

## Technical Note – Contamination Test Results – Monitoring of BH514B

|                      |                                                                                              |                        |                                                                    |
|----------------------|----------------------------------------------------------------------------------------------|------------------------|--------------------------------------------------------------------|
| <b>Project:</b>      | Clarendon Road, Phase 3B                                                                     | <b>Project Number:</b> | RE6089                                                             |
| <b>Subject:</b>      | Groundwater contamination in BH514B                                                          |                        |                                                                    |
| <b>Authors:</b>      | Paul Adams, Jack Holliday                                                                    | <b>Technical Note:</b> | TN6089.002 Issue 2                                                 |
| <b>Date:</b>         | 10/06/2022                                                                                   |                        |                                                                    |
| <b>To:</b>           | Tim Collinson<br>(St William)                                                                |                        |                                                                    |
| <b>Distribution:</b> | Anna Nash<br>Nick Ketchell<br>Daniall Hashemizadeh<br>Sam Giffen<br>Joe Darcy<br>Tom Simpson | <b>Representing:</b>   | Atkins<br>Atkins<br>St William<br>Keltbray<br>Keltbray<br>Keltbray |

### 1. Introduction

Keltbray is contracted to monitor and sample groundwater across the Clarendon Road Phase 3 area as part of the current phase of construction. This work is specified in the *Foundation Work Risk Assessment (5192204\_P3\_P3b\_FWRA)* and *Remediation Method Statement (5192204\_P3\_Rem Method State\_Rev4)* both produced by Atkins. The work is required to monitor groundwater quality within the Made Ground and the deep aquifer residing within the Lambeth Group below the London Clay aquitard.

As part of these works, periodic samples (the weekly or fortnightly intervals between sampling being dependent on the nature of the works being undertaken) have been collected from 3 deep groundwater wells screened towards the base of the Lambeth Group at approximately 35-45m below ground level (bgl). These wells are designated BH510, BH513 and BH514. A location plan is included within the appendices. Monitoring has been undertaken by Keltbray since April 2020 with results compared against the baseline conditions derived from 6 No. groundwater monitoring visits undertaken between September and December 2019 by Atkins. Trigger levels were set as the maximum recorded concentration during baseline plus 10%. Exceedances of the trigger levels were to be reported to St William and Atkins. The trigger levels are shown in blue on the appended data spreadsheet.

**NOTE:** For the avoidance of doubt, BH514 has been interchangeably referred to as BH514A. Both refer to the same standpipe installed in September 2019.

## 2. BH 514

During monitoring on 19<sup>th</sup> November 2021, BH514 was found to be blocked at approximately 1.8m below the well head preventing the sampling (bladder) pump from descending. The cause of the blockage is unknown. The following week, to attempt to remove this blockage and allow monitoring and sampling to continue, the standpipe was partially excavated from ground level using a combination of machine and hand digging with the intention of removing the blockage and replacing the section of the standpipe if necessary. After excavating to 2m and whilst inspecting the standpipe, the blockage cleared and a dip tape was able to descend down the standpipe again. The cause of the blockage was lost down the standpipe.

Following this occurrence, the next sampling of BH514 on 26<sup>th</sup> November 2021 detected spikes of ammonia and total cyanide concentrations higher than previously detected to date. This sample recorded 34,000 ug/L ammonia (vs a trigger level of 2,420 ug/l) and 2,800 ug/L total cyanide (trigger level 38.5 ug/l) as well as low-level TPH (150 ug/L – trigger level 10 ug/l). Subsequent sampling up to 2<sup>nd</sup> February 2022 showed a general declining trend with no further TPH detected (see Figure 2). BH514 was (re)purged on 3<sup>rd</sup> February 2022 in an attempt to remove any contamination which may have entered the standpipe. Only a minimal volume of silty water could be recovered before the well purged dry. The subsequent sample on 9<sup>th</sup> February showed a second, larger spike of total cyanide and ammonia (19,000 and 91,000 ug/L respectively) along with 3.12 ug/L (trigger level 0.16 ug/l) of total PAH (this was only the second time PAH had been detected in the well to date). Results were significantly lower the following week (120, 17,000 and <0.16 ug/L for total cyanide, ammonia and total PAH respectively). However, given the poor recovery, silty nature of the sample and the concern of a potential contamination source within the standpipe, the decision was taken to decommission and replace the well.

BH514 was decommissioned by TOR Drilling in accordance with published Environment Agency guidance by pumping 270-300l of Bentonite grout into the standpipe on 22<sup>nd</sup> February 2022. A replacement, BH514B was drilled 3m from the previous boring and installed on 24<sup>th</sup> February 2022. A schematic showing the installation details of the replacement standpipe is appended to this Technical Note. BH514(A) was drilled to 44.2 m bgl and screened from 34.5-44.2m. BH514B was drilled to 42 m bgl and screened from 32-42m.

## 3. BH 514B

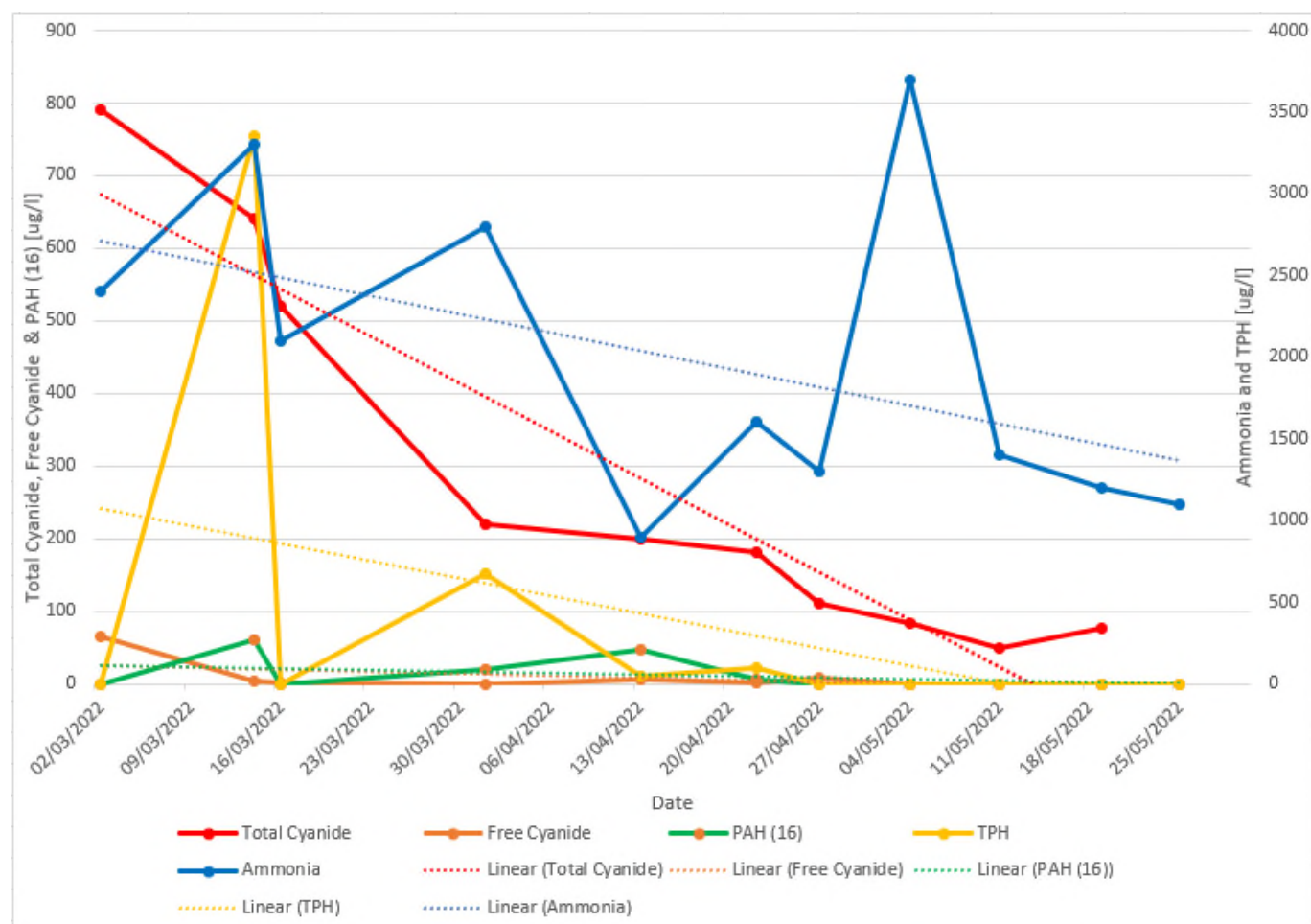
Following purging utilising a Waterra pump, BH514B was first sampled on 2<sup>nd</sup> March 2022. Total cyanide and ammonia were not elevated above the range typically seen in BH514A to date. Both PAH and TPH were below the laboratory limit of detection (LOD).

