filtered      |
| Depth (m)                                |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |  |  |  | 11/05/2022    | 11/05/2022         | 11/05/2022           | 11/05/2022    | 11/05/2022    | 11/05/2022    |
| Time Taken                               |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) |  |  |  | Units         | Limit of detection | Accreditation Status |               |               |               |

#### General Inorganics

|                                  |          |       |           |        |         |         |        |        |        |
|----------------------------------|----------|-------|-----------|--------|---------|---------|--------|--------|--------|
| pH                               | pH Units | N/A   | ISO 17025 | 8.5    | -       | -       | -      | -      | 8.2    |
| Temperature on Receipt           | °C       | 0.1   | NONE      | 5.2    | -       | -       | -      | -      | 5.2    |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | 940    | -       | -       | -      | -      | 980    |
| Turbidity                        | NTU      | 1     | NONE      | 81     | -       | -       | -      | -      | 390    |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 49     | 2.4     | < 1.0   | 130    | < 1.0  | 63     |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | < 1.0  | < 1.0   | < 1.0   | < 1.0  | < 1.0  | < 1.0  |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | 1000   | 320     | 230     | 410    | < 200  | 930    |
| Sulphate as SO4                  | µg/l     | 45    | ISO 17025 | 154000 | 2900000 | 1800000 | 104000 | 102000 | 157000 |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 154    | 2900    | 1800    | 104    | 102    | 157    |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0  | < 5.0   | < 5.0   | < 5.0  | < 5.0  | < 5.0  |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 1400   | < 15    | < 15    | 1100   | 13000  | 1400   |
| Total Suspended Solids           | mg/l     | 2     | ISO 17025 | 5800   | 74      | 68      | 10     | 2      | -      |

|                  |      |      |      |     |   |   |   |   |       |
|------------------|------|------|------|-----|---|---|---|---|-------|
| Redox Potential  | mV   | -800 | NONE | 191 | - | - | - | - | 192.9 |
| Dissolved Oxygen | mg/l | 1    | NONE | 8.7 | - | - | - | - | 8.5   |

#### Total Phenols

|                            |      |    |           |      |      |      |      |      |      |
|----------------------------|------|----|-----------|------|------|------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|--------|--------|--------|

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |     |       |       |
|-----------------------|------|---|-----------|-------|-------|-------|-----|-------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 | U/S | < 5.0 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | < 5.0 | U/S | < 5.0 | < 5.0 |

|                      |      |      |           |        |        |        |      |        |        |
|----------------------|------|------|-----------|--------|--------|--------|------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 1.31   | 0.49   | 0.21   | 30.4 | 1.82   | 1.42   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | < 0.02 | 0.12   | 0.02   | 0.03 | < 0.02 | < 0.02 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | < 0.2  | 20   | < 0.2  | < 0.2  |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 1.1    | 3.5    | 1.7    | 44   | 2.7    | 1      |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | < 0.2  | 4.1  | 0.5    | < 0.2  |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | 0.14 | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 0.7    | 9.6    | 2.8    | 16   | 2.1    | 0.9    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 0.8    | 1.8    | 0.8    | 18   | 0.8    | < 0.6  |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 1.1    | 13     | 5.6    | 3.9  | 14     | 1.2    |



Analytical Report Number: 22-58010  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089 00005

|                                          |               |                    |                         |               |               |               |
|------------------------------------------|---------------|--------------------|-------------------------|---------------|---------------|---------------|
| Lab Sample Number                        | 2273563       | 2273564            | 2273565                 | 2273566       | 2273567       | 2273568       |
| Sample Reference                         | BH514B        | BH510              | BH513                   | W5506         | MB47          | BH514B        |
| Sample Number                            | Unfiltered    | None Supplied      | None Supplied           | None Supplied | None Supplied | Filtered      |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied | None Supplied |
| Date Sampled                             | 11/05/2022    | 11/05/2022         | 11/05/2022              | 11/05/2022    | 11/05/2022    | 11/05/2022    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |               |               |               |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                                |      |    |           |       |       |       |       |       |       |
|----------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 <sub>HS 1D AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 <sub>HS 1D AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 <sub>HS 1D AL</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 <sub>EH 1D AL #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 <sub>EH 1D AL #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 <sub>EH 1D AL #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 <sub>EH 1D AL #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) <sub>HS+EH 1D AL #1 #2 MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  | < 10  |

|                                                               |      |    |           |       |       |       |       |       |       |
|---------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 <sub>HS 1D AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 <sub>HS 1D AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 <sub>HS 1D AR</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 <sub>EH 1D AR #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 <sub>EH 1D AR #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 <sub>EH 1D AR #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 <sub>EH 1D AR #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) <sub>HS+EH 1D AR #1 #2 MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number : 22-58010**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 *for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| Suspended solids in water                | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | ISO 17025            |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |



Analytical Report Number : 22-58010  
Project / Site name: Clarendon Phase 3B

**Water matrix abbreviations:**

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name              | Analytical Method Description                                                                          | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Free cyanide (low level) in water | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW. | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Temperature on Receipt (water)    | Temperature of water upon receipt.                                                                     | In-house method                                                                                                 | L019-UK       | W                  | NONE                 |
| Turbidity of in water             | Determination of sample turbidity by colorimeter and comparison with standard reference samples.       | In-house method based on Standard Method 8237                                                                   | L083-PL       | W                  | NONE                 |

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| _       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

**Jack Holliday**

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## **Analytical Report Number : 22-59928**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 20/05/2022 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 20/05/2022 |
| <b>Your order number:</b>   | S-RE6089 00005     | <b>Analysis completed by:</b>                          | 27/05/2022 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 30/05/2022 |
| <b>Samples Analysed:</b>    | 5 water samples    |                                                        |            |

**Signed:**

*Martyna Langer*  
Martyna Langer  
Junior Reporting Specialist  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-59928  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089 00005

|                                          |               |                    |                         |               |               |
|------------------------------------------|---------------|--------------------|-------------------------|---------------|---------------|
| Lab Sample Number                        | 2284970       | 2284971            | 2284972                 | 2284973       | 2284974       |
| Sample Reference                         | BH514B        | BH510              | BH513                   | WS506         | BH514B        |
| Sample Number                            | Unfiltered    | Unfiltered         | Unfiltered              | Unfiltered    | Filtered      |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Date Sampled                             | 04/05/2022    | 19/05/2022         | 19/05/2022              | 19/05/2022    | 04/05/2022    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |               |               |

#### General Inorganics

|                                  |          |       |           |       |       |       |       |       |
|----------------------------------|----------|-------|-----------|-------|-------|-------|-------|-------|
| pH                               | pH Units | N/A   | ISO 17025 | 8.2   | -     | -     | -     | 8.2   |
| Temperature on Receipt           | oC       | 0.1   | NONE      | 5.8   | -     | -     | -     | 5.7   |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | 850   | -     | -     | -     | 840   |
| Turbidity                        | NTU      | 1     | NONE      | 49    | -     | -     | -     | 160   |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 76    | 7.6   | 1.1   | 100   | 67    |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | < 1.0 | 1.3   | < 1.0 | < 1.0 | < 1.0 |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | 470   | 400   | 210   | 400   | 690   |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 174   | 5090  | 2030  | 137   | 160   |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 1200  | 650   | < 15  | 490   | 810   |
| Total Suspended Solids           | mg/l     | 2     | ISO 17025 | 4300  | 33    | < 2.0 | 32    | -     |

|                  |      |      |      |     |   |   |   |       |
|------------------|------|------|------|-----|---|---|---|-------|
| Redox Potential  | mV   | -800 | NONE | 163 | - | - | - | 147.6 |
| Dissolved Oxygen | mg/l | 1    | NONE | 7.2 | - | - | - | 8.2   |

#### Total Phenols

|                            |      |    |           |      |      |      |      |      |
|----------------------------|------|----|-----------|------|------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|--------|--------|



Analytical Report Number: 22-59928  
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Your Order No: S-RE6089 00005

|                                          |               |                    |                         |               |               |
|------------------------------------------|---------------|--------------------|-------------------------|---------------|---------------|
| Lab Sample Number                        | 2284970       | 2284971            | 2284972                 | 2284973       | 2284974       |
| Sample Reference                         | BH514B        | BH510              | BH513                   | WS506         | BH514B        |
| Sample Number                            | Unfiltered    | Unfiltered         | Unfiltered              | Unfiltered    | Filtered      |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Date Sampled                             | 04/05/2022    | 19/05/2022         | 19/05/2022              | 19/05/2022    | 04/05/2022    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |               |               |

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |      |       |
|-----------------------|------|---|-----------|-------|-------|-------|------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 | U/S* | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | < 5.0 | U/S* | < 5.0 |

|                      |      |      |           |        |        |        |        |        |
|----------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 1.27   | 0.46   | 0.3    | 25.7   | 1.32   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | 0.04   | 0.17   | < 0.02 | 0.03   | 0.05   |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | 0.3    | 0.4    | 0.7    | 24     | < 0.2  |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 2.7    | 3.7    | 4.7    | 28     | 3.1    |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | < 0.2  | 1.4    | < 0.2  |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 4.7    | 6.7    | 5.6    | 7.3    | < 0.5  |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 0.7    | 5.8    | 1.8    | 15     | 0.9    |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 1.4    | 13     | 5.9    | 9.4    | 1.3    |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                                     |      |    |           |       |       |       |       |       |
|---------------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 <sub>HS, 1D, AL</sub>                  | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 <sub>HS, 1D, AL</sub>                  | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 <sub>HS, 1D, AL</sub>                 | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 <sub>EH, 1D, AL, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 <sub>EH, 1D, AL, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 <sub>EH, 1D, AL, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 <sub>EH, 1D, AL, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) <sub>HS+EH, 1D, AL, #1, #2, MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |

|                                                                    |      |    |           |       |       |       |       |       |
|--------------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 <sub>HS, 1D, AR</sub>                  | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 <sub>HS, 1D, AR</sub>                  | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 <sub>HS, 1D, AR</sub>                 | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 <sub>EH, 1D, AR, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 <sub>EH, 1D, AR, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 <sub>EH, 1D, AR, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 <sub>EH, 1D, AR, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) <sub>HS+EH, 1D, AR, #1, #2, MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample

\*U/S due to high variances between chromium (hexavalent) and chromium (III) caused by method differences.



**Analytical Report Number : 22-59928**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 *for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| Suspended solids in water                | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | ISO 17025            |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |



Analytical Report Number : 22-59928  
Project / Site name: Clarendon Phase 3B

**Water matrix abbreviations:**

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name              | Analytical Method Description                                                                          | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Free cyanide (low level) in water | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW. | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Temperature on Receipt (water)    | Temperature of water upon receipt.                                                                     | In-house method                                                                                                 | L019-UK       | W                  | NONE                 |
| Turbidity of in water             | Determination of sample turbidity by colorimeter and comparison with standard reference samples.       | In-house method based on Standard Method 8237                                                                   | L083-PL       | W                  | NONE                 |

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| _       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

Analytical Report Number : 22-59928

Project / Site name: Clarendon Phase 3B

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

| Sample ID | Other ID   | Sample Type | Lab Sample Number | Sample Deviation | Test Name                                | Test Ref | Test Deviation |
|-----------|------------|-------------|-------------------|------------------|------------------------------------------|----------|----------------|
| BH510     | Unfiltered | W           | 2284971           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH510     | Unfiltered | W           | 2284971           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH513     | Unfiltered | W           | 2284972           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH513     | Unfiltered | W           | 2284972           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH514B    | Filtered   | W           | 2284974           | c                | BTEX and MTBE in water (Monoaromatics)   | L073B-PL | c              |
| BH514B    | Filtered   | W           | 2284974           | c                | Hexavalent chromium in water             | L080-PL  | c              |
| BH514B    | Filtered   | W           | 2284974           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH514B    | Filtered   | W           | 2284974           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH514B    | Filtered   | W           | 2284974           | c                | Cr (III) in water                        | L080-PL  | c              |
| BH514B    | Filtered   | W           | 2284974           | c                | Dissolved Oxygen in water                | L086-PL  | c              |
| BH514B    | Filtered   | W           | 2284974           | c                | Electrical conductivity at 20oC of water | L031-PL  | c              |
| BH514B    | Filtered   | W           | 2284974           | c                | Free cyanide (low level) in water        | L080-PL  | c              |
| BH514B    | Filtered   | W           | 2284974           | c                | Low level total cyanide in water         | L080-PL  | c              |
| BH514B    | Filtered   | W           | 2284974           | c                | Metals in water by ICP-MS (dissolved)    | L012-PL  | c              |
| BH514B    | Filtered   | W           | 2284974           | c                | Redox Potential of waters                | L084-PL  | c              |
| BH514B    | Filtered   | W           | 2284974           | c                | Speciated EPA-16 PAHs in water           | L102B-PL | c              |
| BH514B    | Filtered   | W           | 2284974           | c                | Sulphate in water                        | L039-PL  | c              |
| BH514B    | Filtered   | W           | 2284974           | c                | Sulphide in water                        | L029-PL  | c              |
| BH514B    | Filtered   | W           | 2284974           | c                | TPHCWG (Waters)                          | L070-PL  | c              |
| BH514B    | Filtered   | W           | 2284974           | c                | Thiocyanate in water                     | L082-PL  | c              |
| BH514B    | Filtered   | W           | 2284974           | c                | Turbidity of in water                    | L083-PL  | c              |
| BH514B    | Filtered   | W           | 2284974           | c                | pH at 20oC in water (automated)          | L099-PL  | c              |
| BH514B    | Unfiltered | W           | 2284970           | c                | BTEX and MTBE in water (Monoaromatics)   | L073B-PL | c              |
| BH514B    | Unfiltered | W           | 2284970           | c                | Hexavalent chromium in water             | L080-PL  | c              |
| BH514B    | Unfiltered | W           | 2284970           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH514B    | Unfiltered | W           | 2284970           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH514B    | Unfiltered | W           | 2284970           | c                | Cr (III) in water                        | L080-PL  | c              |
| BH514B    | Unfiltered | W           | 2284970           | c                | Dissolved Oxygen in water                | L086-PL  | c              |
| BH514B    | Unfiltered | W           | 2284970           | c                | Electrical conductivity at 20oC of water | L031-PL  | c              |
| BH514B    | Unfiltered | W           | 2284970           | c                | Free cyanide (low level) in water        | L080-PL  | c              |
| BH514B    | Unfiltered | W           | 2284970           | c                | Low level total cyanide in water         | L080-PL  | c              |
| BH514B    | Unfiltered | W           | 2284970           | c                | Metals in water by ICP-MS (dissolved)    | L012-PL  | c              |
| BH514B    | Unfiltered | W           | 2284970           | c                | Redox Potential of waters                | L084-PL  | c              |
| BH514B    | Unfiltered | W           | 2284970           | c                | Settleable Solids in water               | L004-PL  | c              |
| BH514B    | Unfiltered | W           | 2284970           | c                | Speciated EPA-16 PAHs in water           | L102B-PL | c              |
| BH514B    | Unfiltered | W           | 2284970           | c                | Sulphate in water                        | L039-PL  | c              |
| BH514B    | Unfiltered | W           | 2284970           | c                | Sulphide in water                        | L029-PL  | c              |
| BH514B    | Unfiltered | W           | 2284970           | c                | Suspended solids in water                | L004-PL  | c              |
| BH514B    | Unfiltered | W           | 2284970           | c                | TPHCWG (Waters)                          | L070-PL  | c              |
| BH514B    | Unfiltered | W           | 2284970           | c                | Thiocyanate in water                     | L082-PL  | c              |
| BH514B    | Unfiltered | W           | 2284970           | c                | Turbidity of in water                    | L083-PL  | c              |
| BH514B    | Unfiltered | W           | 2284970           | c                | pH at 20oC in water (automated)          | L099-PL  | c              |
| WS506     | Unfiltered | W           | 2284973           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| WS506     | Unfiltered | W           | 2284973           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |



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## **Analytical Report Number : 22-61552**

Replaces Analytical Report Number: 22-61552, issue no. 1  
Additional analysis undertaken.

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 27/05/2022 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 27/05/2022 |
| <b>Your order number:</b>   | S-RE6089 00005     | <b>Analysis completed by:</b>                          | 14/06/2022 |
| <b>Report Issue Number:</b> | 2                  | <b>Report issued on:</b>                               | 14/06/2022 |
| <b>Samples Analysed:</b>    | 6 water samples    |                                                        |            |

  
**Signed:**

Adam Fenwick  
Technical Reviewer  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-61552  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089 00005

|                                          |               |                    |                         |               |               |
|------------------------------------------|---------------|--------------------|-------------------------|---------------|---------------|
| Lab Sample Number                        | 2294279       | 2294280            | 2294281                 | 2294282       | 2294283       |
| Sample Reference                         | BH514B        | BH510              | BH513                   | WS506         | MB48          |
| Sample Number                            | unfiltered    | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Date Sampled                             | 25/05/2022    | 25/05/2022         | 25/05/2022              | 25/05/2022    | 25/05/2022    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |               |               |

#### General Inorganics

|                                  |          |       |           |        |         |         |        |        |
|----------------------------------|----------|-------|-----------|--------|---------|---------|--------|--------|
| pH                               | pH Units | N/A   | ISO 17025 | 8.1    | -       | -       | -      | -      |
| Temperature on Receipt           | oC       | 0.1   | NONE      | 6.9    | -       | -       | -      | -      |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | 970    | -       | -       | -      | -      |
| Turbidity                        | NTU      | 1     | NONE      | 17     | -       | -       | -      | -      |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 52     | 3       | < 1.0   | 67     | < 1.0  |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | < 1.0  | < 1.0   | < 1.0   | < 1.0  | < 1.0  |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | U/S    | 450     | 280     | 530    | 630    |
| Sulphate as SO4                  | µg/l     | 45    | ISO 17025 | 170000 | 5240000 | 1720000 | 147000 | 118000 |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 170    | 5240    | 1720    | 147    | 118    |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0  | < 5.0   | < 5.0   | < 5.0  | < 5.0  |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 1100   | 590     | < 15    | 150    | 10000  |
| Total Suspended Solids           | mg/l     | 2     | ISO 17025 | 590    | 68      | 46      | 190    | 8      |

|                  |      |      |      |      |   |   |   |   |
|------------------|------|------|------|------|---|---|---|---|
| Redox Potential  | mV   | -800 | NONE | 63.3 | - | - | - | - |
| Dissolved Oxygen | mg/l | 1    | NONE | 4.8  | - | - | - | - |

#### Total Phenols

|                            |      |    |           |      |      |      |      |      |
|----------------------------|------|----|-----------|------|------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|--------|--------|



Analytical Report Number: 22-61552  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089 00005

|                                          |               |                    |                         |               |               |
|------------------------------------------|---------------|--------------------|-------------------------|---------------|---------------|
| Lab Sample Number                        | 2294279       | 2294280            | 2294281                 | 2294282       | 2294283       |
| Sample Reference                         | BH514B        | BH510              | BH513                   | WS506         | MB48          |
| Sample Number                            | unfiltered    | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Date Sampled                             | 25/05/2022    | 25/05/2022         | 25/05/2022              | 25/05/2022    | 25/05/2022    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |               |               |