The sampling (bladder) pump became lodged in the new well on 9<sup>th</sup> March and was freed on 14<sup>th</sup> March. Thus, subsequent samples had to be bailed limiting the potential for any further well purging to be undertaken. Field (physiochemical) parameters were subsequently analysed by the laboratory for samples collected from this well. These samples were recorded as being silty. The sample collected on 14<sup>th</sup> March

had total cyanide and ammonia concentrations within the historical range. However, both total PAH (60.1 ug/L – trigger level 0.16 ug/l) and TPH (3,357 ug/L – trigger level 10 ug/l) were elevated above historical levels. Concentrations of PAH and TPH fell below the laboratory LOD at the next sampling (16<sup>th</sup> March) but returned (albeit at lower levels than those recorded on 14<sup>th</sup> March) on 1<sup>st</sup> and 13<sup>th</sup> April (see Figure 1). Subsequently, concentrations of total cyanide have fallen consistently but remain marginally above the trigger level (76 vs. 38.5 µg/l) based on the most recent result of 19<sup>th</sup> May.

Figure 1 presents the results of 5 key determinants (i.e. those which have seen the most significant exceedances and/or fluctuations) in the samples recovered from BH514B since the standpipe became blocked with the sampling pump and PAH and TPH was detected.

**Figure 1: Summary of recent trends – key determinants – BH514B**



**NOTE:** The cyanide results of 25<sup>th</sup> May for the unfiltered sample are currently pending. The data is available for the filtered sample and is shown in Table 1. The pending results will be forwarded as soon as they are received. The filtered sample result indicates that cyanide results remain low (albeit marginally above the trigger level for total cyanide).

The trendlines added to the data show a distinct, falling trend is evident for four of the five determinants. TPH and PAH have now been below the laboratory LOD since 27<sup>th</sup> April (5 sampling rounds).

Ammonia concentrations remain variable with an exceedance of the trigger level recorded on 4<sup>th</sup> May (3,700 vs. µg/l vs 2,420). This was the first exceedance in 5 sampling rounds (since 1<sup>st</sup> April 2022). Since the last change in ground level (mid-April 2022), the depth to groundwater has been fairly consistent at c. 33m bgl. No visual or olfactory evidence of contamination has been evident apart from a slight sulphurous odour. The full dataset is appended to this Technical Note for information.

#### **4. Historical Exceedances**

Following a thorough review of the available data Keltbray note that low-level heavy range aliphatic hydrocarbons were detected historically within the following monitoring wells:

- 440 ug/L BH514 23<sup>rd</sup> September 2020; and
- 530 ug/L BH513 29<sup>th</sup> January 2021.

These detections are in addition to elevated TPH (410 ug/L 31/10/19) and PAH (5.87 ug/L 24/10/19) concentrations which were recorded in BH513 during the baseline monitoring period. We note that these data were excluded when calculating the trigger level (FWRA Table 7-2 footnote). The reason for the omission of these data is not stated.

BH510 and BH513 located either side of the basement construction (located southeast and southwest respectively – broadly downstream based on our understanding of a southerly groundwater flow direction within the deeper aquifers) have not been affected by this issue and continue to provide groundwater monitoring data as required for the FWRA. No detections of PAH or TPH have been recorded and no notable increases of other determinants have been recorded in these two wells.

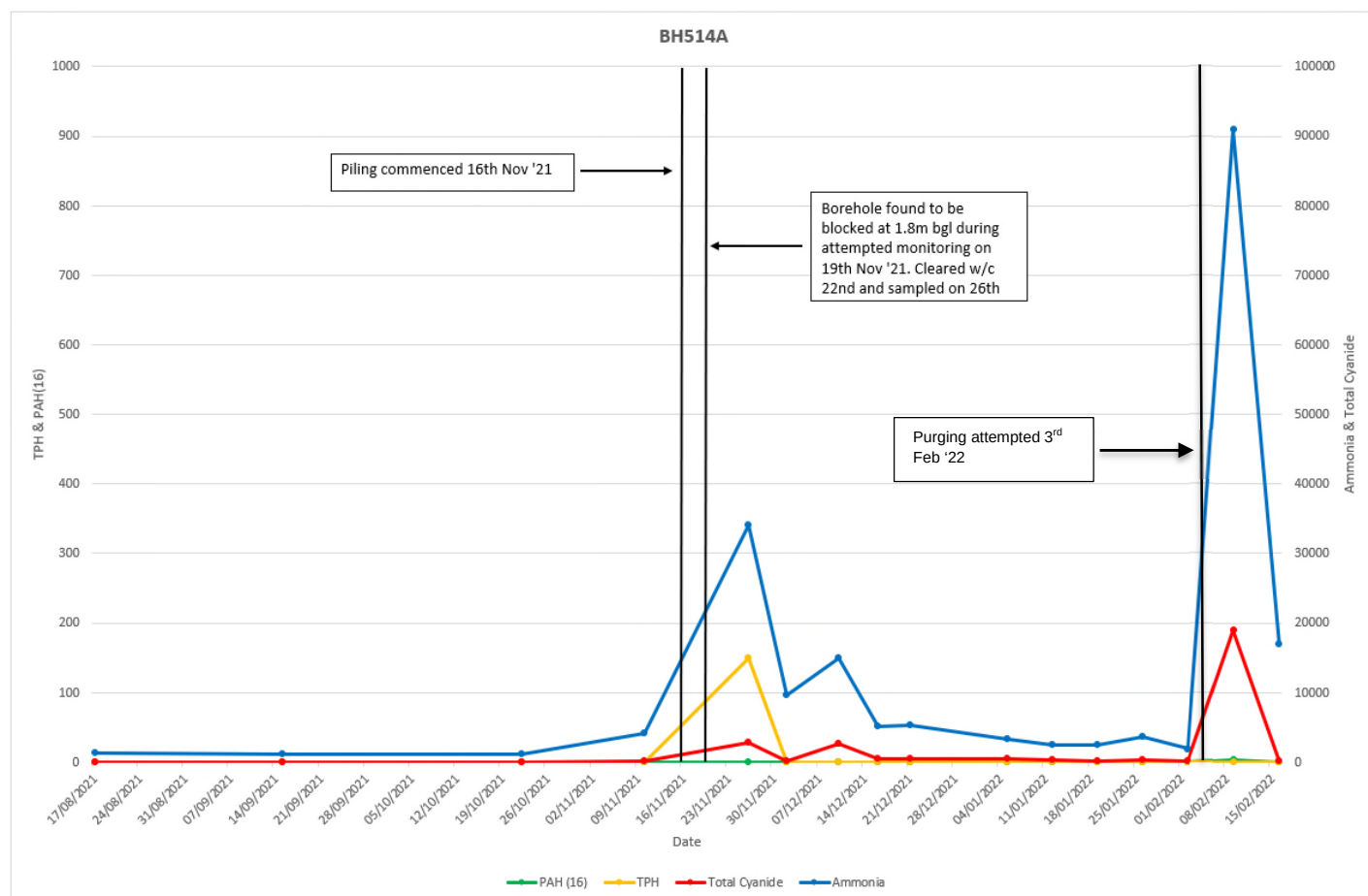
As per our previous note, Keltbray's opinion remains that the low-level, transient, total PAH and heavy range petroleum hydrocarbon levels were not a cause for concern when one considers the solubility and hence low mobility of these compounds in groundwater coupled with the general quality of the groundwater which has been shown to be consistently contaminated with both cyanide and ammonia (possibly as a result of the purifiers once employed within this region of the wider former gasworks). These compounds are considered likely to pose more of a concern to the wider groundwater regime than low-level PAHs and heavy range TPH.

#### **5. Construction Programme**

Piling commenced on 16<sup>th</sup> November 2021 and was paused on 11<sup>th</sup> March 2022, before restarting on the 25<sup>th</sup> April 2022.