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |       |       |
|-----------------------|------|---|-----------|-------|-------|-------|-------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | < 5.0 | 35    | < 5.0 |

|                      |      |      |           |        |        |        |        |        |
|----------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 1.98   | 0.41   | 0.24   | 32.6   | 2.29   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | < 0.02 | 0.06   | < 0.02 | < 0.02 | < 0.02 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | < 0.2  | 35     | 0.5    |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 1.3    | 5.6    | 1.6    | 28     | 5      |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | < 0.2  | 2.4    | 0.8    |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 2.7    | 6.7    | 4.3    | 8.4    | 2.3    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 1.2    | 3.7    | 1.1    | 21     | 1.1    |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 0.9    | 14     | 5.9    | 6.1    | 19     |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                                |      |    |           |       |       |       |       |       |
|----------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 <sub>HS,1D,AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 <sub>HS,1D,AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 <sub>HS,1D,AL</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) <sub>HS+EH,1D,AL,#1,#2,MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |

|                                                               |      |    |           |       |       |       |       |       |
|---------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 <sub>HS,1D,AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 <sub>HS,1D,AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 <sub>HS,1D,AR</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) <sub>HS+EH,1D,AR,#1,#2,MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 22-61552  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089 00005

|                                          |               |                    |                         |  |
|------------------------------------------|---------------|--------------------|-------------------------|--|
| Lab Sample Number                        | 2294284       |                    |                         |  |
| Sample Reference                         | BH514B        |                    |                         |  |
| Sample Number                            | Filtred       |                    |                         |  |
| Depth (m)                                | None Supplied |                    |                         |  |
| Date Sampled                             | 25/05/2022    |                    |                         |  |
| Time Taken                               | None Supplied |                    |                         |  |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |  |

#### General Inorganics

|                                  |          |       |           |        |
|----------------------------------|----------|-------|-----------|--------|
| pH                               | pH Units | N/A   | ISO 17025 | 7.9    |
| Temperature on Receipt           | oC       | 0.1   | NONE      | 6.9    |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | 1000   |
| Turbidity                        | NTU      | 1     | NONE      | -      |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 49     |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | < 1.0  |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | < 200  |
| Sulphate as SO4                  | µg/l     | 45    | ISO 17025 | 203000 |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 203    |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0  |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 1200   |
| Total Suspended Solids           | mg/l     | 2     | ISO 17025 | -      |

|                  |      |      |      |      |
|------------------|------|------|------|------|
| Redox Potential  | mV   | -800 | NONE | 83.4 |
| Dissolved Oxygen | mg/l | 1    | NONE | 7.6  |

#### Total Phenols

|                            |      |    |           |      |
|----------------------------|------|----|-----------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 |
|----------------------------|------|----|-----------|------|

#### Speciated PAHs

|                        |      |      |           |        |
|------------------------|------|------|-----------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |
|-------------------|------|------|-----------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 |
|-------------------|------|------|-----------|--------|



Analytical Report Number: 22-61552  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089 00005

|                                          |               |                    |                         |  |
|------------------------------------------|---------------|--------------------|-------------------------|--|
| Lab Sample Number                        | 2294284       |                    |                         |  |
| Sample Reference                         | BH514B        |                    |                         |  |
| Sample Number                            | Filtred       |                    |                         |  |
| Depth (m)                                | None Supplied |                    |                         |  |
| Date Sampled                             | 25/05/2022    |                    |                         |  |
| Time Taken                               | None Supplied |                    |                         |  |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |  |

#### Heavy Metals / Metalloids

|                       |      |   |           |       |
|-----------------------|------|---|-----------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 |

|                      |      |      |           |        |
|----------------------|------|------|-----------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 1.84   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | < 0.02 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | < 0.2  |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 1.4    |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 2.7    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 1.8    |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 1.9    |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |
|------------------------------------|------|---|-----------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                                     |      |    |           |       |
|---------------------------------------------------------------------|------|----|-----------|-------|
| TPH-CWG - Aliphatic >C5 - C6 <sub>HS, 1D, AL</sub>                  | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 <sub>HS, 1D, AL</sub>                  | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 <sub>HS, 1D, AL</sub>                 | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 <sub>EH, 1D, AL, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 <sub>EH, 1D, AL, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 <sub>EH, 1D, AL, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 <sub>EH, 1D, AL, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) <sub>HS+EH, 1D, AL, #1, #2, MS</sub> | µg/l | 10 | NONE      | < 10  |

|                                                                    |      |    |           |       |
|--------------------------------------------------------------------|------|----|-----------|-------|
| TPH-CWG - Aromatic >C5 - C7 <sub>HS, 1D, AR</sub>                  | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 <sub>HS, 1D, AR</sub>                  | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 <sub>HS, 1D, AR</sub>                 | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 <sub>EH, 1D, AR, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aromatic >C12 - C16 <sub>EH, 1D, AR, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aromatic >C16 - C21 <sub>EH, 1D, AR, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aromatic >C21 - C35 <sub>EH, 1D, AR, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aromatic (C5 - C35) <sub>HS+EH, 1D, AR, #1, #2, MS</sub> | µg/l | 10 | NONE      | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number : 22-61552**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 *for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| Suspended solids in water                | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | ISO 17025            |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |



Analytical Report Number : 22-61552  
Project / Site name: Clarendon Phase 3B

**Water matrix abbreviations:**

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name              | Analytical Method Description                                                                          | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Free cyanide (low level) in water | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW. | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Temperature on Receipt (water)    | Temperature of water upon receipt.                                                                     | In-house method                                                                                                 | L019-UK       | W                  | NONE                 |
| Turbidity of in water             | Determination of sample turbidity by colorimeter and comparison with standard reference samples.       | In-house method based on Standard Method 8237                                                                   | L083-PL       | W                  | NONE                 |

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| _       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

## Sample Deviation Report



**Analytical Report Number : 22-61552**

**Project / Site name: Clarendon Phase 3B**

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

| Sample ID | Other ID      | Sample Type | Lab Sample Number | Sample Deviation | Test Name                                | Test Ref | Test Deviation |
|-----------|---------------|-------------|-------------------|------------------|------------------------------------------|----------|----------------|
| BH510     | None Supplied | W           | 2294280           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH510     | None Supplied | W           | 2294280           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH513     | None Supplied | W           | 2294281           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH513     | None Supplied | W           | 2294281           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH514B    | Filtred       | W           | 2294284           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH514B    | Filtred       | W           | 2294284           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH514B    | Filtred       | W           | 2294284           | c                | Dissolved Oxygen in water                | L086-PL  | c              |
| BH514B    | Filtred       | W           | 2294284           | c                | Electrical conductivity at 20oC of water | L031-PL  | c              |
| BH514B    | Filtred       | W           | 2294284           | c                | Redox Potential of waters                | L084-PL  | c              |
| BH514B    | Filtred       | W           | 2294284           | c                | pH at 20oC in water (automated)          | L099-PL  | c              |
| BH514B    | unfiltred     | W           | 2294279           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH514B    | unfiltred     | W           | 2294279           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH514B    | unfiltred     | W           | 2294279           | c                | Dissolved Oxygen in water                | L086-PL  | c              |
| BH514B    | unfiltred     | W           | 2294279           | c                | Electrical conductivity at 20oC of water | L031-PL  | c              |
| BH514B    | unfiltred     | W           | 2294279           | c                | Redox Potential of waters                | L084-PL  | c              |
| BH514B    | unfiltred     | W           | 2294279           | c                | Turbidity of in water                    | L083-PL  | c              |
| BH514B    | unfiltred     | W           | 2294279           | c                | pH at 20oC in water (automated)          | L099-PL  | c              |
| MB48      | None Supplied | W           | 2294283           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| MB48      | None Supplied | W           | 2294283           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| WS506     | None Supplied | W           | 2294282           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| WS506     | None Supplied | W           | 2294282           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |

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## **Analytical Report Number : 22-62489**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 01/06/2022 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 01/06/2022 |
| <b>Your order number:</b>   | S-RE6089 00005     | <b>Analysis completed by:</b>                          | 10/06/2022 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 14/06/2022 |
| <b>Samples Analysed:</b>    | 4 water samples    |                                                        |            |

  
**Signed:**

Anna Goc  
Junior Reporting Specialist  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-62489  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089 00005

|                                          |               |                    |                         |               |
|------------------------------------------|---------------|--------------------|-------------------------|---------------|
| Lab Sample Number                        | 2299823       | 2299824            | 2299825                 | 2300276       |
| Sample Reference                         | BH514B        | BH510              | BH513                   | BH514B        |
| Sample Number                            | Unfiltered    | None Supplied      | None Supplied           | Filtered      |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Date Sampled                             | 31/05/2022    | 31/05/2022         | 31/05/2022              | 31/05/2022    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |               |

#### General Inorganics

|                                  |          |       |           |       |       |       |       |
|----------------------------------|----------|-------|-----------|-------|-------|-------|-------|
| pH                               | pH Units | N/A   | ISO 17025 | 8.3   | -     | -     | 8.3   |
| Temperature on Receipt           | °C       | 0.1   | NONE      | 5.7   | -     | -     | 5.7   |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | 910   | -     | -     | 950   |
| Turbidity                        | NTU      | 1     | NONE      | 3100  | -     | -     | 1.7   |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 36    | 5.1   | < 1.0 | 34    |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | U/S*  | 600   | 400   | 690   |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 163   | 3380  | 1490  | 164   |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | U/S*  | 1200  | < 15  | 1100  |
| Total Suspended Solids           | mg/l     | 2     | ISO 17025 | 5400  | 22    | 9     | -     |

|                  |      |      |      |       |   |   |       |
|------------------|------|------|------|-------|---|---|-------|
| Redox Potential  | mV   | -800 | NONE | 138.7 | - | - | 136.3 |
| Dissolved Oxygen | mg/l | 1    | NONE | 3.6   | - | - | 8.6   |

#### Total Phenols

|                            |      |    |           |      |      |      |      |
|----------------------------|------|----|-----------|------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|--------|

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |       |
|-----------------------|------|---|-----------|-------|-------|-------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 |



Analytical Report Number: 22-62489  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089 00005

| Lab Sample Number                        |       |                    |                         | 2299823       | 2299824       | 2299825       | 2300276       |
|------------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|---------------|
| Sample Reference                         |       |                    |                         | BH514B        | BH510         | BH513         | BH514B        |
| Sample Number                            |       |                    |                         | Unfiltered    | None Supplied | None Supplied | Filtered      |
| Depth (m)                                |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                         | 31/05/2022    | 31/05/2022    | 31/05/2022    | 31/05/2022    |
| Time Taken                               |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |               |
| Arsenic (dissolved)                      | µg/l  | 0.15               | ISO 17025               | 2.54          | 0.36          | 0.23          | 2.28          |
| Cadmium (dissolved)                      | µg/l  | 0.02               | ISO 17025               | < 0.02        | 0.04          | < 0.02        | < 0.02        |
| Chromium (dissolved)                     | µg/l  | 0.2                | ISO 17025               | < 0.2         | < 0.2         | 0.3           | 0.2           |
| Copper (dissolved)                       | µg/l  | 0.5                | ISO 17025               | 2             | 2.4           | 3             | 2             |
| Lead (dissolved)                         | µg/l  | 0.2                | ISO 17025               | 0.4           | < 0.2         | < 0.2         | 0.3           |
| Mercury (dissolved)                      | µg/l  | 0.05               | ISO 17025               | 0.06          | < 0.05        | < 0.05        | 0.06          |
| Nickel (dissolved)                       | µg/l  | 0.5                | ISO 17025               | 4.9           | 5.9           | 3.3           | 4.6           |
| Selenium (dissolved)                     | µg/l  | 0.6                | ISO 17025               | 2             | 3.4           | 1             | 2.1           |
| Zinc (dissolved)                         | µg/l  | 0.5                | ISO 17025               | 2             | 13            | 7.1           | 2.2           |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                                |      |    |           |       |       |       |       |
|----------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 <sub>HS_ID_AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 <sub>HS_ID_AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 <sub>HS_ID_AL</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 <sub>EH_ID_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 <sub>EH_ID_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 <sub>EH_ID_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 <sub>EH_ID_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) <sub>HS+EH_ID_AL_#1_#2_MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |

|                                                               |      |    |           |       |       |       |       |
|---------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 <sub>HS_ID_AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 <sub>HS_ID_AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 <sub>HS_ID_AR</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 <sub>EH_ID_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 <sub>EH_ID_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 <sub>EH_ID_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 <sub>EH_ID_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) <sub>HS+EH_ID_AR_#1_#2_MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample  
\*Analysis could not be completed due to sample matrix.



**Analytical Report Number : 22-62489**

**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 *for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| Suspended solids in water                | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | ISO 17025            |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |



Analytical Report Number : 22-62489

Project / Site name: Clarendon Phase 3B

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name              | Analytical Method Description                                                                          | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Free cyanide (low level) in water | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW. | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Temperature on Receipt (water)    | Temperature of water upon receipt.                                                                     | In-house method                                                                                                 | L019-UK       | W                  | NONE                 |
| Turbidity of in water             | Determination of sample turbidity by colorimeter and comparison with standard reference samples.       | In-house method based on Standard Method 8237                                                                   | L083-PL       | W                  | NONE                 |

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| _       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

**Analytical Report Number : 22-62489**  
**Project / Site name: Clarendon Phase 3B**

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

| Sample ID | Other ID      | Sample Type | Lab Sample Number | Sample Deviation | Test Name                                | Test Ref      | Test Deviation |
|-----------|---------------|-------------|-------------------|------------------|------------------------------------------|---------------|----------------|
| BH510     | None Supplied | W           | 2299824           | c                | Ammonia as NH3 in water                  | L082-PL       | c              |
| BH510     | None Supplied | W           | 2299824           | c                | Ammoniacal Nitrogen as N in water        | L082-PL       | c              |
| BH510     | None Supplied | W           | 2299824           | c                | Settleable Solids in water               | L004-PL       | c              |
| BH510     | None Supplied | W           | 2299824           | c                | Suspended solids in water                | L004-PL       | c              |
| BH510     | None Supplied | W           | 2300274           | c                | None Supplied                            | None Supplied | None Supplied  |
| BH513     | None Supplied | W           | 2299825           | c                | Ammonia as NH3 in water                  | L082-PL       | c              |
| BH513     | None Supplied | W           | 2299825           | c                | Ammoniacal Nitrogen as N in water        | L082-PL       | c              |
| BH513     | None Supplied | W           | 2299825           | c                | Settleable Solids in water               | L004-PL       | c              |
| BH513     | None Supplied | W           | 2299825           | c                | Suspended solids in water                | L004-PL       | c              |
| BH513     | None Supplied | W           | 2300275           | c                | None Supplied                            | None Supplied | None Supplied  |
| BH514B    | Filtered      | W           | 2300276           | c                | Ammonia as NH3 in water                  | L082-PL       | c              |
| BH514B    | Filtered      | W           | 2300276           | c                | Ammoniacal Nitrogen as N in water        | L082-PL       | c              |
| BH514B    | Filtered      | W           | 2300276           | c                | Dissolved Oxygen in water                | L086-PL       | c              |
| BH514B    | Filtered      | W           | 2300276           | c                | Electrical conductivity at 20oC of water | L031-PL       | c              |
| BH514B    | Filtered      | W           | 2300276           | c                | Redox Potential of waters                | L084-PL       | c              |
| BH514B    | Filtered      | W           | 2300276           | c                | Turbidity of in water                    | L083-PL       | c              |
| BH514B    | Filtered      | W           | 2300276           | c                | pH at 20oC in water (automated)          | L099-PL       | c              |
| BH514B    | Unfiltered    | W           | 2299823           | c                | Ammonia as NH3 in water                  | L082-PL       | c              |
| BH514B    | Unfiltered    | W           | 2299823           | c                | Ammoniacal Nitrogen as N in water        | L082-PL       | c              |
| BH514B    | Unfiltered    | W           | 2299823           | c                | Dissolved Oxygen in water                | L086-PL       | c              |
| BH514B    | Unfiltered    | W           | 2299823           | c                | Electrical conductivity at 20oC of water | L031-PL       | c              |
| BH514B    | Unfiltered    | W           | 2299823           | c                | Redox Potential of waters                | L084-PL       | c              |
| BH514B    | Unfiltered    | W           | 2299823           | c                | Settleable Solids in water               | L004-PL       | c              |
| BH514B    | Unfiltered    | W           | 2299823           | c                | Suspended solids in water                | L004-PL       | c              |
| BH514B    | Unfiltered    | W           | 2299823           | c                | Turbidity of in water                    | L083-PL       | c              |
| BH514B    | Unfiltered    | W           | 2299823           | c                | pH at 20oC in water (automated)          | L099-PL       | c              |
| BH514B    | Unfiltered    | W           | 2300273           | c                | None Supplied                            | None Supplied | None Supplied  |

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## **Analytical Report Number : 22-63774 2A**

Replaces Analytical Report Number: 22-63774 2A, issue no. 1  
Report format change.

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 09/06/2022 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 09/06/2022 |
| <b>Your order number:</b>   | S RE6089 00005     | <b>Analysis completed by:</b>                          | 17/06/2022 |
| <b>Report Issue Number:</b> | 2                  | <b>Report issued on:</b>                               | 17/06/2022 |
| <b>Samples Analysed:</b>    | 6 water samples    |                                                        |            |

**Signed:**

*Izabela Wójcik*

Izabela Wójcik  
Reporting Specialist  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting  
leachates - 2 weeks from reporting  
waters - 2 weeks from reporting  
asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-63774 2A  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

| Lab Sample Number                        |  |  |  | 2307033       | 2307034            | 2307035                 | 2307036       | 2307037       |
|------------------------------------------|--|--|--|---------------|--------------------|-------------------------|---------------|---------------|
| Sample Reference                         |  |  |  | BH514B        | BH514B             | BH510                   | BH513         | WS506         |
| Sample Number                            |  |  |  | pre filtering | post filtering     | None Supplied           | None Supplied | None Supplied |
| Depth (m)                                |  |  |  | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Date Sampled                             |  |  |  | 08/06/2022    | 08/06/2022         | 08/06/2022              | 08/06/2022    | 08/06/2022    |
| Time Taken                               |  |  |  | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) |  |  |  | Units         | Limit of detection | Accreditation<br>Status |               |               |

#### General Inorganics

|                                  |          |       |           |       |       |       |       |       |
|----------------------------------|----------|-------|-----------|-------|-------|-------|-------|-------|
| pH                               | pH Units | N/A   | ISO 17025 | 8.3   | 8.2   | -     | -     | -     |
| Temperature on Receipt           | °C       | 0.1   | NONE      | 5.8   | 5.8   | -     | -     | -     |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | 1000  | 990   | -     | -     | -     |
| Turbidity                        | NTU      | 1     | NONE      | 910   | 840   | -     | -     | -     |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 310   | 310   | 3.5   | < 1.0 | 78    |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | 2     | 2     | < 1.0 | < 1.0 | < 1.0 |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | 3400  | 3600  | 740   | 260   | 440   |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 309   | 286   | 4070  | 1520  | 220   |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 1200  | 1200  | 980   | 31    | 670   |
| Total Suspended Solids           | mg/l     | 2     | ISO 17025 | 2300  | -     | 35    | 16    | 24    |

|                  |      |      |      |       |       |   |   |   |
|------------------|------|------|------|-------|-------|---|---|---|
| Redox Potential  | mV   | -800 | NONE | 174.2 | 147.5 | - | - | - |
| Dissolved Oxygen | mg/l | 1    | NONE | 4.7   | 6.5   | - | - | - |

#### Total Phenols

|                            |      |    |           |      |      |      |      |      |
|----------------------------|------|----|-----------|------|------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |



Analytical Report Number: 22-63774 2A  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

| Lab Sample Number                        |  |  |  | 2307033       | 2307034            | 2307035                 | 2307036       | 2307037       |
|------------------------------------------|--|--|--|---------------|--------------------|-------------------------|---------------|---------------|
| Sample Reference                         |  |  |  | BH514B        | BH514B             | BH510                   | BH513         | WS506         |
| Sample Number                            |  |  |  | pre filtering | post filtering     | None Supplied           | None Supplied | None Supplied |
| Depth (m)                                |  |  |  | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Date Sampled                             |  |  |  | 08/06/2022    | 08/06/2022         | 08/06/2022              | 08/06/2022    | 08/06/2022    |
| Time Taken                               |  |  |  | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) |  |  |  | Units         | Limit of detection | Accreditation<br>Status |               |               |

#### Total PAH

|                   |      |      |           |        |        |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|--------|--------|

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |       |      |
|-----------------------|------|---|-----------|-------|-------|-------|-------|------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | U/S* |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 | U/S* |

|                      |      |      |           |        |        |        |        |      |
|----------------------|------|------|-----------|--------|--------|--------|--------|------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 1.36   | 1.21   | 0.43   | 0.28   | 53.5 |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | < 0.02 | < 0.02 | 0.03   | < 0.02 | 0.05 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | < 0.2  | 0.2    | < 0.2  | 0.3    | 35   |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 1.5    | 2.1    | 4      | 2.3    | 27   |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  | 0.3    | < 0.2  | < 0.2  | 4.8  |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | 0.05   | < 0.05 | < 0.05 | 0.07 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 2.5    | 1.6    | 5.6    | 3.4    | 10   |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 1      | 0.8    | 3.3    | 1.2    | 28   |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 1.6    | 1.5    | 10     | 6      | 6.1  |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                     |      |    |           |       |       |       |       |       |
|-----------------------------------------------------|------|----|-----------|-------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 HS_1D_AL               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 HS_1D_AL               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 HS_1D_AL              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) HS+EH_1D_AL_#1_#2_MS | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |

|                                                    |      |    |           |       |       |       |       |       |
|----------------------------------------------------|------|----|-----------|-------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 HS_1D_AR               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 HS_1D_AR               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 HS_1D_AR              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) HS+EH_1D_AR_#1_#2_MS | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample

\*U/S due to high variances between chromium (hexavalent) and chromium (dissolved) caused by method differences.



Analytical Report Number: 22-63774 2A  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

|                                          |       |                    |                         |               |
|------------------------------------------|-------|--------------------|-------------------------|---------------|
| Lab Sample Number                        |       |                    |                         | 2307038       |
| Sample Reference                         |       |                    |                         | MB49          |
| Sample Number                            |       |                    |                         | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied |
| Date Sampled                             |       |                    |                         | 08/06/2022    |
| Time Taken                               |       |                    |                         | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |

#### General Inorganics

|                                  |          |       |           |       |
|----------------------------------|----------|-------|-----------|-------|
| pH                               | pH Units | N/A   | ISO 17025 | -     |
| Temperature on Receipt           | °C       | 0.1   | NONE      | -     |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | -     |
| Turbidity                        | NTU      | 1     | NONE      | -     |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 2     |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | < 1.0 |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | < 200 |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 136   |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0 |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 8700  |
| Total Suspended Solids           | mg/l     | 2     | ISO 17025 | 7     |

|                  |      |      |      |   |
|------------------|------|------|------|---|
| Redox Potential  | mV   | -800 | NONE | - |
| Dissolved Oxygen | mg/l | 1    | NONE | - |

#### Total Phenols

|                            |      |    |           |      |
|----------------------------|------|----|-----------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 |
|----------------------------|------|----|-----------|------|

#### Speciated PAHs

|                        |      |      |           |        |
|------------------------|------|------|-----------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 |



Analytical Report Number: 22-63774 2A  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

|                                          |       |                    |                         |               |
|------------------------------------------|-------|--------------------|-------------------------|---------------|
| Lab Sample Number                        |       |                    |                         | 2307038       |
| Sample Reference                         |       |                    |                         | MB49          |
| Sample Number                            |       |                    |                         | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied |
| Date Sampled                             |       |                    |                         | 08/06/2022    |
| Time Taken                               |       |                    |                         | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |

#### Total PAH

|                   |      |      |           |        |
|-------------------|------|------|-----------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 |
|-------------------|------|------|-----------|--------|

#### Heavy Metals / Metalloids

|                       |      |   |           |       |
|-----------------------|------|---|-----------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 |

|                      |      |      |           |        |
|----------------------|------|------|-----------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 2.48   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | 0.02   |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | 0.5    |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 6.4    |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | 0.4    |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 2.3    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 1.2    |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 29     |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |
|------------------------------------|------|---|-----------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                     |      |    |           |       |
|-----------------------------------------------------|------|----|-----------|-------|
| TPH-CWG - Aliphatic >C5 - C6 HS_1D_AL               | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 HS_1D_AL               | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 HS_1D_AL              | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) HS+EH_1D_AL_#1_#2_MS | µg/l | 10 | NONE      | < 10  |

|                                                    |      |    |           |       |
|----------------------------------------------------|------|----|-----------|-------|
| TPH-CWG - Aromatic >C5 - C7 HS_1D_AR               | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 HS_1D_AR               | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 HS_1D_AR              | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aromatic >C12 - C16 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aromatic >C16 - C21 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aromatic >C21 - C35 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aromatic (C5 - C35) HS+EH_1D_AR_#1_#2_MS | µg/l | 10 | NONE      | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample

\*U/S due to high variances between chromium (hexavalent) and chromium (dissolved) caused by method differences.



**Analytical Report Number : 22-63774 2A**

**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| Suspended solids in water                | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | ISO 17025            |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |



**Analytical Report Number : 22-63774 2A**

**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name              | Analytical Method Description                                                                          | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Free cyanide (low level) in water | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW. | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Temperature on Receipt (water)    | Temperature of water upon receipt.                                                                     | In-house method                                                                                                 | L019-UK       | W                  | NONE                 |
| Turbidity of in water             | Determination of sample turbidity by colorimeter and comparison with standard reference samples.       | In-house method based on Standard Method 8237                                                                   | L083-PL       | W                  | NONE                 |

**For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.**

**For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.**

**Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.**

**Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.**

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| _       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

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## **Analytical Report Number : 22-64766**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 14/06/2022 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 14/06/2022 |
| <b>Your order number:</b>   | S-RE6089 00005     | <b>Analysis completed by:</b>                          | 21/06/2022 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 21/06/2022 |
| <b>Samples Analysed:</b>    | 4 water samples    |                                                        |            |

  
**Signed:**

Adam Fenwick  
Technical Reviewer  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-64766  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089 00005

|                                          |  |  |  |               |                    |                      |               |
|------------------------------------------|--|--|--|---------------|--------------------|----------------------|---------------|
| Lab Sample Number                        |  |  |  | 2312489       | 2312490            | 2312491              | 2312492       |
| Sample Reference                         |  |  |  | BH514B        | BH514B             | BH510                | BH513         |
| Sample Number                            |  |  |  | Pre filtering | Post filtering     | None Supplied        | None Supplied |
| Depth (m)                                |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied |
| Date Sampled                             |  |  |  | 14/06/2022    | 14/06/2022         | 14/06/2022           | 14/06/2022    |
| Time Taken                               |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied |
| Analytical Parameter<br>(Water Analysis) |  |  |  | Units         | Limit of detection | Accreditation Status |               |

#### General Inorganics

|                                  |          |       |           |        |        |         |         |
|----------------------------------|----------|-------|-----------|--------|--------|---------|---------|
| pH                               | pH Units | N/A   | ISO 17025 | 8.4    | 8.4    | -       | -       |
| Temperature on Receipt           | °C       | 0.1   | NONE      | 6.2    | 6.2    | -       | -       |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | 880    | 860    | -       | -       |
| Turbidity                        | NTU      | 1     | NONE      | 2300   | 1900   | -       | -       |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 26     | 17     | 4.6     | < 1.0   |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | < 1.0  | < 1.0  | < 1.0   | < 1.0   |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | 460    | 390    | 1100    | 260     |
| Sulphate as SO4                  | µg/l     | 45    | ISO 17025 | 210000 | 193000 | 4780000 | 1830000 |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 210    | 193    | 4780    | 1830    |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0  | < 5.0  | < 5.0   | < 5.0   |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 1000   | 1000   | 680     | 230     |
| Total Suspended Solids           | mg/l     | 2     | ISO 17025 | 2300   | -      | 44      | 6       |

|                  |      |      |      |       |       |   |   |
|------------------|------|------|------|-------|-------|---|---|
| Redox Potential  | mV   | -800 | NONE | 173.3 | 153.7 | - | - |
| Dissolved Oxygen | mg/l | 1    | NONE | 2.3   | 4.5   | - | - |

#### Total Phenols

|                            |      |    |           |      |      |      |      |
|----------------------------|------|----|-----------|------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|--------|



Analytical Report Number: 22-64766  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089 00005

| Lab Sample Number                        |  |  |  | 2312489       | 2312490            | 2312491              | 2312492       |
|------------------------------------------|--|--|--|---------------|--------------------|----------------------|---------------|
| Sample Reference                         |  |  |  | BH514B        | BH514B             | BH510                | BH513         |
| Sample Number                            |  |  |  | Pre filtering | Post filtering     | None Supplied        | None Supplied |
| Depth (m)                                |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied |
| Date Sampled                             |  |  |  | 14/06/2022    | 14/06/2022         | 14/06/2022           | 14/06/2022    |
| Time Taken                               |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied |
| Analytical Parameter<br>(Water Analysis) |  |  |  | Units         | Limit of detection | Accreditation Status |               |

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |       |
|-----------------------|------|---|-----------|-------|-------|-------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 |

|                      |      |      |           |        |        |        |        |
|----------------------|------|------|-----------|--------|--------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 1.9    | 2.28   | 0.42   | 0.34   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | < 0.02 | < 0.02 | 0.04   | < 0.02 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | 0.3    | < 0.2  |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 1      | 1.4    | 2.7    | 1.7    |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | < 0.2  | < 0.2  |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | 0.06   | 0.05   | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 1.9    | 2.7    | 4.9    | 2.7    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 1.7    | 2.2    | 2.7    | 1.1    |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 2      | 2.8    | 23     | 9.9    |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                                |      |    |           |       |       |       |       |
|----------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 <sub>HS,1D,AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 <sub>HS,1D,AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 <sub>HS,1D,AL</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) <sub>HS+EH,1D,AL,#1,#2,MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |

|                                                               |      |    |           |       |       |       |       |
|---------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 <sub>HS,1D,AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 <sub>HS,1D,AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 <sub>HS,1D,AR</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) <sub>HS+EH,1D,AR,#1,#2,MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number : 22-64766**

**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 *for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| Suspended solids in water                | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | ISO 17025            |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |



Analytical Report Number : 22-64766

Project / Site name: Clarendon Phase 3B

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name              | Analytical Method Description                                                                          | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Free cyanide (low level) in water | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW. | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Temperature on Receipt (water)    | Temperature of water upon receipt.                                                                     | In-house method                                                                                                 | L019-UK       | W                  | NONE                 |
| Turbidity of in water             | Determination of sample turbidity by colorimeter and comparison with standard reference samples.       | In-house method based on Standard Method 8237                                                                   | L083-PL       | W                  | NONE                 |

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| _       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

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## **Analytical Report Number : 22-67236**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 24/06/2022 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 24/06/2022 |
| <b>Your order number:</b>   | S-RE6089/00005     | <b>Analysis completed by:</b>                          | 04/07/2022 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 04/07/2022 |
| <b>Samples Analysed:</b>    | 6 water samples    |                                                        |            |

  
**Signed:**

Martyna Langer  
Junior Reporting Specialist  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-67236  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089/00005

|                                          |               |                    |                         |  |               |               |               |               |
|------------------------------------------|---------------|--------------------|-------------------------|--|---------------|---------------|---------------|---------------|
| Lab Sample Number                        | 2327008       |                    |                         |  | 2327009       | 2327010       | 2327011       | 2327012       |
| Sample Reference                         | BH514B        |                    |                         |  | BH514B        | BH510         | BH513         | WS506         |
| Sample Number                            | unfiltered    |                    |                         |  | filtered      | None Supplied | None Supplied | None Supplied |
| Depth (m)                                | None Supplied |                    |                         |  | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             | 23/06/2022    |                    |                         |  | 23/06/2022    | 23/06/2022    | 23/06/2022    | 23/06/2022    |
| Time Taken                               | None Supplied |                    |                         |  | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |  |               |               |               |               |

#### General Inorganics

|                                  |          |       |           |       |       |       |       |       |
|----------------------------------|----------|-------|-----------|-------|-------|-------|-------|-------|
| pH                               | pH Units | N/A   | ISO 17025 | 8.4   | 8.2   | -     | -     | -     |
| Temperature on Receipt           | oC       | 0.1   | NONE      | 5.2   | 5.2   | -     | -     | -     |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | 960   | 960   | -     | -     | -     |
| Turbidity                        | NTU      | 1     | NONE      | 3700  | 1600  | -     | -     | -     |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 16    | 15    | 5     | < 1.0 | 96    |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | 240   | 330   | 250   | 250   | 550   |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 155   | 141   | 3050  | 1470  | 151   |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 980   | 950   | 690   | < 15  | 690   |
| Total Suspended Solids           | mg/l     | 2     | ISO 17025 | 2900  | -     | 39    | 240   | 9     |

|                  |      |      |      |      |      |   |   |   |
|------------------|------|------|------|------|------|---|---|---|
| Redox Potential  | mV   | -800 | NONE | 22.2 | 25.9 | - | - | - |
| Dissolved Oxygen | mg/l | 1    | NONE | 8.8  | 3.6  | - | - | - |

#### Total Phenols

|                            |      |    |           |      |      |      |      |      |
|----------------------------|------|----|-----------|------|------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|--------|--------|



Analytical Report Number: 22-67236  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089/00005

| Lab Sample Number                        |       |                    |                         | 2327008       | 2327009       | 2327010       | 2327011       | 2327012       |
|------------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|---------------|---------------|
| Sample Reference                         |       |                    |                         | BH514B        | BH514B        | BH510         | BH513         | WS506         |
| Sample Number                            |       |                    |                         | unfiltered    | filtered      | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                         | 23/06/2022    | 23/06/2022    | 23/06/2022    | 23/06/2022    | 23/06/2022    |
| Time Taken                               |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |               |               |

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |       |      |
|-----------------------|------|---|-----------|-------|-------|-------|-------|------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | U/S* |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 | U/S* |

|                      |      |      |           |        |        |        |        |      |
|----------------------|------|------|-----------|--------|--------|--------|--------|------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 1.88   | 1.19   | 0.43   | 0.29   | 69.3 |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | < 0.02 | < 0.02 | 0.03   | < 0.02 | 0.04 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | 0.2    | < 0.2  | 20   |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 1.8    | 7.3    | 4.1    | 3.5    | 33   |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | < 0.2  | < 0.2  | 6.1  |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.08 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 2.7    | 1.9    | 4.3    | 2.4    | 13   |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 1.6    | 0.9    | 2.6    | 1      | 27   |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 12     | 8.6    | 14     | 14     | 8    |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                                |      |    |           |       |       |       |       |       |
|----------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 <sub>HS,1D,AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 <sub>HS,1D,AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 <sub>HS,1D,AL</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) <sub>HS+EH,1D,AL,#1,#2,MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |

|                                                               |      |    |           |       |       |       |       |       |
|---------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 <sub>HS,1D,AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 <sub>HS,1D,AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 <sub>HS,1D,AR</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) <sub>HS+EH,1D,AR,#1,#2,MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample

\*U/S due to high variances between chromium (hexavalent) and chromium (dissolved) caused by method differences.



Analytical Report Number: 22-67236  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089/00005

|                                          |               |                    |                         |  |
|------------------------------------------|---------------|--------------------|-------------------------|--|
| Lab Sample Number                        | 2327013       |                    |                         |  |
| Sample Reference                         | MB50          |                    |                         |  |
| Sample Number                            | None Supplied |                    |                         |  |
| Depth (m)                                | None Supplied |                    |                         |  |
| Date Sampled                             | 23/06/2022    |                    |                         |  |
| Time Taken                               | None Supplied |                    |                         |  |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |  |

#### General Inorganics

|                                  |          |       |           |       |
|----------------------------------|----------|-------|-----------|-------|
| pH                               | pH Units | N/A   | ISO 17025 | -     |
| Temperature on Receipt           | oC       | 0.1   | NONE      | -     |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | -     |
| Turbidity                        | NTU      | 1     | NONE      | -     |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 13    |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | < 1.0 |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | 300   |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 81.1  |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0 |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 4900  |
| Total Suspended Solids           | mg/l     | 2     | ISO 17025 | 10    |

|                  |      |      |      |   |
|------------------|------|------|------|---|
| Redox Potential  | mV   | -800 | NONE | - |
| Dissolved Oxygen | mg/l | 1    | NONE | - |

#### Total Phenols

|                            |      |    |           |      |
|----------------------------|------|----|-----------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 |
|----------------------------|------|----|-----------|------|

#### Speciated PAHs

|                        |      |      |           |        |
|------------------------|------|------|-----------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |
|-------------------|------|------|-----------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 |
|-------------------|------|------|-----------|--------|



Analytical Report Number: 22-67236  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089/00005

|                                          |               |                    |                         |  |
|------------------------------------------|---------------|--------------------|-------------------------|--|
| Lab Sample Number                        | 2327013       |                    |                         |  |
| Sample Reference                         | MB50          |                    |                         |  |
| Sample Number                            | None Supplied |                    |                         |  |
| Depth (m)                                | None Supplied |                    |                         |  |
| Date Sampled                             | 23/06/2022    |                    |                         |  |
| Time Taken                               | None Supplied |                    |                         |  |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |  |

#### Heavy Metals / Metalloids

|                       |      |   |           |       |
|-----------------------|------|---|-----------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 |

|                      |      |      |           |        |
|----------------------|------|------|-----------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 1.96   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | < 0.02 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | 0.3    |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 3.8    |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | 0.5    |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 2      |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 0.7    |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 18     |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |
|------------------------------------|------|---|-----------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                                     |      |    |           |       |
|---------------------------------------------------------------------|------|----|-----------|-------|
| TPH-CWG - Aliphatic >C5 - C6 <sub>HS, 1D, AL</sub>                  | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 <sub>HS, 1D, AL</sub>                  | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 <sub>HS, 1D, AL</sub>                 | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 <sub>EH, 1D, AL, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 <sub>EH, 1D, AL, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 <sub>EH, 1D, AL, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 <sub>EH, 1D, AL, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) <sub>HS+EH, 1D, AL, #1, #2, MS</sub> | µg/l | 10 | NONE      | < 10  |

|                                                                    |      |    |           |       |
|--------------------------------------------------------------------|------|----|-----------|-------|
| TPH-CWG - Aromatic >C5 - C7 <sub>HS, 1D, AR</sub>                  | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 <sub>HS, 1D, AR</sub>                  | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 <sub>HS, 1D, AR</sub>                 | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 <sub>EH, 1D, AR, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aromatic >C12 - C16 <sub>EH, 1D, AR, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aromatic >C16 - C21 <sub>EH, 1D, AR, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aromatic >C21 - C35 <sub>EH, 1D, AR, #1, #2, MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aromatic (C5 - C35) <sub>HS+EH, 1D, AR, #1, #2, MS</sub> | µg/l | 10 | NONE      | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample

\*U/S due to high variances between chromium (hexavalent) and chromium (dissolved) caused by method differences.



**Analytical Report Number : 22-67236**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 *for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| Suspended solids in water                | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | ISO 17025            |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |



Analytical Report Number : 22-67236

Project / Site name: Clarendon Phase 3B

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name              | Analytical Method Description                                                                          | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Free cyanide (low level) in water | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW. | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Temperature on Receipt (water)    | Temperature of water upon receipt.                                                                     | In-house method                                                                                                 | L019-UK       | W                  | NONE                 |
| Turbidity of in water             | Determination of sample turbidity by colorimeter and comparison with standard reference samples.       | In-house method based on Standard Method 8237                                                                   | L083-PL       | W                  | NONE                 |

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.