A review of the data for BH514A (Figure 2 below and the appended datasheet) would appear to indicate a spike in determinants concentrations (including ammonia, total cyanide and TPH) soon after the commencement of piling. However, the spike receded quickly whilst the piling continued and, in the case of ammonia and total cyanide, an upward trend was evident prior to piling commencing. Furthermore, concrete piling which was occurring for Blocks D3 and D4 is downstream of BH514B. Sheet piling around the perimeter of Block E was also occurring during this period. Only the northern extent (comprising a small proportion of the perimeter) could be considered upstream of BH514B. A Figure (annotated plan, no reference) showing the extent of the piling works is provided within the appendix. The FWRA indicates that all piles terminate at least 5m above the Lambeth Group within the London Clay which acts as an aquitard to the underlying aquifer. Pile logs available to date confirm no evidence of a change in strata towards the base of the borings formed for the piles. Hence, all piles have terminated within the London Clay. Hence, Keltbray concluded that there was no evidence that piling was responsible for the observed spike in determinant concentrations and that it was acceptable for the works to continue.

**Figure 2: Summary of key determinant concentrations during piling – BH514A**



Note to Figure 2: Piling operations ceased from 23<sup>rd</sup> December 2021 to 4<sup>th</sup> January 2022 for the Christmas period

## 6. Sample Turbidity

There appears to be a link between the amount of silt within the sample and the contamination results. This was evident in BH514(A) when a spike of total cyanide and ammonia coupled with a low-level detection of PAHs was recorded on 9<sup>th</sup> February 2022 following a purge which had resulted in the standpipe being purged dry on 3<sup>rd</sup> February 2022. This trend was also evident when a sample was first collected from BH514B via bailing on 14<sup>th</sup> March 2022 following the pump becoming stuck in the standpipe on 9<sup>th</sup> March (bailing has been necessary ever since). As bailing is a more aggressive sampling technique, it is inevitable that fines will be disturbed into suspension and into the sample. Keltbray had no option but to use this sampling technique as we could not risk the bladder (low flow) pump becoming lodged within the standpipe on a second occasion (the depth to groundwater prevented the use of other, less intrusive, sampling techniques such as a peristaltic pump).

Keltbray has undertaken some further assessment by subjecting duplicates of all the samples taken since 13<sup>th</sup> April 2022 to filtration to remove the fines prior to analysis. The results, tabulated below, demonstrate that PAHs and TPH were below the laboratory LOD in all the filtered samples. Other determinant concentrations have been consistent with the unfiltered sample results. This would appear to indicate that the PAH and TPH contamination is associated with the fines and not dissolved within the groundwater itself. This is a logical conclusion if one considers the low solubility of the PAHs and (to a lesser extent) the mid to heavy carbon range TPH in water. This result, coupled with the results of the downstream monitoring wells, which have shown no elevations since the start of the piling works, appears to indicate that this is an isolated issue within the vicinity of BH514(A) /514B.

**Table 1: Filtered Sample Geo-chemical Results – BH514B [µg/l]**

| Determinant   | Trigger level | 13/04/22 | 22/04/22 | 27/04/22 | 04/05/22 | 11/05/22 | 19/05/22 | 25/05/22 |
|---------------|---------------|----------|----------|----------|----------|----------|----------|----------|
| Total Cyanide | 38.5          | 200      | 190      | 110      | 86       | 63       | 67       | 49       |
| Free Cyanide  | 2.2           | 1.6      | 5.9      | 5.2      | <1.0     | <1.0     | <1.0     | <1.0     |
| PAH (16)      | 0.16          | <0.16    | <0.16    | <0.16    | <0.16    | <0.16    | <0.16    | <0.16    |
| TPH           | 10            | <10      | <10      | <10      | <10      | <10      | <10      | <10      |
| Ammonia       | 2420          | 890      | 1300     | 1200     | 1200     | 1400     | 810      | 1200     |

## 7. Closing Statement

Keltbray will continue to monitor BH514B and the other two surrounding monitoring wells, BH510 and BH513 in accordance with the agreed programme. In BH514B we will continue to test both an unfiltered and a filtered sample up to the date the well needs to be decommissioned.

With a significant amount of data now available indicating that TPH and PAH is not persisting within the groundwater in BH514B, we strongly advocate that the well be decommissioned in accordance with published Environment Agency guidance no later than the week commencing 20<sup>th</sup> June 2022. Piling operations will recommence in Block E3 adjacent to the borehole location and Keltbray (as previously stated) do not want to be piling in close proximity to the well as it presents a potential contaminant migration pathway to the deeper aquifer. Monitoring and reporting will continue from BH510 and BH513 until the completion of the piling works and the associated post-piling monitoring period as required by the FWRA.

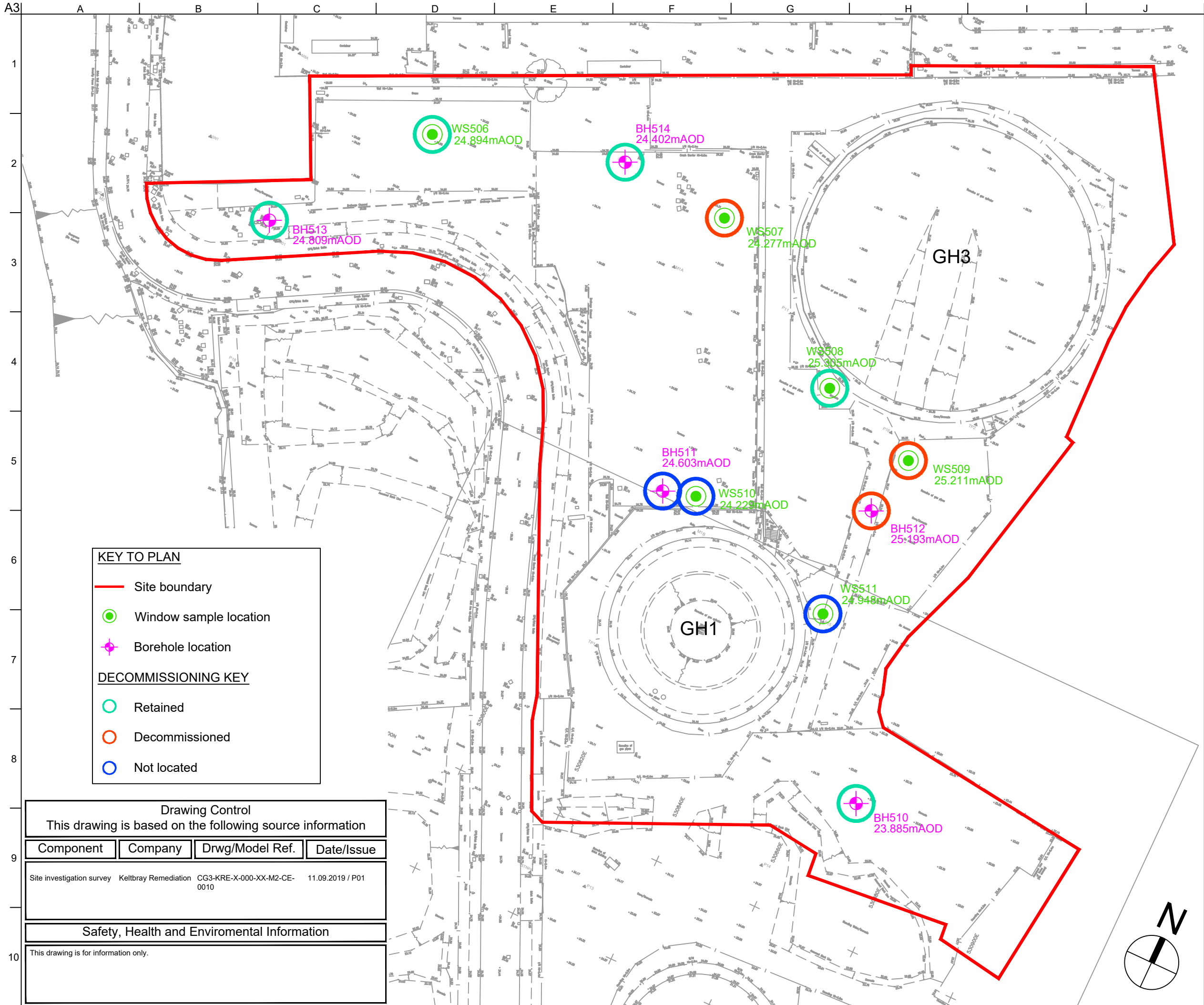
We would welcome any thoughts and comment on the above to be received by Keltbray during the week commencing 13<sup>th</sup> June 2022. We would be pleased to discuss any of the above in a meeting. Arrangements are currently being made to action the well decommissioning.