Analytical Report Number : 22-67236

Project / Site name: Clarendon Phase 3B

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name | Analytical Method Description | Analytical Method Reference | Method number | Wet / Dry Analysis | Accreditation Status |
|----------------------|-------------------------------|-----------------------------|---------------|--------------------|----------------------|
|----------------------|-------------------------------|-----------------------------|---------------|--------------------|----------------------|

### Information in Support of Analytical Results

#### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| -       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

## Sample Deviation Report



**Analytical Report Number : 22-67236**

**Project / Site name: Clarendon Phase 3B**

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

| Sample ID | Other ID      | Sample Type | Lab Sample Number | Sample Deviation | Test Name                                | Test Ref | Test Deviation |
|-----------|---------------|-------------|-------------------|------------------|------------------------------------------|----------|----------------|
| BH510     | None Supplied | W           | 2327010           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH510     | None Supplied | W           | 2327010           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH513     | None Supplied | W           | 2327011           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH513     | None Supplied | W           | 2327011           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH514B    | filtered      | W           | 2327009           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH514B    | filtered      | W           | 2327009           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH514B    | filtered      | W           | 2327009           | c                | Dissolved Oxygen in water                | L086-PL  | c              |
| BH514B    | filtered      | W           | 2327009           | c                | Electrical conductivity at 20oC of water | L031-PL  | c              |
| BH514B    | filtered      | W           | 2327009           | c                | Redox Potential of waters                | L084-PL  | c              |
| BH514B    | filtered      | W           | 2327009           | c                | Turbidity of in water                    | L083-PL  | c              |
| BH514B    | filtered      | W           | 2327009           | c                | pH at 20oC in water (automated)          | L099-PL  | c              |
| BH514B    | unfiltered    | W           | 2327008           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH514B    | unfiltered    | W           | 2327008           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH514B    | unfiltered    | W           | 2327008           | c                | Dissolved Oxygen in water                | L086-PL  | c              |
| BH514B    | unfiltered    | W           | 2327008           | c                | Electrical conductivity at 20oC of water | L031-PL  | c              |
| BH514B    | unfiltered    | W           | 2327008           | c                | Redox Potential of waters                | L084-PL  | c              |
| BH514B    | unfiltered    | W           | 2327008           | c                | Turbidity of in water                    | L083-PL  | c              |
| BH514B    | unfiltered    | W           | 2327008           | c                | pH at 20oC in water (automated)          | L099-PL  | c              |
| MB50      | None Supplied | W           | 2327013           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| MB50      | None Supplied | W           | 2327013           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| WS506     | None Supplied | W           | 2327012           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| WS506     | None Supplied | W           | 2327012           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |

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## **Analytical Report Number : 20-43722**

|                             |                 |                                                        |            |
|-----------------------------|-----------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Road  | <b>Samples received on:</b>                            | 26/11/2020 |
| <b>Your job number:</b>     | 6075            | <b>Samples instructed on/<br/>Analysis started on:</b> | 27/11/2020 |
| <b>Your order number:</b>   | S-RE6075/00005  | <b>Analysis completed by:</b>                          | 04/12/2020 |
| <b>Report Issue Number:</b> | 1               | <b>Report issued on:</b>                               | 04/12/2020 |
| <b>Samples Analysed:</b>    | 4 water samples |                                                        |            |

**Signed:**

Karolina Marek  
PL Head of Reporting Team  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting  
leachates - 2 weeks from reporting  
waters - 2 weeks from reporting  
asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 20-43722  
Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

|                                          |               |                    |                      |               |
|------------------------------------------|---------------|--------------------|----------------------|---------------|
| Lab Sample Number                        | 1697469       | 1697470            | 1697471              | 1697472       |
| Sample Reference                         | MB32          | BH510              | BH513                | BH514         |
| Sample Number                            | None Supplied | None Supplied      | None Supplied        | None Supplied |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied        | None Supplied |
| Date Sampled                             | 25/11/2020    | 25/11/2020         | 25/11/2020           | 25/11/2020    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied        | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation Status |               |

#### General Inorganics

|                                      |          |       |           |       |       |       |       |
|--------------------------------------|----------|-------|-----------|-------|-------|-------|-------|
| pH                                   | pH Units | N/A   | ISO 17025 | -     | -     | -     | 8.4   |
| Temperature on Receipt               | oC       | 0.1   | NONE      | -     | -     | -     | 6.1   |
| Electrical Conductivity at 20 °C     | µS/cm    | 10    | ISO 17025 | -     | -     | -     | 1000  |
| Turbidity                            | NTU      | 1     | NONE      | -     | -     | -     | 54    |
| Total Cyanide (Low Level 1 µg/l)     | µg/l     | 1     | ISO 17025 | 4.4   | 6.9   | < 1.0 | 84    |
| Free Cyanide (Low Level 1 µg/l)      | µg/l     | 1     | ISO 17025 | < 1   | < 1   | < 1   | < 1   |
| Thiocyanate as SCN                   | µg/l     | 200   | ISO 17025 | 270   | < 200 | 320   | 6500  |
| Sulphate as SO4                      | mg/l     | 0.045 | ISO 17025 | 131   | 3350  | 2420  | 247   |
| Sulphide                             | µg/l     | 5     | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Ammonia as NH3                       | µg/l     | 15    | ISO 17025 | 12000 | 970   | 940   | 1700  |
| Total Dissolved Solids (Gravimetric) | mg/l     | 4     | ISO 17025 | -     | -     | -     | 690   |
| Redox Potential                      | mV       | -800  | NONE      | -     | -     | -     | 114.2 |
| Dissolved Oxygen                     | mg/l     | 1     | NONE      | -     | -     | -     | 5.8   |

#### Total Phenols

|                            |      |    |           |      |      |      |      |
|----------------------------|------|----|-----------|------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|--------|



Environmental Science

Analytical Report Number: 20-43722

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

|                                          |               |                    |                      |               |
|------------------------------------------|---------------|--------------------|----------------------|---------------|
| Lab Sample Number                        | 1697469       | 1697470            | 1697471              | 1697472       |
| Sample Reference                         | MB32          | BH510              | BH513                | BH514         |
| Sample Number                            | None Supplied | None Supplied      | None Supplied        | None Supplied |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied        | None Supplied |
| Date Sampled                             | 25/11/2020    | 25/11/2020         | 25/11/2020           | 25/11/2020    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied        | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation Status |               |

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |       |
|-----------------------|------|---|-----------|-------|-------|-------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Chromium (III)        | µg/l | 1 | NONE      | 2.6   | 3.3   | 3.5   | 2.3   |

|                      |      |      |           |        |        |        |        |
|----------------------|------|------|-----------|--------|--------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 2.57   | 5.27   | 2.16   | 1.4    |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | < 0.02 | 0.03   | < 0.02 | < 0.02 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | 2.6    | 3.3    | 3.5    | 2.3    |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 4.9    | 13     | 8.3    | 2.7    |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | 0.7    | 0.4    | 0.3    | < 0.2  |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 3      | 12     | 7.2    | 1.4    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 1.5    | 5.4    | 2.5    | 1.3    |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 12     | 12     | 15     | 2.4    |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                |      |    |           |       |       |       |       |
|--------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6   | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8   | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10  | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |

|                               |      |    |           |       |       |       |       |
|-------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7   | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8   | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10  | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 20-43722

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of conductivity of water by conductivity meter                                                                                                               | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW, PrW.                                                               | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | NONE                 |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |



**Analytical Report Number : 20-43722**

**Project / Site name: Clarendon Road**

**Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)**

| Analytical Test Name                          | Analytical Method Description                                                                          | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Free cyanide (low level) in water             | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW. | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Temperature on Receipt (water)                | Temperature of water upon receipt.                                                                     | In-house method                                                                                                 | L019-UK       | W                  | NONE                 |
| Turbidity of in water                         | Determination of sample turbidity by colorimeter and comparison with standard reference samples.       | In-house method based on Standard Method 8237                                                                   | L083-PL       | W                  | NONE                 |
| Total dissolved solids in water (Gravimetric) | Determination of total dissolved solids in water by gravimetry.                                        | In house method based on BSEN 15216:2007                                                                        | L004-PL       | W                  | ISO 17025            |

**For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.**

**For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.**

**Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.**

## Sample Deviation Report



Analytical Report Number : 20-43722

Project / Site name: Clarendon Road

| Sample ID | Other ID      | Sample Type | Lab Sample Number | Sample Deviation | Test Name                 | Test Ref | Test Deviation |
|-----------|---------------|-------------|-------------------|------------------|---------------------------|----------|----------------|
| BH514     | None Supplied | W           | 1697472           | c                | Dissolved Oxygen in water | L086-PL  | c              |

**Jack Holliday**

Keltbray Remediation Ltd  
St Andrew's House  
Portsmouth Road  
Esher  
KT10 9TA

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## **Analytical Report Number : 21-10039**

|                             |                 |                                                        |            |
|-----------------------------|-----------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Road  | <b>Samples received on:</b>                            | 15/09/2021 |
| <b>Your job number:</b>     | RE6075          | <b>Samples instructed on/<br/>Analysis started on:</b> | 15/09/2021 |
| <b>Your order number:</b>   | RE6075-00005    | <b>Analysis completed by:</b>                          | 22/09/2021 |
| <b>Report Issue Number:</b> | 1               | <b>Report issued on:</b>                               | 22/09/2021 |
| <b>Samples Analysed:</b>    | 5 water samples |                                                        |            |

**Signed:**

Agnieszka Czerwińska  
Technical Reviewer (Reporting Team)  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting  
leachates - 2 weeks from reporting  
waters - 2 weeks from reporting  
asbestos - 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 21-10039

Project / Site name: Clarendon Road

Your Order No: RE6075-00005

| Lab Sample Number                        |  |  |  | 2011379       | 2011380            | 2011381              | 2011382       | 2011383       |
|------------------------------------------|--|--|--|---------------|--------------------|----------------------|---------------|---------------|
| Sample Reference                         |  |  |  | BH513         | BH510              | BH514                | WS508         | MB33          |
| Sample Number                            |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied | None Supplied |
| Depth (m)                                |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied | None Supplied |
| Date Sampled                             |  |  |  | 15/09/2021    | 15/09/2021         | 15/09/2021           | 15/09/2021    | 15/09/2021    |
| Time Taken                               |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) |  |  |  | Units         | Limit of detection | Accreditation Status |               |               |

#### General Inorganics

|                                  |          |       |           |       |       |        |       |       |
|----------------------------------|----------|-------|-----------|-------|-------|--------|-------|-------|
| pH                               | pH Units | N/A   | ISO 17025 | -     | -     | 8.2    | -     | -     |
| Temperature on Receipt           | °C       | 0.1   | NONE      | -     | -     | 6.00   | -     | -     |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | -     | -     | 940    | -     | -     |
| Turbidity                        | NTU      | 1     | NONE      | -     | -     | 370    | -     | -     |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | < 1.0 | < 1.0 | 22     | 34    | 73    |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | < 1.0 | < 1.0 | < 1.0  | < 1.0 | < 1.0 |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | 220   | < 200 | 1800   | < 200 | 550   |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 2070  | 874   | 175    | 45.3  | 171   |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0 | < 5.0 | < 5.0  | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 550   | 960   | 1200   | 4500  | 3200  |
|                                  |          |       |           |       |       |        |       |       |
| Redox Potential                  | mV       | -800  | NONE      | -     | -     | 130.40 | -     | -     |
| Dissolved Oxygen                 | mg/l     | 1     | NONE      | -     | -     | 6.7    | -     | -     |

#### Total Phenols

|                            |      |    |           |      |      |      |    |      |
|----------------------------|------|----|-----------|------|------|------|----|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 | 33 | < 10 |
|----------------------------|------|----|-----------|------|------|------|----|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 9.23   |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.28   |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.48   |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.39   |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.62   |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |        |      |
|-------------------|------|------|-----------|--------|--------|--------|--------|------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 | < 0.16 | 11.0 |
|-------------------|------|------|-----------|--------|--------|--------|--------|------|



**Analytical Report Number: 21-10039**

**Project / Site name: Clarendon Road**

**Your Order No: RE6075-00005**

| Lab Sample Number                        |  |  |  | 2011379       | 2011380            | 2011381              | 2011382       | 2011383       |
|------------------------------------------|--|--|--|---------------|--------------------|----------------------|---------------|---------------|
| Sample Reference                         |  |  |  | BH513         | BH510              | BH514                | WS508         | MB33          |
| Sample Number                            |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied | None Supplied |
| Depth (m)                                |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied | None Supplied |
| Date Sampled                             |  |  |  | 15/09/2021    | 15/09/2021         | 15/09/2021           | 15/09/2021    | 15/09/2021    |
| Time Taken                               |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) |  |  |  | Units         | Limit of detection | Accreditation Status |               |               |

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |      |       |
|-----------------------|------|---|-----------|-------|-------|-------|------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 | U/S* | < 5.0 |
| Chromium (III)        | µg/l | 1 | NONE      | 4.8   | 3.2   | 2.3   | U/S* | 2.9   |

|                      |      |      |           |        |        |        |       |        |
|----------------------|------|------|-----------|--------|--------|--------|-------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 1.66   | 2.12   | 2.77   | 5.75  | 4.57   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | < 0.02 | < 0.02 | < 0.02 | 0.03  | 0.02   |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | 4.8    | 3.2    | 2.3    | 8.6   | 2.9    |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 5.7    | 2.0    | 1.5    | 7.0   | 4.9    |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | < 0.2  | 0.3   | 0.6    |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | 0.06   | < 0.05 | < 0.05 | 0.26  | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 8.6    | 3.7    | 0.8    | 11    | 4.2    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 1.8    | 1.2    | 0.7    | 13    | 1.9    |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 9.2    | 2.9    | 0.6    | < 0.5 | 13     |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | 3.7   |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | 3.0   |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | 1.2   |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                |      |    |           |       |       |       |       |       |
|--------------------------------|------|----|-----------|-------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6   | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8   | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10  | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |

|                               |      |    |           |       |       |       |       |      |
|-------------------------------|------|----|-----------|-------|-------|-------|-------|------|
| TPH-CWG - Aromatic >C5 - C7   | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | 3.7  |
| TPH-CWG - Aromatic >C7 - C8   | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | 3.0  |
| TPH-CWG - Aromatic >C8 - C10  | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | 1.2  |
| TPH-CWG - Aromatic >C10 - C12 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | 10   |
| TPH-CWG - Aromatic >C12 - C16 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10 |
| TPH-CWG - Aromatic >C16 - C21 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10 |
| TPH-CWG - Aromatic >C21 - C35 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10 |
| TPH-CWG - Aromatic (C5 - C35) | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | 18   |

U/S = Unsuitable Sample I/S = Insufficient Sample

\*U/S due to high variances between chromium (hexavalent) and chromium (dissolved) caused by method differences.



Analytical Report Number : 21-10039

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | NONE                 |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |
| Free cyanide (low level) in water        | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW.                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |



**Analytical Report Number : 21-10039**

**Project / Site name: Clarendon Road**

**Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)**

| Analytical Test Name           | Analytical Method Description                                                                    | Analytical Method Reference                   | Method number | Wet / Dry Analysis | Accreditation Status |
|--------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------|---------------|--------------------|----------------------|
| Temperature on Receipt (water) | Temperature of water upon receipt.                                                               | In-house method                               | L019-UK       | W                  | NONE                 |
| Turbidity of in water          | Determination of sample turbidity by colorimeter and comparison with standard reference samples. | In-house method based on Standard Method 8237 | L083-PL       | W                  | NONE                 |

**For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.**

**For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.**

**Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.**

**Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.**

**Jack Holliday**

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## **Analytical Report Number : 21-22219**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 11/11/2021 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 11/11/2021 |
| <b>Your order number:</b>   | S RE6089 00005     | <b>Analysis completed by:</b>                          | 18/11/2021 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 18/11/2021 |
| <b>Samples Analysed:</b>    | 5 water samples    |                                                        |            |

**Signed:**

Agnieszka Czerwińska  
Technical Reviewer (Reporting Team)  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting  
leachates - 2 weeks from reporting  
waters - 2 weeks from reporting  
asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 21-22219  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

| Lab Sample Number                        |  |  |  | 2079108       | 2079109            | 2079110              | 2079111       | 2079112       |
|------------------------------------------|--|--|--|---------------|--------------------|----------------------|---------------|---------------|
| Sample Reference                         |  |  |  | BH510         | BH514              | BH513                | WS506         | MB35          |
| Sample Number                            |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied | None Supplied |
| Depth (m)                                |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied | None Supplied |
| Date Sampled                             |  |  |  | 10/11/2021    | 10/11/2021         | 10/11/2021           | 10/11/2021    | 10/11/2021    |
| Time Taken                               |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) |  |  |  | Units         | Limit of detection | Accreditation Status |               |               |

#### General Inorganics

|                                        |          |       |           |       |        |       |       |       |
|----------------------------------------|----------|-------|-----------|-------|--------|-------|-------|-------|
| pH                                     | pH Units | N/A   | ISO 17025 | -     | 8.1    | -     | -     | -     |
| Temperature on Receipt                 | °C       | 0.1   | NONE      | -     | 6.40   | -     | -     | -     |
| Electrical Conductivity at 20 °C       | µS/cm    | 10    | ISO 17025 | -     | 1000   | -     | -     | -     |
| Turbidity                              | NTU      | 1     | NONE      | -     | 200    | -     | -     | -     |
| Total Cyanide (Low Level 1 µg/l)       | µg/l     | 1     | ISO 17025 | 5.8   | 230    | < 1.0 | 120   | 4.9   |
| Free Cyanide (Low Level 1 µg/l)        | µg/l     | 1     | ISO 17025 | < 1.0 | 11     | < 1.0 | < 1.0 | < 1.0 |
| Thiocyanate as SCN                     | µg/l     | 200   | ISO 17025 | 310   | 3300   | 290   | 360   | < 200 |
| Sulphate as SO <sub>4</sub>            | mg/l     | 0.045 | ISO 17025 | 1970  | 210    | 2080  | 101   | 99.9  |
| Sulphide                               | µg/l     | 5     | NONE      | < 5.0 | < 5.0  | < 5.0 | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH <sub>3</sub> | µg/l     | 15    | ISO 17025 | 700   | 4100   | 1000  | 2400  | 24000 |
|                                        |          |       |           |       |        |       |       |       |
| Redox Potential                        | mV       | -800  | NONE      | -     | -31.60 | -     | -     | -     |
| Dissolved Oxygen                       | mg/l     | 1     | NONE      | -     | 2.1    | -     | -     | -     |

#### Total Phenols

|                            |      |    |           |      |      |      |      |    |
|----------------------------|------|----|-----------|------|------|------|------|----|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 | < 10 | 39 |
|----------------------------|------|----|-----------|------|------|------|------|----|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|--------|--------|

#### Heavy Metals / Metalloids

|                       |      |      |           |        |        |        |      |        |
|-----------------------|------|------|-----------|--------|--------|--------|------|--------|
| Chromium (hexavalent) | µg/l | 5    | ISO 17025 | < 5.0  | < 5.0  | < 5.0  | U/S* | < 5.0  |
| Chromium (III)        | µg/l | 1    | NONE      | 4.0    | 2.4    | 4.4    | U/S* | 2.1    |
|                       |      |      |           |        |        |        |      |        |
| Arsenic (dissolved)   | µg/l | 0.15 | ISO 17025 | 2.94   | 2.88   | 2.17   | 7.65 | 1.70   |
| Cadmium (dissolved)   | µg/l | 0.02 | ISO 17025 | 0.16   | < 0.02 | 0.04   | 0.03 | < 0.02 |
| Chromium (dissolved)  | µg/l | 0.2  | ISO 17025 | 4.0    | 2.4    | 4.4    | 13   | 2.1    |
| Copper (dissolved)    | µg/l | 0.5  | ISO 17025 | 6.1    | 2.4    | 7.3    | 24   | 6.6    |
| Lead (dissolved)      | µg/l | 0.2  | ISO 17025 | < 0.2  | 0.2    | 0.4    | 0.4  | 0.9    |
| Mercury (dissolved)   | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | 0.08 | 0.06   |
| Nickel (dissolved)    | µg/l | 0.5  | ISO 17025 | 9.8    | 3.0    | 5.8    | 15   | 3.0    |
| Selenium (dissolved)  | µg/l | 0.6  | ISO 17025 | 2.3    | 1.4    | 1.7    | 21   | 0.9    |
| Zinc (dissolved)      | µg/l | 0.5  | ISO 17025 | 14     | 6.1    | 16     | 5.3  | 8.4    |



Analytical Report Number: 21-22219  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

|                                          |       |                    |                         |               |               |               |               |               |
|------------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|---------------|---------------|
| Lab Sample Number                        |       |                    |                         | 2079108       | 2079109       | 2079110       | 2079111       | 2079112       |
| Sample Reference                         |       |                    |                         | BH510         | BH514         | BH513         | WS506         | MB35          |
| Sample Number                            |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                         | 10/11/2021    | 10/11/2021    | 10/11/2021    | 10/11/2021    | 10/11/2021    |
| Time Taken                               |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |               |               |



Analytical Report Number: 21-22219  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

| Lab Sample Number                        |       |                    |                         | 2079108       | 2079109       | 2079110       | 2079111       | 2079112       |
|------------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|---------------|---------------|
| Sample Reference                         |       |                    |                         | BH510         | BH514         | BH513         | WS506         | MB35          |
| Sample Number                            |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                         | 10/11/2021    | 10/11/2021    | 10/11/2021    | 10/11/2021    | 10/11/2021    |
| Time Taken                               |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |               |               |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                |      |    |           |       |       |       |       |       |
|--------------------------------|------|----|-----------|-------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6   | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8   | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10  | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |

|                               |      |    |           |       |       |       |       |       |
|-------------------------------|------|----|-----------|-------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7   | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8   | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10  | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample

\*U/S due to high variances between chromium (hexavalent) and chromium (dissolved) caused by method differences.