Sincerely,

A handwritten signature in grey ink, appearing to read 'P. Adams', with a stylized flourish at the end.

Dr Paul Adams

For, and on behalf of, Keltbray Ltd.



KEY TO PLAN

Site boundary

Window sample location

Borehole location

DECOMMISSIONING KEY

Retained

Decommissioned

Not located

Drawing Control

This drawing is based on the following source information

| Component                 | Company              | Drwg/Model Ref.             | Date/Issue       |
|---------------------------|----------------------|-----------------------------|------------------|
| Site investigation survey | Keltbray Remediation | CG3-KRE-X-000-XX-M2-CE-0010 | 11.09.2019 / P01 |

Safety, Health and Enviromental Information

This drawing is for information only.

- NOTES:
- This drawing is to be read in conjunction with all relevant engineer's drawings, architect's drawings and specifications.
  - For setting out information, refer to the relevant architect's drawing.
  - All elevations and levels are in metres and are related to Ordnance Datum (O.D.).
  - All dimensions are in metres unless noted otherwise.
  - Drawings should not be scaled either by hand or from the computer digital data, only figured dimensions are to be used.
  - The contractor shall be responsible for the design, build and temporary works. They shall provide all temporary works during construction.
  - Specific temporary works constraints arising from the permanent works design, if and where applicable, are noted on the Keltbray Remediation drawings to which they relate.
  - Any discrepancies in the information provided should be immediately reported to the Engineer prior to the commencement of work.

|                  |            |    |            |      |
|------------------|------------|----|------------|------|
| P01              | 13.11.2020 | MP | 13.11.2020 | JH   |
| FIRST FOR REVIEW |            |    |            |      |
| Rev              | Date       | By | Chkd       | Appd |

**keltbray** Remediation

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Client

**St William**  
Designed for life

Project Title

**CLARENDON ROAD GAS WORKS  
PHASE 3**

Key Plan

Drawing Title

**BOREHOLE DECOMMISSIONING PLAN**

Scale at A3

NTS

Role

X - SUBCONTRACTOR

Suitability

S2 - FOR INFORMATION

|                                                                    |     |
|--------------------------------------------------------------------|-----|
| Keltbray Remediation Job No                                        | Rev |
| 6075                                                               | P01 |
| Name                                                               |     |
| CR3-KRE-X-000-XX-M2-CE-1027                                        |     |
| Phase - Originator - Role - Zone - Level - Type - Element - Number |     |



NOTES:

1. DIMENSIONS NOT TO BE SCALED FROM THIS DRAWING.
2. DIMENSIONS GIVEN IN MILLIMETRES UNLESS NOTED OTHERWISE.
3. ALL LEVELS ARE IN METRES ABOVE ORDNANCE DATUM UNLESS NOTED OTHERWISE.
4. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL ASSOCIATED DRAWINGS, REPORTS AND SPECIFICATIONS.
5. THIS DRAWING IS BASED UPON THE FOLLOWING PTA DRAWINGS:  
W257 PTA D4 PL SC S-17-4141\_C12  
W257 PTA D3 PL SC S-17-3141\_C3
6. PILE SETTING OUT POINTS ARE BASED UPON THE INFORMATION REFERENCED ABOVE AND MUST BE CHECKED AND APPROVED BY ALL RELEVANT PARTIES.

LEGEND

- TEST PILE
- ANCHOR PILES

| Revision History |          |                                |    |       |
|------------------|----------|--------------------------------|----|-------|
| Rev.             | Date     | Description / Purpose of Issue | On | Off   |
| P01              | 06.12.21 | FOR INFORMATION                | TL | KP DR |
| Rev.             | Date     | Description / Purpose of Issue | On | Off   |

Client: ST WILLIAM

Engineer: PTA

Originator: KELTRAY PILING

Logo:

Address:

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Project: CLARENDON PHASE 3B

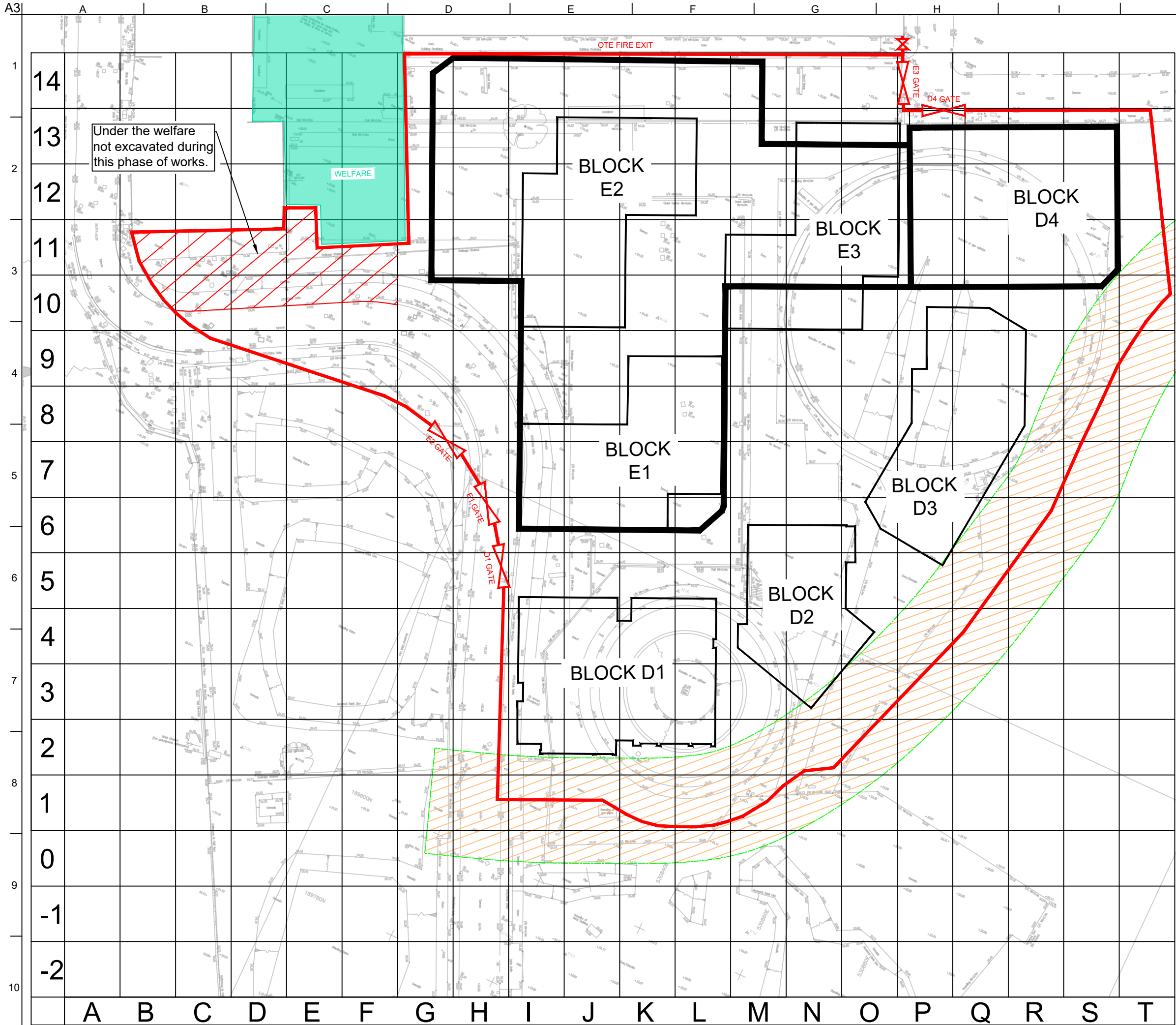
Drawing Title: BLOCK D3, D4 & E  
GENERAL ARRANGEMENT