**Analytical Report Number : 21-22219**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | NONE                 |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |
| Free cyanide (low level) in water        | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW.                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |



**Analytical Report Number : 21-22219**

**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)**

| Analytical Test Name           | Analytical Method Description                                                                    | Analytical Method Reference                   | Method number | Wet / Dry Analysis | Accreditation Status |
|--------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------|---------------|--------------------|----------------------|
| Temperature on Receipt (water) | Temperature of water upon receipt.                                                               | In-house method                               | L019-UK       | W                  | NONE                 |
| Turbidity of in water          | Determination of sample turbidity by colorimeter and comparison with standard reference samples. | In-house method based on Standard Method 8237 | L083-PL       | W                  | NONE                 |

**For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.**

**For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.**

**Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.**

**Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.**

**Jack Holliday**

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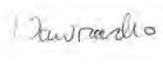
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## **Analytical Report Number : 21-25971**

Replaces Analytical Report Number: 21-25971, issue no. 1  
Client references/information amended.

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 29/11/2021 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 30/11/2021 |
| <b>Your order number:</b>   | S RE6089 00005     | <b>Analysis completed by:</b>                          | 14/12/2021 |
| <b>Report Issue Number:</b> | 2                  | <b>Report issued on:</b>                               | 14/12/2021 |
| <b>Samples Analysed:</b>    | 4 water samples    |                                                        |            |

  
**Signed:**

Joanna Wawrzeczko  
Technical Reviewer (Reporting Team)  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 21-25971  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

|                                          |               |                    |                         |               |
|------------------------------------------|---------------|--------------------|-------------------------|---------------|
| Lab Sample Number                        | 2099466       | 2099467            | 2099468                 | 2099469       |
| Sample Reference                         | BH510         | BH514              | BH513                   | MB36          |
| Sample Number                            | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Date Sampled                             | 26/11/2021    | 26/11/2021         | 26/11/2021              | 26/11/2021    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |               |

#### General Inorganics

|                                  |          |       |           |       |        |       |       |
|----------------------------------|----------|-------|-----------|-------|--------|-------|-------|
| pH                               | pH Units | N/A   | ISO 17025 | -     | 7.8    | -     | -     |
| Temperature on Receipt           | °C       | 0.1   | NONE      | -     | 6.40   | -     | -     |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | -     | 1800   | -     | -     |
| Turbidity                        | NTU      | 1     | NONE      | -     | 2700   | -     | -     |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 7.1   | 2800   | 7.5   | 11    |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | < 1.0 | 16     | 2.1   | < 1.0 |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | 400   | 100000 | 350   | 250   |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 2580  | 796    | 1610  | 135   |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0 | U/S*   | < 5.0 | U/S   |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 650   | 34000  | 430   | 16000 |

|                  |      |      |      |   |       |   |   |
|------------------|------|------|------|---|-------|---|---|
| Redox Potential  | mV   | -800 | NONE | - | 26.20 | - | - |
| Dissolved Oxygen | mg/l | 1    | NONE | - | < 1.0 | - | - |

#### Total Phenols

|                            |      |    |           |      |    |      |      |
|----------------------------|------|----|-----------|------|----|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | 83 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|----|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|--------|



Analytical Report Number: 21-25971  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

| Lab Sample Number                        |       |                    |                         | 2099466       | 2099467       | 2099468       | 2099469       |
|------------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|---------------|
| Sample Reference                         |       |                    |                         | BH510         | BH514         | BH513         | MB36          |
| Sample Number                            |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                         | 26/11/2021    | 26/11/2021    | 26/11/2021    | 26/11/2021    |
| Time Taken                               |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |               |

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |       |
|-----------------------|------|---|-----------|-------|-------|-------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 |

|                      |      |      |           |        |        |        |        |
|----------------------|------|------|-----------|--------|--------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 4.05   | 13.9   | 2.09   | 2.93   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | 0.09   | 0.03   | 0.03   | < 0.02 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | 3.8    | 1.5    | 4.2    | 2.9    |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 5.6    | 1.5    | 5.9    | 2.5    |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | < 0.2  | 0.9    |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 13     | 18     | 5.8    | 4.0    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 2.6    | 8.7    | 1.8    | 1.0    |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 8.0    | 2.3    | 16     | 9.1    |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                                |      |    |           |       |       |       |       |
|----------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 <sub>HS,1D,AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 <sub>HS,1D,AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 <sub>HS,1D,AL</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) <sub>HS+EH,1D,AL,#1,#2,MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |

|                                                               |      |    |           |       |       |       |       |
|---------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 <sub>HS,1D,AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 <sub>HS,1D,AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 <sub>HS,1D,AR</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | 48    | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | 65    | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | 38    | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) <sub>HS+EH,1D,AR,#1,#2,MS</sub> | µg/l | 10 | NONE      | < 10  | 150   | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample

\* Sample was oily.



**Analytical Report Number : 21-25971**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 *for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | NONE                 |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |
| Free cyanide (low level) in water        | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW.                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |



Analytical Report Number : 21-25971

Project / Site name: Clarendon Phase 3B

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name           | Analytical Method Description                                                                    | Analytical Method Reference                   | Method number | Wet / Dry Analysis | Accreditation Status |
|--------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------|---------------|--------------------|----------------------|
| Temperature on Receipt (water) | Temperature of water upon receipt.                                                               | In-house method                               | L019-UK       | W                  | NONE                 |
| Turbidity of in water          | Determination of sample turbidity by colorimeter and comparison with standard reference samples. | In-house method based on Standard Method 8237 | L083-PL       | W                  | NONE                 |

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| -       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

Analytical Report Number : 21-25971  
Project / Site name: Clarendon Phase 3B

| Sample ID | Other ID      | Sample Type | Lab Sample Number | Sample Deviation | Test Name                                | Test Ref      | Test Deviation |
|-----------|---------------|-------------|-------------------|------------------|------------------------------------------|---------------|----------------|
| BH510     | None Supplied | W           | 2099466           | c                | Ammonia as NH3 in water                  | L082-PL       | c              |
| BH510     | None Supplied | W           | 2099466           | c                | Ammoniacal Nitrogen as N in water        | L082-PL       | c              |
| BH513     | None Supplied | W           | 2099468           | c                | Ammonia as NH3 in water                  | L082-PL       | c              |
| BH513     | None Supplied | W           | 2099468           | c                | Ammoniacal Nitrogen as N in water        | L082-PL       | c              |
| BH514     | None Supplied | W           | 2099467           | c                | Ammonia as NH3 in water                  | L082-PL       | c              |
| BH514     | None Supplied | W           | 2099467           | c                | Ammoniacal Nitrogen as N in water        | L082-PL       | c              |
| BH514     | None Supplied | W           | 2099467           | c                | Dissolved Oxygen in water                | L086-PL       | c              |
| BH514     | None Supplied | W           | 2099467           | c                | Electrical conductivity at 20oC of water | L031-PL       | c              |
| BH514     | None Supplied | W           | 2099467           | c                | Redox Potential of waters                | L084-PL       | c              |
| BH514     | None Supplied | W           | 2099467           | c                | Turbidity of in water                    | L083-PL       | c              |
| BH514     | None Supplied | W           | 2099467           | c                | pH at 20oC in water (automated)          | L099-PL       | c              |
| Discharge | None Supplied | W           | 2099470           | c                | None Supplied                            | None Supplied | None Supplied  |
| MB36      | None Supplied | W           | 2099469           | c                | Ammonia as NH3 in water                  | L082-PL       | c              |
| MB36      | None Supplied | W           | 2099469           | c                | Ammoniacal Nitrogen as N in water        | L082-PL       | c              |

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**e:** reception@i2analytical.com

## **Analytical Report Number : 22-46278**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 17/03/2022 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 17/03/2022 |
| <b>Your order number:</b>   | S-RE6089-00005     | <b>Analysis completed by:</b>                          | 22/03/2022 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 24/03/2022 |
| <b>Samples Analysed:</b>    | 3 water samples    |                                                        |            |

  
**Signed:**

Anna Goc  
Technical Reviewer (Reporting Team)  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-46278  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089-00005

|                                          |       |                    |                         |               |               |               |
|------------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|
| Lab Sample Number                        |       |                    |                         | 2208756       | 2208757       | 2208758       |
| Sample Reference                         |       |                    |                         | BH514B        | BH510         | BH513         |
| Sample Number                            |       |                    |                         | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                         | 16/03/2022    | 16/03/2022    | 16/03/2022    |
| Time Taken                               |       |                    |                         | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |
|                                          |       |                    |                         |               |               |               |

#### General Inorganics

|                                  |          |       |           |        |        |       |
|----------------------------------|----------|-------|-----------|--------|--------|-------|
| pH                               | pH Units | N/A   | ISO 17025 | 8.3    | -      | -     |
| Temperature on Receipt           | °C       | 0.1   | NONE      | 7.2    | -      | -     |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | 1500   | -      | -     |
| Turbidity                        | NTU      | 1     | NONE      | U/S*   | -      | -     |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 520    | 16     | < 1.0 |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | 2.1    | < 1.0  | < 1.0 |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | 18000  | 320    | 220   |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 537    | 3740** | 1830  |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0  | < 5.0  | < 5.0 |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 2100   | 920    | 270   |
| Total Suspended Solids           | mg/l     | 2     | ISO 17025 | 19000  | 130    | 97    |
| Redox Potential                  | mV       | -800  | NONE      | -161.8 | -      | -     |
| Dissolved Oxygen                 | mg/l     | 1     | NONE      | < 1.0  | -      | -     |

#### Total Phenols

|                            |      |    |           |    |      |      |
|----------------------------|------|----|-----------|----|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | 11 | < 10 | < 10 |
|----------------------------|------|----|-----------|----|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|



Analytical Report Number: 22-46278  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089-00005

|                                          |               |                    |                         |
|------------------------------------------|---------------|--------------------|-------------------------|
| Lab Sample Number                        | 2208756       | 2208757            | 2208758                 |
| Sample Reference                         | BH514B        | BH510              | BH513                   |
| Sample Number                            | None Supplied | None Supplied      | None Supplied           |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied           |
| Date Sampled                             | 16/03/2022    | 16/03/2022         | 16/03/2022              |
| Time Taken                               | None Supplied | None Supplied      | None Supplied           |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |
|-----------------------|------|---|-----------|-------|-------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | < 5.0 |

|                      |      |      |           |       |        |        |
|----------------------|------|------|-----------|-------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 1.15  | 3.49   | 1.03   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | 0.03  | 0.16   | 0.02   |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | 1.4   | 4.6    | 4.1    |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 6.3   | 17     | 6.6    |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2 | < 0.2  | < 0.2  |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | 0.5   | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 3.9   | 16     | 5.5    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 2.6   | 3.9    | 1.6    |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 1.2   | 9.1    | 7.8    |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                                |      |    |           |       |       |       |
|----------------------------------------------------------------|------|----|-----------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 <sub>HS_ID_AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 <sub>HS_ID_AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 <sub>HS_ID_AL</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 <sub>EH_ID_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 <sub>EH_ID_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 <sub>EH_ID_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 <sub>EH_ID_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) <sub>HS+EH_ID_AL_#1_#2_MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |

|                                                               |      |    |           |       |       |       |
|---------------------------------------------------------------|------|----|-----------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 <sub>HS_ID_AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 <sub>HS_ID_AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 <sub>HS_ID_AR</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 <sub>EH_ID_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 <sub>EH_ID_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 <sub>EH_ID_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 <sub>EH_ID_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) <sub>HS+EH_ID_AR_#1_#2_MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample

\*Analysis could not be completed due to sample matrix

\*\*Result was reported from high dilution and should be interpreted with care



Analytical Report Number : 22-46278  
Project / Site name: Clarendon Phase 3B

**Water matrix abbreviations:**

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discrete analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| Suspended solids in water                | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | ISO 17025            |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |



**Analytical Report Number : 22-46278**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name              | Analytical Method Description                                                                          | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Free cyanide (low level) in water | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW. | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Temperature on Receipt (water)    | Temperature of water upon receipt.                                                                     | In-house method                                                                                                 | L019-UK       | W                  | NONE                 |
| Turbidity of in water             | Determination of sample turbidity by colorimeter and comparison with standard reference samples.       | In-house method based on Standard Method 8237                                                                   | L083-PL       | W                  | NONE                 |

**For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.**

**For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.**

**Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.**

**Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.**

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| -       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |



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## **Analytical Report Number : 22-49337**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 01/04/2022 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 01/04/2022 |
| <b>Your order number:</b>   | S RE6089 00005     | <b>Analysis completed by:</b>                          | 08/04/2022 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 11/04/2022 |
| <b>Samples Analysed:</b>    | 4 water samples    |                                                        |            |

**Signed:**

Joanna Wawrzeczko  
Reporting Specialist  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-49337  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

|                                          |               |                    |                      |               |
|------------------------------------------|---------------|--------------------|----------------------|---------------|
| Lab Sample Number                        | 2224700       | 2224701            | 2224702              | 2224703       |
| Sample Reference                         | BH514B        | BH510              | BH513                | MB44          |
| Sample Number                            | None Supplied | None Supplied      | None Supplied        | None Supplied |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied        | None Supplied |
| Date Sampled                             | 01/04/2022    | 01/04/2022         | 01/04/2022           | 01/04/2022    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied        | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation Status |               |

#### General Inorganics

|                                  |          |       |           |       |       |       |       |
|----------------------------------|----------|-------|-----------|-------|-------|-------|-------|
| pH                               | pH Units | N/A   | ISO 17025 | 8.4   | -     | -     | -     |
| Temperature on Receipt           | °C       | 0.1   | NONE      | 6.3   | -     | -     | -     |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | 1400  | -     | -     | -     |
| Turbidity                        | NTU      | 1     | NONE      | 32    | -     | -     | -     |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 220   | < 1.0 | 11    | < 1.0 |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | 4700  | 290   | 230   | 210   |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 341   | 1850  | 1700  | 126   |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 2800  | 580   | 650   | 15000 |
| Total Suspended Solids           | mg/l     | 2     | ISO 17025 | 16000 | 320   | 160   | 95    |

|                  |      |      |      |       |   |   |   |
|------------------|------|------|------|-------|---|---|---|
| Redox Potential  | mV   | -800 | NONE | 47.5  | - | - | - |
| Dissolved Oxygen | mg/l | 1    | NONE | < 1.0 | - | - | - |

#### Total Phenols

|                            |      |    |           |      |      |      |      |
|----------------------------|------|----|-----------|------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | 1.07   | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | 0.36   | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | 0.28   | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | 1.64   | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | 0.51   | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | 3      | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | 2.7    | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | 1.66   | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | 1.37   | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | 1.73   | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | 0.87   | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | 1.59   | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | 1.01   | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | 0.33   | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | 1.18   | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |      |        |        |        |
|-------------------|------|------|-----------|------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | 19.3 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|------|--------|--------|--------|



Analytical Report Number: 22-49337  
Project / Site name: Clarendon Phase 3B

Your Order No: S RE6089 00005

|                                          |               |                    |                         |               |
|------------------------------------------|---------------|--------------------|-------------------------|---------------|
| Lab Sample Number                        | 2224700       | 2224701            | 2224702                 | 2224703       |
| Sample Reference                         | BH514B        | BH510              | BH513                   | MB44          |
| Sample Number                            | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Date Sampled                             | 01/04/2022    | 01/04/2022         | 01/04/2022              | 01/04/2022    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied           | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |               |

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |       |
|-----------------------|------|---|-----------|-------|-------|-------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 |

|                      |      |      |           |        |        |        |        |
|----------------------|------|------|-----------|--------|--------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 1.01   | 0.48   | 0.38   | 2.03   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | < 0.02 | 0.09   | 0.03   | < 0.02 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | < 0.2  | 0.2    |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 0.7    | 3.8    | 3.1    | 2.5    |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | < 0.2  | 0.4    |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 1.1    | 8.3    | 6.9    | 2.8    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 3.4    | 1.6    | 1.3    | 1      |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 2.5    | 11     | 6.9    | 9      |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                                |      |    |           |       |       |       |       |
|----------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 <sub>HS,1D,AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 <sub>HS,1D,AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 <sub>HS,1D,AL</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | 27    | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | 36    | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | 83    | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 <sub>EH,1D,AL,#1,#2,MS</sub>    | µg/l | 10 | NONE      | 510   | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) <sub>HS+EH,1D,AL,#1,#2,MS</sub> | µg/l | 10 | NONE      | 660   | < 10  | < 10  | < 10  |

|                                                               |      |    |           |       |       |       |       |
|---------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 <sub>HS,1D,AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 <sub>HS,1D,AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 <sub>HS,1D,AR</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 <sub>EH,1D,AR,#1,#2,MS</sub>    | µg/l | 10 | NONE      | 10    | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) <sub>HS+EH,1D,AR,#1,#2,MS</sub> | µg/l | 10 | NONE      | 10    | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number : 22-49337**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 *for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| Suspended solids in water                | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | ISO 17025            |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |



Analytical Report Number : 22-49337

Project / Site name: Clarendon Phase 3B

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name              | Analytical Method Description                                                                          | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Free cyanide (low level) in water | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW. | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Temperature on Receipt (water)    | Temperature of water upon receipt.                                                                     | In-house method                                                                                                 | L019-UK       | W                  | NONE                 |
| Turbidity of in water             | Determination of sample turbidity by colorimeter and comparison with standard reference samples.       | In-house method based on Standard Method 8237                                                                   | L083-PL       | W                  | NONE                 |