Date of first issue: 08.12.2021

Scale: A3  
NTS

Job No: P347

| Drawing Status: FOR INFORMATION       |            |      |       |      |      |                 |               |
|---------------------------------------|------------|------|-------|------|------|-----------------|---------------|
| Project                               | Originator | Zone | Level | Type | Role | PI              | Number        |
| W257                                  | KLB        | D4   | FN    | DR   |      |                 | 1000          |
| Drawing No: W257-KLB-D4-FN-DR-PI-1000 |            |      |       |      |      | Suitability: S4 | Revision: P01 |



- NOTES:
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  8. Any discrepancies in the information provided should be immediately reported to the Engineer prior to the commencement of work.

|     |            |    |            |    |
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| P01 | 20.09.2021 | WH | 20.09.2021 | JH |
|-----|------------|----|------------|----|

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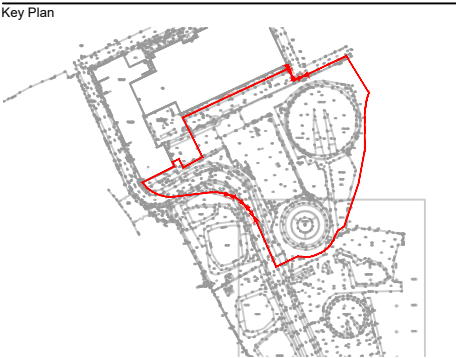
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| Rev | Date | By | Chkd | Appd |
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Client  
**St William**  
Designed for life

Project Title  
CLARENDON ROAD PHASE 3B



Drawing Title  
AMMONIUM VALIDATION PLAN

Scale at A3  
NTS

Role  
X - SUBCONTRACTOR

Suitability  
S2 - FOR INFORMATION

|                             |     |
|-----------------------------|-----|
| Keltbray Remediation Job No | Rev |
| 6089                        | P01 |

Keltbray Name  
CR3B-KRE-X-000-XX-DR-CE-2000  
Phase - Originator - Role - Zone - Level - Type - Element - Number

St. William Name  
N/A

| BHID                              | Criteria | BH510      | BH513      | BH514      | BH510      | BH513      | BH514      | BH510      | BH513      | BH514      | BH510      | BH513      | BH514      | BH510      | BH513      | BH514      | BH510      | BH513      | BH514      | BH510      | BH513      | BH514      | BH510      | BH513      | BH514      | BH510      | BH513      | BH514      | BH510      | BH513      | BH514      | BH510      | BH513      | BH514      |
|-----------------------------------|----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Date sampled                      | -        | 23/04/2020 | 23/04/2020 | 14/05/2020 | 28/05/2020 | 27/05/2020 | 27/05/2020 | 11/06/2020 | 11/06/2020 | 11/06/2020 | 25/06/2020 | 25/06/2020 | 25/06/2020 | 10/07/2020 | 10/07/2020 | 10/07/2020 | 23/07/2020 | 23/07/2020 | 23/07/2020 | 10/08/2020 | 10/08/2020 | 10/08/2021 | 20/08/2020 | 20/08/2020 | 21/08/2020 | 04/09/2020 | 04/09/2020 | 04/09/2020 | 16/09/2020 | 16/09/2020 | 16/09/2020 | 23/09/2020 | 23/09/2020 | 23/09/2020 |
| mAOD                              | -        |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
| DTW                               | -        | 35.85      | 36.39      | 39.05      | 36.92      | 35.4       | 39.12      | 37.44      | 35.1       | 38.87      | 37.48      | 35.08      | 39         | 37.09      | 35.24      | 38.92      | 36.9       | 34.87      | 37.27      | 36.86      | 34.89      | 36.53      | 36.71      | 34.73      | 36.7       | 36.6       | 36.02      | 36.36      | 36.54      | 34.78      | 36.36      | 35.39      | 34.35      | 36.1       |
| DTB                               | -        | 47.15      | 38.59      | 44.13      | 47.115     | 38.6       | 44.13      | 47.14      | 46.59      | 44.02      | 47.35      | 46.75      | 44.02      | 47.13      | 46.75      | 44.02      | 47.13      | 46.75      | 44.02      | 47.025     | 46.72      | 43.13      | 47.1       | 46.64      | 43.13      | 46.1       | 46.7       | 44         | 46.7       | 46.1       | 46         | 46.97      | 46.55      | 42.62      |
| NAPL present?                     | N        | N          | N          | N          | N          | N          | N          | N          | N          | N          | N          | N          | N          | N          | N          | N          | N          | N          | N          | N          | N          | N          | N          | N          | N          | N          | N          | N          | N          | N          | N          | N          | N          | N          |
| NAPL thickness                    | -        | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          |
| DO                                | 139      | 3.9        | 4.8        | -          | 5.4        | 4          | -          | 16.1       | 7.3        | -          | 31.4       | 37.85      | -          | 14.2       | 10.4       | -          | 12.1       | 29         | -          | 8.6        | 9.7        | -          | 11.8       | 9          | -          | 42.8       | 10.3       | -          | 21         | 34.6       | -          | 12.5       | 13.1       | -          |
| pH                                | 8.6      | 7.76       | 8.09       | -          | 7.7        | 9.08       | -          | 7.77       | 8.13       | -          | 7.45       | 8.02       | -          | 7.7        | 6.34       | -          | 7.75       | 8.14       | -          | 7.68       | 8.07       | -          | 8.08       | 8.04       | -          | 7.75       | 7.79       | -          | 7.71       | 7          | -          | 7.76       | 7.72       | -          |
| Temp                              | 20.6     | 14.1       | 15.2       | -          | 13.5       | 14         | -          | 13         | 13.6       | -          | 19.9       | 23.4       | -          | 14         | 16.8       | -          | 13.7       | 16.1       | -          | 16.1       | 17.3       | -          | 18         | 16.4       | -          | 14.1       | 14.2       | -          | 15.8       | 15.8       | -          | 12.7       | 25         | -          |
| EC                                | N/A      | 9725       | 6116       | -          | 9709       | 4318       | -          | 9685       | 3792       | -          | 9365       | 3789       | -          | 9207       | 6813       | -          | 9528       | 4513       | -          | 9583       | 4360       | -          | 464.9      | 4621       | -          | 9579       | 9319       | -          | 9477       | 5729       | -          | 9505       | 9525       | -          |
| Redox(orp)                        | 580      | -125.9     | -49.5      | -          | -133.6     | -146.7     | -          | 120.6      | 106.3      | -          | 60.9       | 153.5      | -          | -136.5     | -160.9     | -          | 93.4       | 101.5      | -          | -116.8     | -77.5      | -          | 12.6       | 107.3      | -          | -156.7     | -131.1     | -          | -118.8     | 37.4       | -          | -59.3      | 104.5      | -          |
| Turbidity (TDS) (Lab data in NTU) | 88       | -          | -          | -          | 3331       | 2808       | -          | 6292       | 2456.3     | -          | 6084       | 2453       | -          | 5986       | 4426.5     | -          | 6181.5     | 2931       | -          | 6168       | 3009       | -          | 3022       | 3016       | -          | 6220       | 5993.5     | -          | 6155       | 3724       | -          | 6175       | 3724       | -          |
| Comments                          |          |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
| Lab Report Ref No.                |          | 20-97369   | 20-97370   | 20-99702   | 20-11443   | 20-11443   | 20-11443   | 20-13920   | 20-13920   | 20-13920   |            |            |            | 20-18408   | 20-18408   | 20-18408   | 20-21026   | 20-21026   |            | 20-23758   | 20-23758   | 20-24097   | 20-25766   | 20-25766   | 20-25766   | 20-28341   | 20-28341   | 20-28027   | 20-30209   | 20-30209   | 20-30209   | 20-32131   | 20-32131   | 20-31429   |
| Total Cyanide (Low Level 1 µg/l)  | 38.5     | 10         | 1.1        | 220        | 9.2        | <1.0       | 120        | 9.7        | <1.0       | 83         | <1.0       | 47         | 11         | 18         | 5          | 87         | 9.7        | <1.0       |            | 23         | 2.9        | 55         | 6.1        | <1         | 46         | 12         | 4.3        | 35         | 11         | 3.9        | 31         | 7.1        | 2.5        | 36         |
| Free Cyanide (Low Level 1 µg/l)   | 2.2      | <1         | <1         | 17         | 8          | <1         | 10         | <1         | <1         | 6          | <1         | <1         | <1         | <1         | <1         | 5          | <1         | <1         |            | <1         | <1         | 2          | <1         | <1         | <1         | <1         | <1         | <1         | <1         | <1         | <1         | <1         | <1         | <1         |
| Sulphate as SO4                   | 4477     | 5170       | 2580       | 896        | 5980       | 2060       | 565        | 5000*      | 1660       | 291        | 1920       | 137        | 3600       | 6590       | 2240       | 244        | 5000*      | 1660       |            | 4200       | 2060       | 222        | 4950*      | 2420       | 205        | 4810       | 3200       | 217        | 2450       | 1880       | 203        | 4750       | 5300       | 213        |
| Sulphide                          | 5        | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       |            | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       |            |
| Ammonia as NH3                    | 2420     | 1100       | 1000       | 5200       | 1800       | 980        | 3200       | 1100       | 1000       | 2600       | 990        | 8800       | 960        | 860        | 990        | 1700       | 1100       | 1000       |            | 1100       | 980        | 1300       | 810        | 810        | 1300       | 960        | 1100       | 1500       | 990        | 1300       | 1400       | 1100       | 1100       | 1500       |
| Total Suspended Solids            |          |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |
| Total Phenols (monohydric)        | 10       | <10        | <10        | <10        | <10        | <10        | <10        | <10        | <10        | <10        | <10        | <10        | <10        | <10        | <10        | <10        | <10        | <10        |            | 13         | 10         | <10        | <10        | <10        | <10        | <10        | <10        | <10        | <10        | <10        | <10        | <10        | <10        | <10        |
| Naphthalene                       | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |            | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |
| Acenaphthylene                    | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |            | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |
| Acenaphthene                      | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |            | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |
| Fluorene                          | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |            | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |
| Phenanthrene                      | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |            | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |
| Anthracene                        | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |            | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |
| Fluoranthene                      | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |            | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |
| Pyrene                            | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |            | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |
| Benzo(a)anthracene                | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |            | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |
| Chrysene                          | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |            | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |
| Benzo(b)fluoranthene              | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |            | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |
| Benzo(k)fluoranthene              | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |            | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |
| Benzo(a)pyrene                    | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |            | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |
| Indeno(1,2,3-cd)pyrene            | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |            | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |
| Dibenz(a,h)anthracene             | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |            | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |
| Benzo(ghi)perylene                | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |            | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      |
| Total EPA-16 PAHs                 | 0.16     | <0.16      | <0.16      | <0.16      | <0.16      | <0.16      | <0.16      | <0.16      | <0.16      | <0.16      | <0.16      | <0.16      | <0.16      | <0         |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |

| BHID                              | Criteria | BHS10      | BHS13      | BHS14      | BHS10      | BHS13      | BHS14      | BHS10      | BHS13      | BHS14      | BHS10      | BHS13      | BHS14      | BHS10      | BHS13      | BHS14      | BHS10           | BHS13           | BHS14           | BHS10      | BHS13      | BHS14            | BHS10      | BHS13                                   | BHS14      | BHS10      | BHS13      | BHS14      | BHS10      | BHS13      | BHS14              | BHS10    | BHS13 | BHS14 |
|-----------------------------------|----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-----------------|-----------------|-----------------|------------|------------|------------------|------------|-----------------------------------------|------------|------------|------------|------------|------------|------------|--------------------|----------|-------|-------|
| Date sampled                      | -        | 01/10/2020 | 01/10/2020 | 01/10/2020 | 08/10/2020 | 08/10/2020 | 08/10/2020 | 15/10/2020 | 15/10/2020 | 15/10/2020 | 25/11/2020 | 25/11/2020 | 25/11/2020 | 14/12/2020 | 14/12/2020 | 14/12/2020 | 29/01/2021      | 29/01/2021      | 29/01/2021      | 19/02/2021 | 19/02/2021 | 19/02/2021       | 25/03/2021 | 25/03/2021                              | 25/03/2021 | 30/04/2021 | 30/04/2021 | 30/04/2021 | 20/05/2021 | 20/05/2021 | 20/05/2021         | BHS10    |       |       |
| mAOB                              | -        |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |                 |                 |                 |            |            |                  |            |                                         |            |            |            |            |            |            |                    |          |       |       |
| DTW                               | -        | 36.21      | 34.46      | 36.04      | 34.95      | 34.31      | 35.7       | 35.31      | 34.6       | 35.7       | 34.14      | 33.76      | 34.35      | 33.51      | 33.535     | 33.83      | 32.88           | 32.87           | 33.16           | 34.025     | 32.58      | 33.43            | 34.33      | 33.15                                   | 34.15      | 34.4       | 32.72      | 34.31      | 34.5       | 33.395     | 34.545             | 34.46    |       |       |
| DTB                               | -        | 46.94      | 46.56      | 41.86      | 46.985     | 46.39      | 41.83      | 46.94      | 41.65      | 41.83      | 46.94      | 46.26      | 41.88      | 46.98      | 46.7       | 41.88      | 47.32           | 47.88           | 42.87           | 46.88      | 46.65      | 42.42            | 47.3       | 46.8                                    | 42.6       | 47.13      | 46.7       | 42.3       | 47.16      | 46.55      | 42.56              | 47.23    |       |       |
| NAPL present?                     | N        | N          | N          | N          | N          | N          | N          | N          | N          | N          | N          | N          | N          | N          | N          | N          | N               | N               | N               | N          | N          | N                | N          | N                                       | N          | N          | N          | N          | N          | N          | N                  | N        | N     |       |
| NAPL thickness                    | -        | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -               | -               | -               | -          | -          | -                | -          | -                                       | -          | -          | -          | -          | -          | -          | -                  | -        | -     |       |
| DO                                | 139      | 20         | 13.8       | -          | 18.8       | 23.3       | -          | 14.3       | 7.1        | -          | 38.7       | 12.8       | 5.8        | 9.8        | 12.5       | 10         | 8.5             | 12.2            | 9.6             | 7.9        | 25.3       | 9.3              | 12.3       | 13.6                                    | 9.7        | 5.5        | 17.6       | 6.4        | 12.3       | 14.1       | 2.7                | 17.8     |       |       |
| pH                                | 8.6      | 7.55       | 7          | -          | 7.5        | 7.03       | -          | 7.7        | 6.98       | -          | 7.76       | 7.01       | 8.4        | 7.73       | 6.96       | 8.2        | 7.83            | 7.13            | 8               | 7.79       | 7.02       | 8.1              | 7.67       | 6.99                                    | 8.2        | 7.67       | 7.05       | 8.2        | 7.6        | 7.02       | 8.5                | 7.46     |       |       |
| Temp                              | 20.6     | 12.8       | 13.7       | -          | 13         | 13.9       | -          | 12.6       | 13         | -          | 12.2       | 12.8       | 6.1        | 12.2       | 12.5       | 5.9        | 11.8            | 12.3            | 7.4             | 11.5       | 12.2       | 5.4              | 12.3       | 11.8                                    | 7.1        | 12         | 11.9       | 6.3        | 12.2       | 13.4       | 6.3                | 12.61    |       |       |
| EC                                | N/A      | 3407       | 3260       | -          | 4669       | 4656       | -          | 9260       | 4638       | -          | 8300       | 4713       | 1000       | 8634       | 4635       | 830        | 7517            | 4437            | 6800            | 7609       | 4757       | 920              | 6630       | 4034                                    | 870        | 7350       | 4293       | 920        | 6180       | 4535       | 930                | 6840     |       |       |
| Redox(orp)                        | 580      | -26.9      | 21.4       | -          | 150.9      | 111        | -          | -48.7      | 212.5      | -          | -39.8      | 73.1       | 114.2      | -101.8     | 161.2      | 150.8      | -69             | 82.9            | 172.5           | -92.2      | 132        | 201.5            | -62.3      | 86.1                                    | 101        | 180.5      | -51        | 101        | 180.5      | -55.1      | 191.4              | 59.1     | 13.7  |       |
| Turbidity (TDS) (Lab data in NTU) | 88       | 2216.5     | 2119       | -          | 3035       | 3022.5     | -          | 6019       | 3016       | -          | 5388       | 3061       | 690        | 5616       | 3009       | 820        | 4888            | 2886            | 58              | 4946       | 3094       | 280              | 4309       | 2613                                    | 600        | 4778       | 2789       | 110        | 4004       | 4986       | 2700               | 4446     |       |       |
| Comments                          |          |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |                 |                 |                 |            |            | Sulphurous odour |            | Pump briefly stuck when descending well |            |            |            |            |            |            | Brown, very cloudy |          |       |       |
| Lab Report Ref No.                |          | 20-33157   | 20-33157   | 20-33157   | 20-34421   | 20-34421   | 20-34421   | 20-35658   | 20-35658   | 20-35658   | 20-43722   | 20-43722   | 20-43722   | 20-47666   | 20-47666   | 20-47666   | Combined Report | Combined Report | Combined Report | 21-57876   | 21-57876   | 21-57876         | 21-64914   | 21-64914                                | 21-64914   | 21-72188   | 21-72188   | 21-72188   | 21-75942   | 21-75942   | 21-75942           | 21-82537 |       |       |
| Total Cyanide (Low Level 1 µg/l)  | 38.5     | 1.8        | 3.9        | 30         | <1.0       | <1.0       | 110        | 6.2        | <1.0       | 47         | 6.9        | <1.0       | 84         | 7.7        | <1.0       | 61         | 97              | <1.0            | 7.6             | 6.4        | <1.0       | 29               | 7.3        | <1.0                                    | 26         | 6.2        | <1.0       | 29         | 6.1        | <1.0       | 29                 | 1.7      |       |       |
| Free Cyanide (Low Level 1 µg/l)   | 2.2      | <1         | <1         | <1         | <1         | <1         | <1         | <1         | <1         | <1         | <1         | <1         | <1         | <1         | <1         | <1         | 1               | <1              | <1              | <1         | <1         | <1               | <1         | <1                                      | <1         | <1         | <1         | <1         | <1         | <1         | <1                 | <1       |       |       |
| Sulphate as SO4                   | 4477     | 1230000    | 1310000    | 192000     | 1730       | 1960       | 200        | 4530*      | 2060       | 214        | 3350       | 2420       | 247        | 4100       | 1820       | 186        | 174             | 1570            | 3420            | 3660       | 2030       | 163              | 3920       | 1910                                    | 240        | 2760       | 2290       | 135        | 2250       | 1320       | 164                | 2730     |       |       |
| Sulphide                          | 5        | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0            | <5.0            | <5.0            | <5.0       | <5.0       | <5.0             | <5.0       | <5.0                                    | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0       | <5.0               | <5.0     |       |       |
| Ammonia as NH3                    | 2420     | 1100       | 1100       | 1400       | 980        | 800        | 1400       | 1000       | 880        | 1600       | 970        | 940        | 1700       | 1700       | 1000       | 1900       | 1900            | 55              | 960             | 1400       | 770        | 1400             | 1100       | 760                                     | 1500       | 930        | 570        | 1300       | 920        | 690        | 1600               | 1200     |       |       |
| Total Suspended Solids            |          |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |                 |                 |                 |            |            |                  |            |                                         |            |            |            |            |            |            |                    |          |       |       |
| Total Phenols (monohydric)        | 10       | <10        | <10        | <10        | <10        | <10        | <10        | <10        | <10        | <10        | <10        | <10        | <10        | 31         | <10        | <10        | <10             | <10             | <10             | <10        | <10        | <10              | <10        | <10                                     | <10        | <10        | <10        | <10        | <10        | <10        | <10                | <10      |       |       |
| Naphthalene                       | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01           | <0.01           | <0.01           | <0.01      | <0.01      | <0.01            | 1.19       | <0.01                                   | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01              | <0.01    |       |       |
| Acenaphthylene                    | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01           | <0.01           | <0.01           | <0.01      | <0.01      | <0.01            | <0.01      | <0.01                                   | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01              | <0.01    |       |       |
| Acenaphthene                      | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01           | <0.01           | <0.01           | <0.01      | <0.01      | <0.01            | <0.01      | <0.01                                   | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01              | <0.01    |       |       |
| Fluorene                          | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01           | <0.01           | <0.01           | <0.01      | <0.01      | <0.01            | <0.01      | <0.01                                   | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01              | <0.01    |       |       |
| Phenanthrene                      | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01           | <0.01           | <0.01           | <0.01      | <0.01      | <0.01            | <0.01      | <0.01                                   | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01              | <0.01    |       |       |
| Anthracene                        | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01           | <0.01           | <0.01           | <0.01      | <0.01      | <0.01            | <0.01      | <0.01                                   | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01              | <0.01    |       |       |
| Fluoranthene                      | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01           | <0.01           | <0.01           | <0.01      | <0.01      | <0.01            | <0.01      | <0.01                                   | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01              | <0.01    |       |       |
| Pyrene                            | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01           | <0.01           | <0.01           | <0.01      | <0.01      | <0.01            | <0.01      | <0.01                                   | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01              | <0.01    |       |       |
| Benzo(a)anthracene                | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01           | <0.01           | <0.01           | <0.01      | <0.01      | <0.01            | <0.01      | <0.01                                   | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01              | <0.01    |       |       |
| Chrysene                          | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01           | <0.01           | <0.01           | <0.01      | <0.01      | <0.01            | <0.01      | <0.01                                   | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01              | <0.01    |       |       |
| Benzo(b)fluoranthene              | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01           | <0.01           | <0.01           | <0.01      | <0.01      | <0.01            | <0.01      | <0.01                                   | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01              | <0.01    |       |       |
| Benzo(k)fluoranthene              | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01           | <0.01           | <0.01           | <0.01      | <0.01      | <0.01            | <0.01      | <0.01                                   | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01              | <0.01    |       |       |
| Benzo(a)pyrene                    | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01           | <0.01           | <0.01           | <0.01      | <0.01      | <0.01            | <0.01      | <0.01                                   | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01              | <0.01    |       |       |
| Indeno(1,2,3-cd)pyrene            | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01           | <0.01           | <0.01           | <0.01      | <0.01      | <0.01            | <0.01      | <0.01                                   | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01              | <0.01    |       |       |
| Dibenz(a,h)anthracene             | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01           | <0.01           | <0.01           | <0.01      | <0.01      | <0.01            | <0.01      | <0.01                                   | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01              | <0.01    |       |       |
| Benzo(ghi)perylene                | 0.01     | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01           | <0.01           | <0.01           | <0.01      | <0.01      | <0.01            | <0.01      | <0.01                                   | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01      | <0.01              | <0.01    |       |       |
| Total EPA-16 PAHs                 | 0.16     | <0.16      | <0.16      | <0.16      | <0.16      | <0.16      | <0.16      | <0.16      | <0.16      | <0.16      | <0.16      | <0.16      | <0.16      | <0.16      | <0.16      | <0.16      | <0.16           | <0.16           | <0.16           | <0.16      | <0.16      | <0.16            | 1.19       | <0.16                                   | <0.16      | <0.16      | <0.16      | <0.16      | <0.16      | <0.16      | <0.16              | <0.16    |       |       |
| Arsenic (dissolved)               | 3.92     | 2.01       | 1.68       | 1.62       | 1.68       | 1.36       | 0.66       | 4.65       | 1.58       | 1.44       | 5.27       | 2.16       | 1          |            |            |            |                 |                 |                 |            |            |                  |            |                                         |            |            |            |            |            |            |                    |          |       |       |