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| _       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

**Analytical Report Number : 22-49337**

**Project / Site name: Clarendon Phase 3B**

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

| Sample ID | Other ID      | Sample Type | Lab Sample Number | Sample Deviation | Test Name                 | Test Ref | Test Deviation |
|-----------|---------------|-------------|-------------------|------------------|---------------------------|----------|----------------|
| BH514B    | None Supplied | W           | 2224700           | c                | Dissolved Oxygen in water | L086-PL  | c              |

**Jack Holliday**

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## **Analytical Report Number : 22-52149**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 14/04/2022 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 14/04/2022 |
| <b>Your order number:</b>   | D RE6089 00005     | <b>Analysis completed by:</b>                          | 25/04/2022 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 25/04/2022 |
| <b>Samples Analysed:</b>    | 5 water samples    |                                                        |            |

**Signed:**

Joanna Wawrzeczko  
Reporting Specialist  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-52149  
Project / Site name: Clarendon Phase 3B

Your Order No: D RE6089 00005

|                                          |               |                    |                      |  |               |               |               |               |
|------------------------------------------|---------------|--------------------|----------------------|--|---------------|---------------|---------------|---------------|
| Lab Sample Number                        | 2240914       |                    |                      |  | 2241125       | 2241126       | 2241127       | 2242400       |
| Sample Reference                         | BH514B        |                    |                      |  | BH510         | BH513         | MB46          | BH514B        |
| Sample Number                            | None Supplied |                    |                      |  | None Supplied | None Supplied | None Supplied | Filtered      |
| Depth (m)                                | None Supplied |                    |                      |  | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             | 13/04/2022    |                    |                      |  | 13/04/2022    | 13/04/2022    | 13/04/2022    | 13/04/2022    |
| Time Taken                               | None Supplied |                    |                      |  | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation Status |  |               |               |               |               |

#### General Inorganics

|                                  |          |       |           |       |       |       |       |       |
|----------------------------------|----------|-------|-----------|-------|-------|-------|-------|-------|
| pH                               | pH Units | N/A   | ISO 17025 | 8.6   | -     | -     | -     | 8.3   |
| Temperature on Receipt           | °C       | 0.1   | NONE      | 6.8   | -     | -     | -     | 6.8   |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | 1000  | -     | -     | -     | 820   |
| Turbidity                        | NTU      | 1     | NONE      | 350   | -     | -     | -     | 2     |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 200   | 16    | < 1.0 | < 1.0 | 140   |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | 5.1   | < 1.0 | < 1.0 | < 1.0 | 16    |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | 2800  | 370   | 270   | 360   | 3000  |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 233   | 2840  | 1690  | 138   | 207   |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 900   | 560   | < 15  | 10000 | 890   |
| Total Suspended Solids           | mg/l     | 2     | ISO 17025 | 15    | 110   | 96    | 85    | -     |

|                  |      |      |      |        |   |   |   |       |
|------------------|------|------|------|--------|---|---|---|-------|
| Redox Potential  | mV   | -800 | NONE | -216.4 | - | - | - | 168.7 |
| Dissolved Oxygen | mg/l | 1    | NONE | 2.5    | - | - | - | 8.4   |

#### Total Phenols

|                            |      |    |           |      |      |      |    |    |
|----------------------------|------|----|-----------|------|------|------|----|----|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 | 18 | 14 |
|----------------------------|------|----|-----------|------|------|------|----|----|

#### Speciated PAHs

|                        |      |      |           |      |        |        |        |        |
|------------------------|------|------|-----------|------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | 1.55 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | 0.59 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | 0.38 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | 0.53 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | 4.1  | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | 1.39 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | 7.95 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | 6.95 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | 3.96 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | 3.45 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | 4.38 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | 1.85 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | 3.97 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | 2.05 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | 0.65 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | 2.33 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |      |        |        |        |        |
|-------------------|------|------|-----------|------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | 46.1 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|------|--------|--------|--------|--------|



Analytical Report Number: 22-52149  
Project / Site name: Clarendon Phase 3B

Your Order No: D RE6089 00005

|                                          |               |                    |                         |               |               |
|------------------------------------------|---------------|--------------------|-------------------------|---------------|---------------|
| Lab Sample Number                        | 2240914       | 2241125            | 2241126                 | 2241127       | 2242400       |
| Sample Reference                         | BH514B        | BH510              | BH513                   | MB46          | BH514B        |
| Sample Number                            | None Supplied | None Supplied      | None Supplied           | None Supplied | Filtered      |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Date Sampled                             | 13/04/2022    | 13/04/2022         | 13/04/2022              | 13/04/2022    | 13/04/2022    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |               |               |

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |       |       |
|-----------------------|------|---|-----------|-------|-------|-------|-------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |

|                      |      |      |           |        |        |        |        |        |
|----------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 1.04   | 0.66   | 0.21   | 1.61   | 1.32   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | < 0.02 | 0.16   | < 0.02 | < 0.02 | < 0.02 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | < 0.2  | < 0.2  | < 0.2  |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 0.6    | 5.3    | 1.9    | 2.1    | 64     |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | < 0.2  | 0.4    | 0.2    |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.06   |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 0.9    | 9      | 3.4    | 2.7    | 1.2    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 0.6    | 1.9    | 0.9    | 0.9    | 1      |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 1.5    | 12     | 15     | 16     | < 0.5  |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                                |      |    |           |       |       |       |       |       |
|----------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 <sub>HS_1D_AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 <sub>HS_1D_AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 <sub>HS_1D_AL</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 <sub>EH_1D_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 <sub>EH_1D_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 <sub>EH_1D_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 <sub>EH_1D_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) <sub>HS+EH_1D_AL_#1_#2_MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |

|                                                               |      |    |           |       |       |       |       |       |
|---------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 <sub>HS_1D_AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 <sub>HS_1D_AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 <sub>HS_1D_AR</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 <sub>EH_1D_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 <sub>EH_1D_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 <sub>EH_1D_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | 21    | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 <sub>EH_1D_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | 23    | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) <sub>HS+EH_1D_AR_#1_#2_MS</sub> | µg/l | 10 | NONE      | 44    | < 10  | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number : 22-52149**

**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 *for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| Suspended solids in water                | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | ISO 17025            |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |



Analytical Report Number : 22-52149

Project / Site name: Clarendon Phase 3B

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name              | Analytical Method Description                                                                          | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Free cyanide (low level) in water | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW. | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Temperature on Receipt (water)    | Temperature of water upon receipt.                                                                     | In-house method                                                                                                 | L019-UK       | W                  | NONE                 |
| Turbidity of in water             | Determination of sample turbidity by colorimeter and comparison with standard reference samples.       | In-house method based on Standard Method 8237                                                                   | L083-PL       | W                  | NONE                 |

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| _       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

## Sample Deviation Report



**Analytical Report Number : 22-52149**

**Project / Site name: Clarendon Phase 3B**

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

| Sample ID | Other ID      | Sample Type | Lab Sample Number | Sample Deviation | Test Name                                | Test Ref | Test Deviation |
|-----------|---------------|-------------|-------------------|------------------|------------------------------------------|----------|----------------|
| BH510     | None Supplied | W           | 2241125           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH510     | None Supplied | W           | 2241125           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH510     | None Supplied | W           | 2241125           | c                | Settleable Solids in water               | L004-PL  | c              |
| BH510     | None Supplied | W           | 2241125           | c                | Suspended solids in water                | L004-PL  | c              |
| BH513     | None Supplied | W           | 2241126           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH513     | None Supplied | W           | 2241126           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH513     | None Supplied | W           | 2241126           | c                | Settleable Solids in water               | L004-PL  | c              |
| BH513     | None Supplied | W           | 2241126           | c                | Suspended solids in water                | L004-PL  | c              |
| BH514B    | None Supplied | W           | 2240914           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH514B    | None Supplied | W           | 2240914           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH514B    | None Supplied | W           | 2240914           | c                | Dissolved Oxygen in water                | L086-PL  | c              |
| BH514B    | None Supplied | W           | 2240914           | c                | Electrical conductivity at 20oC of water | L031-PL  | c              |
| BH514B    | None Supplied | W           | 2240914           | c                | Redox Potential of waters                | L084-PL  | c              |
| BH514B    | None Supplied | W           | 2240914           | c                | Settleable Solids in water               | L004-PL  | c              |
| BH514B    | None Supplied | W           | 2240914           | c                | Suspended solids in water                | L004-PL  | c              |
| BH514B    | None Supplied | W           | 2240914           | c                | Turbidity of in water                    | L083-PL  | c              |
| BH514B    | None Supplied | W           | 2240914           | c                | pH at 20oC in water (automated)          | L099-PL  | c              |
| BH514B    | Filtered      | W           | 2242400           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH514B    | Filtered      | W           | 2242400           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH514B    | Filtered      | W           | 2242400           | c                | Dissolved Oxygen in water                | L086-PL  | c              |
| BH514B    | Filtered      | W           | 2242400           | c                | Electrical conductivity at 20oC of water | L031-PL  | c              |
| BH514B    | Filtered      | W           | 2242400           | c                | Redox Potential of waters                | L084-PL  | c              |
| BH514B    | Filtered      | W           | 2242400           | c                | Turbidity of in water                    | L083-PL  | c              |
| BH514B    | Filtered      | W           | 2242400           | c                | pH at 20oC in water (automated)          | L099-PL  | c              |
| MB46      | None Supplied | W           | 2241127           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| MB46      | None Supplied | W           | 2241127           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| MB46      | None Supplied | W           | 2241127           | c                | Settleable Solids in water               | L004-PL  | c              |
| MB46      | None Supplied | W           | 2241127           | c                | Suspended solids in water                | L004-PL  | c              |

**Jack Holliday**

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## **Analytical Report Number : 22-58010**

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 12/05/2022 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 12/05/2022 |
| <b>Your order number:</b>   | S-RE6089 00005     | <b>Analysis completed by:</b>                          | 19/05/2022 |
| <b>Report Issue Number:</b> | 1                  | <b>Report issued on:</b>                               | 19/05/2022 |
| <b>Samples Analysed:</b>    | 6 water samples    |                                                        |            |

**Signed:**

Adam Fenwick  
Technical Reviewer  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-58010  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089 00005

|                                          |  |  |  |               |                    |                      |               |               |               |
|------------------------------------------|--|--|--|---------------|--------------------|----------------------|---------------|---------------|---------------|
| Lab Sample Number                        |  |  |  | 2273563       | 2273564            | 2273565              | 2273566       | 2273567       | 2273568       |
| Sample Reference                         |  |  |  | BH514B        | BH510              | BH513                | W5506         | MB47          | BH514B        |
| Sample Number                            |  |  |  | Unfiltered    | None Supplied      | None Supplied        | None Supplied | None Supplied | Filtered      |
| Depth (m)                                |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |  |  |  | 11/05/2022    | 11/05/2022         | 11/05/2022           | 11/05/2022    | 11/05/2022    | 11/05/2022    |
| Time Taken                               |  |  |  | None Supplied | None Supplied      | None Supplied        | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) |  |  |  | Units         | Limit of detection | Accreditation Status |               |               |               |

#### General Inorganics

|                                  |          |       |           |        |         |         |        |        |        |
|----------------------------------|----------|-------|-----------|--------|---------|---------|--------|--------|--------|
| pH                               | pH Units | N/A   | ISO 17025 | 8.5    | -       | -       | -      | -      | 8.2    |
| Temperature on Receipt           | °C       | 0.1   | NONE      | 5.2    | -       | -       | -      | -      | 5.2    |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | 940    | -       | -       | -      | -      | 980    |
| Turbidity                        | NTU      | 1     | NONE      | 81     | -       | -       | -      | -      | 390    |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 49     | 2.4     | < 1.0   | 130    | < 1.0  | 63     |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | < 1.0  | < 1.0   | < 1.0   | < 1.0  | < 1.0  | < 1.0  |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | 1000   | 320     | 230     | 410    | < 200  | 930    |
| Sulphate as SO4                  | µg/l     | 45    | ISO 17025 | 154000 | 2900000 | 1800000 | 104000 | 102000 | 157000 |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 154    | 2900    | 1800    | 104    | 102    | 157    |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0  | < 5.0   | < 5.0   | < 5.0  | < 5.0  | < 5.0  |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 1400   | < 15    | < 15    | 1100   | 13000  | 1400   |
| Total Suspended Solids           | mg/l     | 2     | ISO 17025 | 5800   | 74      | 68      | 10     | 2      | -      |

|                  |      |      |      |     |   |   |   |   |       |
|------------------|------|------|------|-----|---|---|---|---|-------|
| Redox Potential  | mV   | -800 | NONE | 191 | - | - | - | - | 192.9 |
| Dissolved Oxygen | mg/l | 1    | NONE | 8.7 | - | - | - | - | 8.5   |

#### Total Phenols

|                            |      |    |           |      |      |      |      |      |      |
|----------------------------|------|----|-----------|------|------|------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|--------|--------|--------|

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |     |       |       |
|-----------------------|------|---|-----------|-------|-------|-------|-----|-------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 | U/S | < 5.0 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | < 5.0 | U/S | < 5.0 | < 5.0 |

|                      |      |      |           |        |        |        |      |        |        |
|----------------------|------|------|-----------|--------|--------|--------|------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 1.31   | 0.49   | 0.21   | 30.4 | 1.82   | 1.42   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | < 0.02 | 0.12   | 0.02   | 0.03 | < 0.02 | < 0.02 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | < 0.2  | 20   | < 0.2  | < 0.2  |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 1.1    | 3.5    | 1.7    | 44   | 2.7    | 1      |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | < 0.2  | 4.1  | 0.5    | < 0.2  |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | 0.14 | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 0.7    | 9.6    | 2.8    | 16   | 2.1    | 0.9    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 0.8    | 1.8    | 0.8    | 18   | 0.8    | < 0.6  |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 1.1    | 13     | 5.6    | 3.9  | 14     | 1.2    |



Analytical Report Number: 22-58010  
Project / Site name: Clarendon Phase 3B

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|                                          |               |                    |                         |               |               |               |
|------------------------------------------|---------------|--------------------|-------------------------|---------------|---------------|---------------|
| Lab Sample Number                        | 2273563       | 2273564            | 2273565                 | 2273566       | 2273567       | 2273568       |
| Sample Reference                         | BH514B        | BH510              | BH513                   | W5506         | MB47          | BH514B        |
| Sample Number                            | Unfiltered    | None Supplied      | None Supplied           | None Supplied | None Supplied | Filtered      |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied | None Supplied |
| Date Sampled                             | 11/05/2022    | 11/05/2022         | 11/05/2022              | 11/05/2022    | 11/05/2022    | 11/05/2022    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |               |               |               |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                                |      |    |           |       |       |       |       |       |       |
|----------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 <sub>HS 1D AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 <sub>HS 1D AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 <sub>HS 1D AL</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 <sub>EH 1D AL #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 <sub>EH 1D AL #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 <sub>EH 1D AL #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 <sub>EH 1D AL #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) <sub>HS+EH 1D AL #1 #2 MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  | < 10  |

|                                                               |      |    |           |       |       |       |       |       |       |
|---------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 <sub>HS 1D AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 <sub>HS 1D AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 <sub>HS 1D AR</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 <sub>EH 1D AR #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 <sub>EH 1D AR #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 <sub>EH 1D AR #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 <sub>EH 1D AR #1 #2 MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) <sub>HS+EH 1D AR #1 #2 MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number : 22-58010**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 *for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| Suspended solids in water                | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | ISO 17025            |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |



Analytical Report Number : 22-58010  
Project / Site name: Clarendon Phase 3B

**Water matrix abbreviations:**

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name              | Analytical Method Description                                                                          | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Free cyanide (low level) in water | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW. | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Temperature on Receipt (water)    | Temperature of water upon receipt.                                                                     | In-house method                                                                                                 | L019-UK       | W                  | NONE                 |
| Turbidity of in water             | Determination of sample turbidity by colorimeter and comparison with standard reference samples.       | In-house method based on Standard Method 8237                                                                   | L083-PL       | W                  | NONE                 |

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| -       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |



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## **Analytical Report Number : 22-61552**

Replaces Analytical Report Number: 22-61552, issue no. 1  
Additional analysis undertaken.

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 27/05/2022 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 27/05/2022 |
| <b>Your order number:</b>   | S-RE6089 00005     | <b>Analysis completed by:</b>                          | 14/06/2022 |
| <b>Report Issue Number:</b> | 2                  | <b>Report issued on:</b>                               | 14/06/2022 |
| <b>Samples Analysed:</b>    | 6 water samples    |                                                        |            |

  
**Signed:**

Adam Fenwick  
Technical Reviewer  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

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|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-61552  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089 00005

|                                          |               |                    |                         |               |               |
|------------------------------------------|---------------|--------------------|-------------------------|---------------|---------------|
| Lab Sample Number                        | 2294279       | 2294280            | 2294281                 | 2294282       | 2294283       |
| Sample Reference                         | BH514B        | BH510              | BH513                   | WS506         | MB48          |
| Sample Number                            | unfiltered    | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Date Sampled                             | 25/05/2022    | 25/05/2022         | 25/05/2022              | 25/05/2022    | 25/05/2022    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |               |               |

#### General Inorganics

|                                  |          |       |           |        |         |         |        |        |
|----------------------------------|----------|-------|-----------|--------|---------|---------|--------|--------|
| pH                               | pH Units | N/A   | ISO 17025 | 8.1    | -       | -       | -      | -      |
| Temperature on Receipt           | oC       | 0.1   | NONE      | 6.9    | -       | -       | -      | -      |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | 970    | -       | -       | -      | -      |
| Turbidity                        | NTU      | 1     | NONE      | 17     | -       | -       | -      | -      |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 52     | 3       | < 1.0   | 67     | < 1.0  |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | < 1.0  | < 1.0   | < 1.0   | < 1.0  | < 1.0  |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | U/S    | 450     | 280     | 530    | 630    |
| Sulphate as SO4                  | µg/l     | 45    | ISO 17025 | 170000 | 5240000 | 1720000 | 147000 | 118000 |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 170    | 5240    | 1720    | 147    | 118    |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0  | < 5.0   | < 5.0   | < 5.0  | < 5.0  |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 1100   | 590     | < 15    | 150    | 10000  |
| Total Suspended Solids           | mg/l     | 2     | ISO 17025 | 590    | 68      | 46      | 190    | 8      |

|                  |      |      |      |      |   |   |   |   |
|------------------|------|------|------|------|---|---|---|---|
| Redox Potential  | mV   | -800 | NONE | 63.3 | - | - | - | - |
| Dissolved Oxygen | mg/l | 1    | NONE | 4.8  | - | - | - | - |

#### Total Phenols

|                            |      |    |           |      |      |      |      |      |
|----------------------------|------|----|-----------|------|------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|--------|--------|



Analytical Report Number: 22-61552  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089 00005

| Lab Sample Number                        | 2294279       | 2294280            | 2294281                 | 2294282       | 2294283       |
|------------------------------------------|---------------|--------------------|-------------------------|---------------|---------------|
| Sample Reference                         | BH514B        | BH510              | BH513                   | WS506         | MB48          |
| Sample Number                            | unfiltered    | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Date Sampled                             | 25/05/2022    | 25/05/2022         | 25/05/2022              | 25/05/2022    | 25/05/2022    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied           | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation<br>Status |               |               |

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |       |       |
|-----------------------|------|---|-----------|-------|-------|-------|-------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | < 5.0 | 35    | < 5.0 |

|                      |      |      |           |        |        |        |        |        |
|----------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 1.98   | 0.41   | 0.24   | 32.6   | 2.29   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | < 0.02 | 0.06   | < 0.02 | < 0.02 | < 0.02 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | < 0.2  | 35     | 0.5    |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 1.3    | 5.6    | 1.6    | 28     | 5      |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | < 0.2  | 2.4    | 0.8    |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 2.7    | 6.7    | 4.3    | 8.4    | 2.3    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 1.2    | 3.7    | 1.1    | 21     | 1.1    |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 0.9    | 14     | 5.9    | 6.1    | 19     |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                                |      |    |           |       |       |       |       |       |
|----------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 <sub>HS_1D_AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 <sub>HS_1D_AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 <sub>HS_1D_AL</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 <sub>EH_1D_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 <sub>EH_1D_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 <sub>EH_1D_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 <sub>EH_1D_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) <sub>HS+EH_1D_AL_#1_#2_MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |

|                                                               |      |    |           |       |       |       |       |       |
|---------------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 <sub>HS_1D_AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 <sub>HS_1D_AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 <sub>HS_1D_AR</sub>              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 <sub>EH_1D_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 <sub>EH_1D_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 <sub>EH_1D_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 <sub>EH_1D_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) <sub>HS+EH_1D_AR_#1_#2_MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 22-61552  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089 00005

|                                          |       |                    |                         |               |
|------------------------------------------|-------|--------------------|-------------------------|---------------|
| Lab Sample Number                        |       |                    |                         | 2294284       |
| Sample Reference                         |       |                    |                         | BH514B        |
| Sample Number                            |       |                    |                         | Filtred       |
| Depth (m)                                |       |                    |                         | None Supplied |
| Date Sampled                             |       |                    |                         | 25/05/2022    |
| Time Taken                               |       |                    |                         | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |

#### General Inorganics

|                                  |          |       |           |        |
|----------------------------------|----------|-------|-----------|--------|
| pH                               | pH Units | N/A   | ISO 17025 | 7.9    |
| Temperature on Receipt           | °C       | 0.1   | NONE      | 6.9    |
| Electrical Conductivity at 20 °C | µS/cm    | 10    | ISO 17025 | 1000   |
| Turbidity                        | NTU      | 1     | NONE      | -      |
| Total Cyanide (Low Level 1 µg/l) | µg/l     | 1     | ISO 17025 | 49     |
| Free Cyanide (Low Level 1 µg/l)  | µg/l     | 1     | ISO 17025 | < 1.0  |
| Thiocyanate as SCN               | µg/l     | 200   | ISO 17025 | < 200  |
| Sulphate as SO4                  | µg/l     | 45    | ISO 17025 | 203000 |
| Sulphate as SO4                  | mg/l     | 0.045 | ISO 17025 | 203    |
| Sulphide                         | µg/l     | 5     | NONE      | < 5.0  |
| Ammoniacal Nitrogen as NH3       | µg/l     | 15    | ISO 17025 | 1200   |
| Total Suspended Solids           | mg/l     | 2     | ISO 17025 | -      |

|                  |      |      |      |      |
|------------------|------|------|------|------|
| Redox Potential  | mV   | -800 | NONE | 83.4 |
| Dissolved Oxygen | mg/l | 1    | NONE | 7.6  |

#### Total Phenols

|                            |      |    |           |      |
|----------------------------|------|----|-----------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 |
|----------------------------|------|----|-----------|------|

#### Speciated PAHs

|                        |      |      |           |        |
|------------------------|------|------|-----------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |
|-------------------|------|------|-----------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 |
|-------------------|------|------|-----------|--------|



Analytical Report Number: 22-61552  
Project / Site name: Clarendon Phase 3B

Your Order No: S-RE6089 00005

|                                          |       |                    |                         |               |
|------------------------------------------|-------|--------------------|-------------------------|---------------|
| Lab Sample Number                        |       |                    |                         | 2294284       |
| Sample Reference                         |       |                    |                         | BH514B        |
| Sample Number                            |       |                    |                         | Filtred       |
| Depth (m)                                |       |                    |                         | None Supplied |
| Date Sampled                             |       |                    |                         | 25/05/2022    |
| Time Taken                               |       |                    |                         | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |
|                                          |       |                    |                         |               |

#### Heavy Metals / Metalloids

|                       |      |   |           |       |
|-----------------------|------|---|-----------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 |

|                      |      |      |           |        |
|----------------------|------|------|-----------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 1.84   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | < 0.02 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | < 0.2  |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 1.4    |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 2.7    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 1.8    |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 1.9    |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |
|------------------------------------|------|---|-----------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                                |      |    |           |       |
|----------------------------------------------------------------|------|----|-----------|-------|
| TPH-CWG - Aliphatic >C5 - C6 <sub>HS_1D_AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 <sub>HS_1D_AL</sub>               | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 <sub>HS_1D_AL</sub>              | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 <sub>EH_1D_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 <sub>EH_1D_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 <sub>EH_1D_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 <sub>EH_1D_AL_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) <sub>HS+EH_1D_AL_#1_#2_MS</sub> | µg/l | 10 | NONE      | < 10  |

|                                                               |      |    |           |       |
|---------------------------------------------------------------|------|----|-----------|-------|
| TPH-CWG - Aromatic >C5 - C7 <sub>HS_1D_AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 <sub>HS_1D_AR</sub>               | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 <sub>HS_1D_AR</sub>              | µg/l | 1  | ISO 17025 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 <sub>EH_1D_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aromatic >C12 - C16 <sub>EH_1D_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aromatic >C16 - C21 <sub>EH_1D_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aromatic >C21 - C35 <sub>EH_1D_AR_#1_#2_MS</sub>    | µg/l | 10 | NONE      | < 10  |
| TPH-CWG - Aromatic (C5 - C35) <sub>HS+EH_1D_AR_#1_#2_MS</sub> | µg/l | 10 | NONE      | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample



**Analytical Report Number : 22-61552**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 *for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| Suspended solids in water                | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | ISO 17025            |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |



Analytical Report Number : 22-61552  
Project / Site name: Clarendon Phase 3B

**Water matrix abbreviations:**

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name              | Analytical Method Description                                                                          | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Free cyanide (low level) in water | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW. | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Temperature on Receipt (water)    | Temperature of water upon receipt.                                                                     | In-house method                                                                                                 | L019-UK       | W                  | NONE                 |
| Turbidity of in water             | Determination of sample turbidity by colorimeter and comparison with standard reference samples.       | In-house method based on Standard Method 8237                                                                   | L083-PL       | W                  | NONE                 |

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| _       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

## Sample Deviation Report



**Analytical Report Number : 22-61552**

**Project / Site name: Clarendon Phase 3B**

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

| Sample ID | Other ID      | Sample Type | Lab Sample Number | Sample Deviation | Test Name                                | Test Ref | Test Deviation |
|-----------|---------------|-------------|-------------------|------------------|------------------------------------------|----------|----------------|
| BH510     | None Supplied | W           | 2294280           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH510     | None Supplied | W           | 2294280           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH513     | None Supplied | W           | 2294281           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH513     | None Supplied | W           | 2294281           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH514B    | Filtred       | W           | 2294284           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH514B    | Filtred       | W           | 2294284           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH514B    | Filtred       | W           | 2294284           | c                | Dissolved Oxygen in water                | L086-PL  | c              |
| BH514B    | Filtred       | W           | 2294284           | c                | Electrical conductivity at 20oC of water | L031-PL  | c              |
| BH514B    | Filtred       | W           | 2294284           | c                | Redox Potential of waters                | L084-PL  | c              |
| BH514B    | Filtred       | W           | 2294284           | c                | pH at 20oC in water (automated)          | L099-PL  | c              |
| BH514B    | unfiltred     | W           | 2294279           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH514B    | unfiltred     | W           | 2294279           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH514B    | unfiltred     | W           | 2294279           | c                | Dissolved Oxygen in water                | L086-PL  | c              |
| BH514B    | unfiltred     | W           | 2294279           | c                | Electrical conductivity at 20oC of water | L031-PL  | c              |
| BH514B    | unfiltred     | W           | 2294279           | c                | Redox Potential of waters                | L084-PL  | c              |
| BH514B    | unfiltred     | W           | 2294279           | c                | Turbidity of in water                    | L083-PL  | c              |
| BH514B    | unfiltred     | W           | 2294279           | c                | pH at 20oC in water (automated)          | L099-PL  | c              |
| MB48      | None Supplied | W           | 2294283           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| MB48      | None Supplied | W           | 2294283           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| WS506     | None Supplied | W           | 2294282           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| WS506     | None Supplied | W           | 2294282           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |

**Jack Holliday**

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## **Analytical Report Number : 22-70114**

|                             |                 |                                                        |            |
|-----------------------------|-----------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> |                 | <b>Samples received on:</b>                            | 08/07/2022 |
| <b>Your job number:</b>     |                 | <b>Samples instructed on/<br/>Analysis started on:</b> | 08/07/2022 |
| <b>Your order number:</b>   | S-RE6089 00005  | <b>Analysis completed by:</b>                          | 15/07/2022 |
| <b>Report Issue Number:</b> | 1               | <b>Report issued on:</b>                               | 15/07/2022 |
| <b>Samples Analysed:</b>    | 4 water samples |                                                        |            |

**Signed:**

Joanna Wawrzeczko  
Reporting Specialist  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting  
leachates - 2 weeks from reporting  
waters - 2 weeks from reporting  
asbestos - 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-70114

Your Order No: S-RE6089 00005

| Lab Sample Number                        |       |                    |                         | 2342855       | 2342856       | 2342857       | 2342858       |
|------------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|---------------|
| Sample Reference                         |       |                    |                         | BH510         | BH513         | MB51          | WS506         |
| Sample Number                            |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                         | 07/07/2022    | 07/07/2022    | 07/07/2022    | 07/07/2022    |
| Time Taken                               |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |               |

#### General Inorganics

|                                  |      |       |           |       |       |       |       |
|----------------------------------|------|-------|-----------|-------|-------|-------|-------|
| Total Cyanide (Low Level 1 µg/l) | µg/l | 1     | ISO 17025 | 10    | < 1.0 | < 1.0 | 110   |
| Free Cyanide (Low Level 1 µg/l)  | µg/l | 1     | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Thiocyanate as SCN               | µg/l | 200   | ISO 17025 | 330   | < 200 | 340   | 760   |
| Sulphate as SO4                  | mg/l | 0.045 | ISO 17025 | 1900  | 1370  | 103   | 168   |
| Sulphide                         | µg/l | 5     | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH3       | µg/l | 15    | ISO 17025 | < 15  | 32    | 9900  | 110   |
| Total Suspended Solids           | mg/l | 2     | ISO 17025 | 17    | < 2.0 | 77    | 8     |

#### Total Phenols

|                            |      |    |           |      |      |      |      |
|----------------------------|------|----|-----------|------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|--------|

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |      |
|-----------------------|------|---|-----------|-------|-------|-------|------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 | U/S* |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | < 5.0 | U/S* |

|                      |      |      |           |        |        |        |        |
|----------------------|------|------|-----------|--------|--------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 0.59   | 0.29   | 2.25   | 47.1   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | 0.35   | < 0.02 | < 0.02 | 0.04   |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | 0.3    | < 0.2  | < 0.2  | 14     |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 6.1    | 5.3    | 3.6    | 36     |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | 0.4    | 4.8    |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 8.2    | 3.9    | 2.5    | 15     |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 3.4    | 1.1    | 1      | 24     |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 14     | 8.2    | 19     | 15     |

#### Monoaromatics & Oxygenates

|              |      |   |           |       |       |       |       |
|--------------|------|---|-----------|-------|-------|-------|-------|
| Benzene      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene      | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |



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Analytical Report Number: 22-70114

Your Order No: S-RE6089 00005

|                                          |       |                    |                         |               |               |               |               |
|------------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|---------------|
| Lab Sample Number                        |       |                    |                         | 2342855       | 2342856       | 2342857       | 2342858       |
| Sample Reference                         |       |                    |                         | BH510         | BH513         | MB51          | WS506         |
| Sample Number                            |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                         | 07/07/2022    | 07/07/2022    | 07/07/2022    | 07/07/2022    |
| Time Taken                               |       |                    |                         | None Supplied | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |               |
|                                          |       |                    |                         |               |               |               |               |
| o-xylene                                 | µg/l  | 1                  | ISO 17025               | < 1.0         | < 1.0         | < 1.0         | < 1.0         |
| MTBE (Methyl Tertiary Butyl Ether)       | µg/l  | 1                  | ISO 17025               | < 1.0         | < 1.0         | < 1.0         | < 1.0         |

## Petroleum Hydrocarbons

|                                                     |      |    |           |       |       |       |       |
|-----------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 HS_1D_AL               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 HS_1D_AL               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 HS_1D_AL              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 EH_1D_AL_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) HS+EH_1D_AL_#1_#2_MS | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |

|                                                    |      |    |           |       |       |       |       |
|----------------------------------------------------|------|----|-----------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 HS_1D_AR               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 HS_1D_AR               | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 HS_1D_AR              | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 EH_1D_AR_#1_#2_MS    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) HS+EH_1D_AR_#1_#2_MS | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample

\*U/S due to high variances between chromium (hexavalent) and chromium (dissolved) caused by method differences. Sample was yellow.



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**Analytical Report Number : 22-70114****Project / Site name:****Water matrix abbreviations:****Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                   | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)  | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water           | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Monohydric phenols in water            | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Speciated EPA-16 PAHs in water         | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Sulphide in water                      | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                   | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                      | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| Suspended solids in water              | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                        | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | ISO 17025            |
| BTEX and MTBE in water (Monoaromatics) | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                      | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water       | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Free cyanide (low level) in water      | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW.                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |

**For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.****For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.****Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.****Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.**

### Information in Support of Analytical Results

**Analytical Report Number : 22-70114**

**Project / Site name:**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name | Analytical Method Description | Analytical Method Reference | Method number | Wet / Dry Analysis | Accreditation Status |
|----------------------|-------------------------------|-----------------------------|---------------|--------------------|----------------------|
|----------------------|-------------------------------|-----------------------------|---------------|--------------------|----------------------|

**List of HWOL Acronyms and Operators**

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| -       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

**Analytical Report Number : 22-70114**

**Project / Site name:**

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

| Sample ID | Other ID      | Sample Type | Lab Sample Number | Sample Deviation | Test Name                         | Test Ref | Test Deviation |
|-----------|---------------|-------------|-------------------|------------------|-----------------------------------|----------|----------------|
| BH510     | None Supplied | W           | 2342855           | c                | Ammonia as NH3 in water           | L082-PL  | c              |
| BH510     | None Supplied | W           | 2342855           | c                | Ammoniacal Nitrogen as N in water | L082-PL  | c              |
| BH513     | None Supplied | W           | 2342856           | c                | Ammonia as NH3 in water           | L082-PL  | c              |
| BH513     | None Supplied | W           | 2342856           | c                | Ammoniacal Nitrogen as N in water | L082-PL  | c              |
| MB51      | None Supplied | W           | 2342857           | c                | Ammonia as NH3 in water           | L082-PL  | c              |
| MB51      | None Supplied | W           | 2342857           | c                | Ammoniacal Nitrogen as N in water | L082-PL  | c              |
| WS506     | None Supplied | W           | 2342858           | c                | Ammonia as NH3 in water           | L082-PL  | c              |
| WS506     | None Supplied | W           | 2342858           | c                | Ammoniacal Nitrogen as N in water | L082-PL  | c              |

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## **Analytical Report Number : 22-52149**

Replaces Analytical Report Number: 22-52149, issue no. 3  
Client references/information amended.

|                             |                    |                                                        |            |
|-----------------------------|--------------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> | Clarendon Phase 3B | <b>Samples received on:</b>                            | 14/04/2022 |
| <b>Your job number:</b>     | RE6089             | <b>Samples instructed on/<br/>Analysis started on:</b> | 14/04/2022 |
| <b>Your order number:</b>   | D RE6089 00005     | <b>Analysis completed by:</b>                          | 04/05/2022 |
| <b>Report Issue Number:</b> | 4                  | <b>Report issued on:</b>                               | 20/12/2022 |
| <b>Samples Analysed:</b>    | 5 water samples    |                                                        |            |

  
**Signed:**

Adam Fenwick  
Technical Reviewer  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 22-52149  
Project / Site name: Clarendon Phase 3B

Your Order No: D RE6089 00005

|                                          |               |                    |                      |               |               |
|------------------------------------------|---------------|--------------------|----------------------|---------------|---------------|
| Lab Sample Number                        | 2240914       | 2241125            | 2241126              | 2241127       | 2242400       |
| Sample Reference                         | BH514B        | BH510              | BH513                | MB45          | BH514B        |
| Sample Number                            | None Supplied | None Supplied      | None Supplied        | None Supplied | Filtered      |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied        | None Supplied | None Supplied |
| Date Sampled                             | 13/04/2022    | 13/04/2022         | 13/04/2022           | 13/04/2022    | 13/04/2022    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied        | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation Status |               |               |

#### General Inorganics

|                                          |          |       |           |       |       |       |       |       |
|------------------------------------------|----------|-------|-----------|-------|-------|-------|-------|-------|
| pH                                       | pH Units | N/A   | ISO 17025 | 8.6   | -     | -     | -     | 8.3   |
| Temperature on Receipt                   | °C       | 0.1   | NONE      | 6.8   | -     | -     | -     | 6.8   |
| Electrical Conductivity at 20 °C (L031B) | µS/cm    | 10    | ISO 17025 | 1000  | -     | -     | -     | 820   |
| Turbidity                                | NTU      | 1     | NONE      | 350   | -     | -     | -     | 2     |
| Total Cyanide (Low Level 1 µg/l)         | µg/l     | 1     | ISO 17025 | 200   | 16    | < 1.0 | < 1.0 | 200   |
| Free Cyanide (Low Level 1 µg/l)          | µg/l     | 1     | ISO 17025 | 5.1   | < 1.0 | < 1.0 | < 1.0 | 1.6   |
| Thiocyanate as SCN                       | µg/l     | 200   | ISO 17025 | 2800  | 370   | 270   | 360   | 3000  |
| Sulphate as SO4                          | mg/l     | 0.045 | ISO 17025 | 233   | 2840  | 1690  | 138   | 207   |
| Sulphide                                 | µg/l     | 5     | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH3               | µg/l     | 15    | ISO 17025 | 900   | 560   | < 15  | 10000 | 890   |
| Total Suspended Solids (L004B)           | mg/l     | 2     | ISO 17025 | 15    | 110   | 96    | 85    | -     |

|                  |      |      |      |        |   |   |   |       |
|------------------|------|------|------|--------|---|---|---|-------|
| Redox Potential  | mV   | -800 | NONE | -216.4 | - | - | - | 168.7 |
| Dissolved Oxygen | mg/l | 1    | NONE | 2.5    | - | - | - | 8.4   |

#### Total Phenols

|                            |      |    |           |      |      |      |    |      |
|----------------------------|------|----|-----------|------|------|------|----|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 | 18 | < 10 |
|----------------------------|------|----|-----------|------|------|------|----|------|

#### Speciated PAHs

|                        |      |      |           |      |        |        |        |        |
|------------------------|------|------|-----------|------|--------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | 1.55 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | 0.59 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | 0.38 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | 0.53 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | 4.1  | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | 1.39 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | 7.95 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | 6.95 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | 3.96 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | 3.45 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | 4.38 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | 1.85 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | 3.97 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | 2.05 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | 0.65 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | 2.33 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |      |        |        |        |        |
|-------------------|------|------|-----------|------|--------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | 46.1 | < 0.16 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|------|--------|--------|--------|--------|

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |       |       |
|-----------------------|------|---|-----------|-------|-------|-------|-------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | < 5.0 | < 5.0 | < 5.0 |

|                      |      |      |           |        |        |        |        |        |
|----------------------|------|------|-----------|--------|--------|--------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 1.04   | 0.66   | 0.21   | 1.61   | 1.32   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | < 0.02 | 0.16   | < 0.02 | < 0.02 | < 0.02 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | < 0.2  | < 0.2  | < 0.2  |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 0.6    | 5.3    | 1.9    | 2.1    | 0.8    |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | < 0.2  | < 0.2  | < 0.2  | 0.4    | 0.2    |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | 0.06   |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 0.9    | 9      | 3.4    | 2.7    | 1.2    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 0.6    | 1.9    | 0.9    | 0.9    | 1      |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 1.5    | 12     | 15     | 16     | < 0.5  |

Analytical Report Number: 22-52149  
Project / Site name: Clarendon Phase 3B

Your Order No: D RE6089 00005

|                                          |               |                    |                      |               |               |
|------------------------------------------|---------------|--------------------|----------------------|---------------|---------------|
| Lab Sample Number                        | 2240914       | 2241125            | 2241126              | 2241127       | 2242400       |
| Sample Reference                         | BH514B        | BH510              | BH513                | MB45          | BH514B        |
| Sample Number                            | None Supplied | None Supplied      | None Supplied        | None Supplied | Filtered      |
| Depth (m)                                | None Supplied | None Supplied      | None Supplied        | None Supplied | None Supplied |
| Date Sampled                             | 13/04/2022    | 13/04/2022         | 13/04/2022           | 13/04/2022    | 13/04/2022    |
| Time Taken                               | None Supplied | None Supplied      | None Supplied        | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units         | Limit of detection | Accreditation Status |               |               |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                          |      |    |           |       |       |       |       |       |
|----------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 <sub>HS_ID_AL</sub>         | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 <sub>HS_ID_AL</sub>         | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 <sub>HS_ID_AL</sub>        | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 <sub>EH_ID_AL_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 <sub>EH_ID_AL_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 <sub>EH_ID_AL_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 <sub>EH_ID_AL_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) <sub>HS+EH_ID_AL_MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |

|                                                         |      |    |           |       |       |       |       |       |
|---------------------------------------------------------|------|----|-----------|-------|-------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 <sub>HS_ID_AR</sub>         | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 <sub>HS_ID_AR</sub>         | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 <sub>HS_ID_AR</sub>        | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 <sub>EH_ID_AR_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 <sub>EH_ID_AR_MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 <sub>EH_ID_AR_MS</sub>    | µg/l | 10 | NONE      | 21    | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 <sub>EH_ID_AR_MS</sub>    | µg/l | 10 | NONE      | 23    | < 10  | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) <sub>HS+EH_ID_AR_MS</sub> | µg/l | 10 | NONE      | 44    | < 10  | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

**Analytical Report Number : 22-52149**  
**Project / Site name: Clarendon Phase 3B**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                     | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)    | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 *for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water             | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Electrical conductivity at 20oC of water | Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW                                                             | In-house method                                                                                                 | L031-PL       | W                  | ISO 17025            |
| Monohydric phenols in water              | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Dissolved Oxygen in water                | Determination of dissolved oxygen.                                                                                                                                         | In-house method                                                                                                 | L086-PL       | W                  | NONE                 |
| Speciated EPA-16 PAHs in water           | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Redox Potential of waters                | Determination of redox potential in water by electrometric measurement versus Ag/AgCl electrode.                                                                           | In house method.                                                                                                | L084-PL       | W                  | NONE                 |
| Sulphide in water                        | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                     | Determination of thiocyanate in water by discreet analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                        | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| Suspended solids in water                | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                          | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | ISO 17025            |
| BTEX and MTBE in water (Monoaromatics)   | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                  | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                        | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water         | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| pH at 20oC in water (automated)          | Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW                                                                                   | In house method.                                                                                                | L099-PL       | W                  | ISO 17025            |

Analytical Report Number : 22-52149  
Project / Site name: Clarendon Phase 3B

**Water matrix abbreviations:**

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name              | Analytical Method Description                                                                          | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|-----------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Free cyanide (low level) in water | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW. | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Temperature on Receipt (water)    | Temperature of water upon receipt.                                                                     | In-house method                                                                                                 | L019-UK       | W                  | NONE                 |
| Turbidity of in water             | Determination of sample turbidity by colorimeter and comparison with standard reference samples.       | In-house method based on Standard Method 8237                                                                   | L083-PL       | W                  | NONE                 |

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

## Information in Support of Analytical Results

### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| -       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |

# Sample Deviation Report



**Analytical Report Number : 22-52149**

**Project / Site name: Clarendon Phase 3B**

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

Key: a - No sampling date b - Incorrect container c - Holding time d - Headspace e - Temperature

| Sample ID | Other ID      | Sample Type | Lab Sample Number | Sample Deviation | Test Name                                | Test Ref | Test Deviation |
|-----------|---------------|-------------|-------------------|------------------|------------------------------------------|----------|----------------|
| BH510     | None Supplied | W           | 2241125           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH510     | None Supplied | W           | 2241125           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH510     | None Supplied | W           | 2241125           | c                | Settleable Solids in water               | L004-PL  | c              |
| BH510     | None Supplied | W           | 2241125           | c                | Suspended solids in water                | L004-PL  | c              |
| BH513     | None Supplied | W           | 2241126           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH513     | None Supplied | W           | 2241126           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH513     | None Supplied | W           | 2241126           | c                | Settleable Solids in water               | L004-PL  | c              |
| BH513     | None Supplied | W           | 2241126           | c                | Suspended solids in water                | L004-PL  | c              |
| BH514B    | None Supplied | W           | 2240914           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH514B    | None Supplied | W           | 2240914           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH514B    | None Supplied | W           | 2240914           | c                | Dissolved Oxygen in water                | L086-PL  | c              |
| BH514B    | None Supplied | W           | 2240914           | c                | Electrical conductivity at 20oC of water | L031-PL  | c              |
| BH514B    | None Supplied | W           | 2240914           | c                | Redox Potential of waters                | L084-PL  | c              |
| BH514B    | None Supplied | W           | 2240914           | c                | Settleable Solids in water               | L004-PL  | c              |
| BH514B    | None Supplied | W           | 2240914           | c                | Suspended solids in water                | L004-PL  | c              |
| BH514B    | None Supplied | W           | 2240914           | c                | Turbidity of in water                    | L083-PL  | c              |
| BH514B    | None Supplied | W           | 2240914           | c                | pH at 20oC in water (automated)          | L099-PL  | c              |
| BH514B    | Filtered      | W           | 2242400           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| BH514B    | Filtered      | W           | 2242400           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| BH514B    | Filtered      | W           | 2242400           | c                | Dissolved Oxygen in water                | L086-PL  | c              |
| BH514B    | Filtered      | W           | 2242400           | c                | Electrical conductivity at 20oC of water | L031-PL  | c              |
| BH514B    | Filtered      | W           | 2242400           | c                | Redox Potential of waters                | L084-PL  | c              |
| BH514B    | Filtered      | W           | 2242400           | c                | Turbidity of in water                    | L083-PL  | c              |
| BH514B    | Filtered      | W           | 2242400           | c                | pH at 20oC in water (automated)          | L099-PL  | c              |
| MB45      | None Supplied | W           | 2241127           | c                | Ammonia as NH3 in water                  | L082-PL  | c              |
| MB45      | None Supplied | W           | 2241127           | c                | Ammoniacal Nitrogen as N in water        | L082-PL  | c              |
| MB45      | None Supplied | W           | 2241127           | c                | Settleable Solids in water               | L004-PL  | c              |
| MB45      | None Supplied | W           | 2241127           | c                | Suspended solids in water                | L004-PL  | c              |



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## **Analytical Report Number : 22-72674**

Replaces Analytical Report Number: 22-72674, issue no. 1  
Client references/information amended.

|                             |                 |                                                        |            |
|-----------------------------|-----------------|--------------------------------------------------------|------------|
| <b>Project / Site name:</b> |                 | <b>Samples received on:</b>                            | 21/07/2022 |
| <b>Your job number:</b>     |                 | <b>Samples instructed on/<br/>Analysis started on:</b> | 21/07/2022 |
| <b>Your order number:</b>   | S-RE6069-00005  | <b>Analysis completed by:</b>                          | 28/07/2022 |
| <b>Report Issue Number:</b> | 2               | <b>Report issued on:</b>                               | 16/12/2022 |
| <b>Samples Analysed:</b>    | 3 water samples |                                                        |            |

**Signed:**

*Izabela Wójcik*  
Izabela Wójcik  
Reporting Specialist  
**For & on behalf of i2 Analytical Ltd.**

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

|           |                           |
|-----------|---------------------------|
| soils     | - 4 weeks from reporting  |
| leachates | - 2 weeks from reporting  |
| waters    | - 2 weeks from reporting  |
| asbestos  | - 6 months from reporting |

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.  
Application of uncertainty of measurement would provide a range within which the true result lies.  
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 22-72674

Your Order No: S-RE6069-00005

|                                          |       |                    |                         |               |               |               |
|------------------------------------------|-------|--------------------|-------------------------|---------------|---------------|---------------|
| Lab Sample Number                        |       |                    |                         | 2358030       | 2358031       | 2358032       |
| Sample Reference                         |       |                    |                         | BH510         | BH513         | MB52          |
| Sample Number                            |       |                    |                         | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                         | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                         | 20/07/2022    | 20/07/2022    | 20/07/2022    |
| Time Taken                               |       |                    |                         | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation<br>Status |               |               |               |

#### General Inorganics

|                                        |      |       |           |       |       |       |
|----------------------------------------|------|-------|-----------|-------|-------|-------|
| Total Cyanide (Low Level 1 µg/l)       | µg/l | 1     | ISO 17025 | 6.4   | < 1.0 | 2.8   |
| Free Cyanide (Low Level 1 µg/l)        | µg/l | 1     | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| Thiocyanate as SCN                     | µg/l | 200   | ISO 17025 | 480   | < 200 | < 200 |
| Sulphate as SO <sub>4</sub>            | mg/l | 0.045 | ISO 17025 | 4050  | 1350  | 108   |
| Sulphide                               | µg/l | 5     | NONE      | < 5.0 | < 5.0 | < 5.0 |
| Ammoniacal Nitrogen as NH <sub>3</sub> | µg/l | 15    | ISO 17025 | 420   | 110   | 14000 |
| Total Suspended Solids (L004B)         | mg/l | 2     | ISO 17025 | 130   | 14    | 13    |

#### Total Phenols

|                            |      |    |           |      |      |      |
|----------------------------|------|----|-----------|------|------|------|
| Total Phenols (monohydric) | µg/l | 10 | ISO 17025 | < 10 | < 10 | < 10 |
|----------------------------|------|----|-----------|------|------|------|

#### Speciated PAHs

|                        |      |      |           |        |        |        |
|------------------------|------|------|-----------|--------|--------|--------|
| Naphthalene            | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthylene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Acenaphthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Fluorene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Phenanthrene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Anthracene             | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Fluoranthene           | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Pyrene                 | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)anthracene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Chrysene               | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(b)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(k)fluoranthene   | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(a)pyrene         | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Indeno(1,2,3-cd)pyrene | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Dibenz(a,h)anthracene  | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |
| Benzo(ghi)perylene     | µg/l | 0.01 | ISO 17025 | < 0.01 | < 0.01 | < 0.01 |

#### Total PAH

|                   |      |      |           |        |        |        |
|-------------------|------|------|-----------|--------|--------|--------|
| Total EPA-16 PAHs | µg/l | 0.16 | ISO 17025 | < 0.16 | < 0.16 | < 0.16 |
|-------------------|------|------|-----------|--------|--------|--------|

#### Heavy Metals / Metalloids

|                       |      |   |           |       |       |       |
|-----------------------|------|---|-----------|-------|-------|-------|
| Chromium (hexavalent) | µg/l | 5 | ISO 17025 | < 5.0 | < 5.0 | < 5.0 |
| Chromium (III)        | µg/l | 5 | NONE      | < 5.0 | < 5.0 | < 5.0 |

|                      |      |      |           |        |        |        |
|----------------------|------|------|-----------|--------|--------|--------|
| Arsenic (dissolved)  | µg/l | 0.15 | ISO 17025 | 0.68   | 0.27   | 2.44   |
| Cadmium (dissolved)  | µg/l | 0.02 | ISO 17025 | 0.18   | 0.02   | < 0.02 |
| Chromium (dissolved) | µg/l | 0.2  | ISO 17025 | 0.2    | < 0.2  | < 0.2  |
| Copper (dissolved)   | µg/l | 0.5  | ISO 17025 | 6.6    | 6.1    | 5.3    |
| Lead (dissolved)     | µg/l | 0.2  | ISO 17025 | 0.5    | < 0.2  | 0.2    |
| Mercury (dissolved)  | µg/l | 0.05 | ISO 17025 | < 0.05 | < 0.05 | < 0.05 |
| Nickel (dissolved)   | µg/l | 0.5  | ISO 17025 | 6.6    | 3.5    | 3.4    |
| Selenium (dissolved) | µg/l | 0.6  | ISO 17025 | 3.1    | 1      | 0.6    |
| Zinc (dissolved)     | µg/l | 0.5  | ISO 17025 | 12     | 11     | 6.1    |

Analytical Report Number: 22-72674

Your Order No: S-RE6069-00005

|                                          |       |                    |                      |               |               |               |
|------------------------------------------|-------|--------------------|----------------------|---------------|---------------|---------------|
| Lab Sample Number                        |       |                    |                      | 2358030       | 2358031       | 2358032       |
| Sample Reference                         |       |                    |                      | BH510         | BH513         | MB52          |
| Sample Number                            |       |                    |                      | None Supplied | None Supplied | None Supplied |
| Depth (m)                                |       |                    |                      | None Supplied | None Supplied | None Supplied |
| Date Sampled                             |       |                    |                      | 20/07/2022    | 20/07/2022    | 20/07/2022    |
| Time Taken                               |       |                    |                      | None Supplied | None Supplied | None Supplied |
| Analytical Parameter<br>(Water Analysis) | Units | Limit of detection | Accreditation Status |               |               |               |
|                                          |       |                    |                      |               |               |               |

#### Monoaromatics & Oxygenates

|                                    |      |   |           |       |       |       |
|------------------------------------|------|---|-----------|-------|-------|-------|
| Benzene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| Toluene                            | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| Ethylbenzene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| p & m-xylene                       | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| o-xylene                           | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| MTBE (Methyl Tertiary Butyl Ether) | µg/l | 1 | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |

#### Petroleum Hydrocarbons

|                                                             |      |    |           |       |       |       |
|-------------------------------------------------------------|------|----|-----------|-------|-------|-------|
| TPH-CWG - Aliphatic >C5 - C6 <sub>HS, 1D, AL</sub>          | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C6 - C8 <sub>HS, 1D, AL</sub>          | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C8 - C10 <sub>HS, 1D, AL</sub>         | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aliphatic >C10 - C12 <sub>EH, 1D, AL, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C12 - C16 <sub>EH, 1D, AL, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C16 - C21 <sub>EH, 1D, AL, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic >C21 - C35 <sub>EH, 1D, AL, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aliphatic (C5 - C35) <sub>HS+EH, 1D, AL, MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |

|                                                            |      |    |           |       |       |       |
|------------------------------------------------------------|------|----|-----------|-------|-------|-------|
| TPH-CWG - Aromatic >C5 - C7 <sub>HS, 1D, AR</sub>          | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C7 - C8 <sub>HS, 1D, AR</sub>          | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C8 - C10 <sub>HS, 1D, AR</sub>         | µg/l | 1  | ISO 17025 | < 1.0 | < 1.0 | < 1.0 |
| TPH-CWG - Aromatic >C10 - C12 <sub>EH, 1D, AR, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C12 - C16 <sub>EH, 1D, AR, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C16 - C21 <sub>EH, 1D, AR, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic >C21 - C35 <sub>EH, 1D, AR, MS</sub>    | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |
| TPH-CWG - Aromatic (C5 - C35) <sub>HS+EH, 1D, AR, MS</sub> | µg/l | 10 | NONE      | < 10  | < 10  | < 10  |

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

**Analytical Report Number : 22-72674**

**Project / Site name:**

**Water matrix abbreviations:**

**Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)**

| Analytical Test Name                   | Analytical Method Description                                                                                                                                              | Analytical Method Reference                                                                                     | Method number | Wet / Dry Analysis | Accreditation Status |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------|--------------------|----------------------|
| Metals in water by ICP-MS (dissolved)  | Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.                                  | In-house method based on USEPA Method 6020 & 200.8 *for the determination of trace elements in water by ICP-MS. | L012-PL       | W                  | ISO 17025            |
| Hexavalent chromium in water           | Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.                                                 | In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.                                    | L080-PL       | W                  | ISO 17025            |
| Monohydric phenols in water            | Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW                                                                               | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar) | L080-PL       | W                  | ISO 17025            |
| Speciated EPA-16 PAHs in water         | Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW | In-house method based on USEPA 8270                                                                             | L102B-PL      | W                  | ISO 17025            |
| Sulphide in water                      | Determination of sulphide in water by ion selective electrode.                                                                                                             | In-house method                                                                                                 | L029-PL       | W                  | NONE                 |
| Thiocyanate in water                   | Determination of thiocyanate in water by discrete analyser (colorimetry). Accredited matrices SW, GW, PW.                                                                  | In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.                                       | L082-PL       | W                  | ISO 17025            |
| Sulphate in water                      | Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW.                                                  | In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.                            | L039-PL       | W                  | ISO 17025            |
| Suspended solids in water              | Determined gravimetrically with GFC filtration papers.                                                                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L004-PL       | W                  | ISO 17025            |
| TPHCWG (Waters)                        | Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.                                                                 | In-house method                                                                                                 | L070-PL       | W                  | ISO 17025            |
| BTEX and MTBE in water (Monoaromatics) | Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW                                                                                  | In-house method based on USEPA8260                                                                              | L073B-PL      | W                  | ISO 17025            |
| Ammonia as NH3 in water                | Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.                                | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton          | L082-PL       | W                  | ISO 17025            |
| Cr (III) in water                      | In-house method by calculation from total Cr and Cr VI.                                                                                                                    | In-house method by calculation                                                                                  | L080-PL       | W                  | NONE                 |
| Low level total cyanide in water       | Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW                                                                      | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |
| Free cyanide (low level) in water      | Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW.                                                                     | In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar) | L080-PL       | W                  | ISO 17025            |

**For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).**

**For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).**

**For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in Poland.**

**Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.**

## Information in Support of Analytical Results

Analytical Report Number : 22-72674

Project / Site name:

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

| Analytical Test Name | Analytical Method Description | Analytical Method Reference | Method number | Wet / Dry Analysis | Accreditation Status |
|----------------------|-------------------------------|-----------------------------|---------------|--------------------|----------------------|
|----------------------|-------------------------------|-----------------------------|---------------|--------------------|----------------------|

#### List of HWOL Acronyms and Operators

| Acronym | Descriptions                                                           |
|---------|------------------------------------------------------------------------|
| HS      | Headspace Analysis                                                     |
| MS      | Mass spectrometry                                                      |
| FID     | Flame Ionisation Detector                                              |
| GC      | Gas Chromatography                                                     |
| EH      | Extractable Hydrocarbons (i.e. everything extracted by the solvent(s)) |
| CU      | Clean-up - e.g. by Florisil®, silica gel                               |
| 1D      | GC - Single coil/column gas chromatography                             |
| 2D      | GC-GC - Double coil/column gas chromatography                          |
| Total   | Aliphatics & Aromatics                                                 |
| AL      | Aliphatics                                                             |
| AR      | Aromatics                                                              |
| #1      | EH_2D_Total but with humics mathematically subtracted                  |
| #2      | EH_2D_Total but with fatty acids mathematically subtracted             |
| -       | Operator - understore to separate acronyms (exception for +)           |
| +       | Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total     |