| BHID                              | Criteria | BH513      | BH514       | BH510      | BH513      | BH514                         | BH510      | BH513      | BH514                                            | BH510      | BH513      | BH514        | BH510      | BH513      | BH514      | BH510      | BH513      | BH514                               | BH510      | BH513      | BH514                                                                                    | BH510      | BH513      | BH514                                                                          | BH510      | BH513      | BH514                                                                                            | BH510      | BH513      | BH514                                                                                                  | BH510      |  |                                                          |  |  |                                                        |  |  |                     |
|-----------------------------------|----------|------------|-------------|------------|------------|-------------------------------|------------|------------|--------------------------------------------------|------------|------------|--------------|------------|------------|------------|------------|------------|-------------------------------------|------------|------------|------------------------------------------------------------------------------------------|------------|------------|--------------------------------------------------------------------------------|------------|------------|--------------------------------------------------------------------------------------------------|------------|------------|--------------------------------------------------------------------------------------------------------|------------|--|----------------------------------------------------------|--|--|--------------------------------------------------------|--|--|---------------------|
| Date sampled                      | -        | 22/06/2021 | 22/06/2021  | 27/07/2021 | 27/07/2021 | 27/07/2021                    | 17/08/2021 | 17/08/2021 | 17/08/2021                                       | 15/09/2021 | 15/09/2021 | 15/09/2021   | 22/10/2021 | 22/10/2022 | 22/10/2022 | 10/11/2021 | 10/11/2021 | 10/11/2021                          | 19/11/2021 | 19/11/2021 | 19/11/2021                                                                               | 26/11/2021 | 26/11/2021 | 26/11/2021                                                                     | 02/12/2021 | 02/12/2021 | 02/12/2021                                                                                       | 10/12/2021 | 10/12/2021 | 10/12/2021                                                                                             | 16/12/2021 |  |                                                          |  |  |                                                        |  |  |                     |
| mAOd                              | -        |            |             |            |            |                               |            |            |                                                  |            |            |              |            |            |            |            |            |                                     |            |            |                                                                                          |            |            |                                                                                |            |            |                                                                                                  |            |            |                                                                                                        |            |  |                                                          |  |  |                                                        |  |  |                     |
| DTW                               | -        | 33.05      | 34.78       | 34.56      | 32.86      | 35.13                         | 34.88      | 33.39      | 35.11                                            | 34.63      | 32.38      | 34.98        | 34.73      | -          | 35.01      | 34.58      | 32.44      | 35.18                               | 34.19      | 32.17      | -                                                                                        | 34.62      | 31.51      | 34.78                                                                          | 34.68      | 31.58      | 35.03                                                                                            | 34.11      | 31.42      | 35.09                                                                                                  | 34.45      |  |                                                          |  |  |                                                        |  |  |                     |
| DTB                               | -        | 46.79      | 42.45       | 47.35      | 46.83      | 42.46                         | 47.19      | 46.8       | 42.51                                            | 47.33      | 43.65      | 42.71        | 46.98      | -          | 42.05      | 46.84      | 46.6       | 39.86                               | 47.34      | 46.92      | -                                                                                        | 46.6       | 46.8       | 39.32                                                                          | 34.35      | 47.62      | 46.9                                                                                             | 47.23      | 46.84      | 39.39                                                                                                  | 46.98      |  |                                                          |  |  |                                                        |  |  |                     |
| NAPL present?                     | N        | N          | N           | N          | N          | N                             | N          | N          | N                                                | N          | N          | N            | N          | -          | N          | N          | N          | N                                   | N          | N          | -                                                                                        | N          | N          | N                                                                              | N          | N          | N                                                                                                | N          | N          | N                                                                                                      | N          |  |                                                          |  |  |                                                        |  |  |                     |
| NAPL thickness                    | -        | -          | -           | -          | -          | -                             | -          | -          | -                                                | -          | -          | -            | -          | -          | -          | -          | -          | -                                   | -          | -          | -                                                                                        | -          | -          | -                                                                              | -          | -          | -                                                                                                | -          | -          | -                                                                                                      | -          |  |                                                          |  |  |                                                        |  |  |                     |
| DO                                | 139      | 24.9       | 6.1         | 13.8       | 13.6       | 5.4                           | 11.4       | 33.7       | 6.3                                              | 4.4        | 10.6       | 6.7          | 9.3        | -          | 8.7        | 4.8        | 8.1        | 2.1                                 | 7.9        | -          | -                                                                                        | 9.5        | 11         | <1.0                                                                           | 23.2       | 10.1       | 6.3                                                                                              | 1.8        | 36.6       | 2.8                                                                                                    | 5.1        |  |                                                          |  |  |                                                        |  |  |                     |
| pH                                | 8.6      | 6.95       | 8.3         | 7.22       | 7          | 8.6                           | 7.44       | 7.03       | 8.2                                              | 7.49       | 7.05       | 8.2          | 7          | -          | 8.3        | 7.34       | 6.98       | 8.1                                 | 7.11       | -          | -                                                                                        | 7.74       | 6.98       | 7.8                                                                            | 7.67       | 7.03       | 7.7                                                                                              | 7.6        | 7.33       | 8.3                                                                                                    | 7.17       |  |                                                          |  |  |                                                        |  |  |                     |
| Temp                              | 20.6     | 12.7       | 6.3         | 13.7       | 10.7       | 6.4                           | 13.3       | 13.4       | 6.4                                              | 13.3       | 13.8       | 6            | 12.4       | -          | 6.1        | 12.6       | 13.1       | 6.4                                 | 12.3       | -          | -                                                                                        | 10.9       | 11.7       | 6.4                                                                            | 11.1       | 7.9        | 6.2                                                                                              | 5.6        | 8          | 5.6                                                                                                    | 12         |  |                                                          |  |  |                                                        |  |  |                     |
| EC                                | N/A      | 4226       | 910         | 5573       | 4260       | 950                           | 7177       | 4266       | 910                                              | 2314       | 4233       | 940          | 4448       | -          | 860        | 4343       | 4448       | 1000                                | 5550       | -          | -                                                                                        | 5974       | 4676       | 1800                                                                           | 5546       | 4544       | 1100                                                                                             | 2500       | 4180       | 1200                                                                                                   | 5840       |  |                                                          |  |  |                                                        |  |  |                     |
| Redox(orp)                        | 580      | 138        | 60.5        | 112        | 125.3      | 184                           | -59.6      | 170        | 163.8                                            | -107.8     | 130.3      | 130.4        | 174.2      | -          | 195.4      | 2.6        | 136        | -31.6                               | 86.5       | -          | -                                                                                        | 204.1      | 318.5      | 26.2                                                                           | -5.9       | 1723       | 144.9                                                                                            | 225.3      | 110.5      | 96.4                                                                                                   | 97.6       |  |                                                          |  |  |                                                        |  |  |                     |
| Turbidity (TDS) (Lab data in NTU) | 88       | 2749       | 2100        | 2774       | 2896       | 750                           | 4667       | 2776       | 510                                              | 1501       | 2749       | 370          | 2892       | -          | 140        | 2821       | 2892       | 200                                 | 3607.5     | -          | -                                                                                        | 3880.5     | 3042       | 2800                                                                           | 3604       | 2962       | 38000                                                                                            | 400        | 2717       | 1000                                                                                                   | 3796       |  |                                                          |  |  |                                                        |  |  |                     |
| Comments                          |          |            | Muddy water |            |            | Very cloudy, sulphurous odour |            |            | Stabilised at 33.7% DO after 1.15 hrs of pumping |            |            | Sample clear |            |            |            |            |            | Sulphurous odour, very cloudy water |            |            | New ground level, pump could not descend extended tubing - new headworks to be installed |            |            | Borehole blocked at ~1.8m dip tape could not descend - to be excavated / fixed |            |            | New ground level following excavation to clear blockage. Sulphurous odour, slightly cloudy water |            |            | Pumped sample, very cloudy with sulphurous odour. Turbidity reading likely low due to quantity of sand |            |  | Pump fault during stabilisation. Bailed sample collected |  |  | Sulphurous odour, slightly cloudy water. Bailed sample |  |  | Very slightly milky |
| Lab Report Ref No.                |          | 21-82537   | 21-82537    | 21-89207   | 21-89207   | 21-89207                      | 21-93347   | 21-93347   | 21-93347                                         | 21-10039   | 21-10039   | 21-10039     | 21-18170   | -          | 21-18170   | 21-22219   | 21-22219   | 21-22219                            | 21-24316   | -          | -                                                                                        | 21-25971   | 21-25971   | 21-25971                                                                       | 21-18144   | 21-18144   | 21-18144                                                                                         | 21-28597   | 21-28597   | 21-28597                                                                                               | 21-29816   |  |                                                          |  |  |                                                        |  |  |                     |
| Total Cyanide (Low Level 1 µg/l)  | 38.5     | < 1.0      | 21          | 14         | < 1.0      | 28                            | 9.5        | < 1.0      | 17                                               | < 1.0      | < 1.0      | 22           | 110        | -          | 13         | 5.8        | < 1.0      | 230                                 | 5.8        | -          | -                                                                                        | 7.1        | 7.5        | 2800                                                                           | < 1.0      | < 1.0      | 230                                                                                              | 61         | < 1.0      | 2700                                                                                                   | 33         |  |                                                          |  |  |                                                        |  |  |                     |
| Free Cyanide (Low Level 1 µg/l)   | 2.2      | < 1.0      | 1.5         | 2          | < 1.0      | 2.2                           | < 1.0      | < 1.0      | < 1.0                                            | < 1.0      | < 1.0      | < 1.0        | < 1.0      | -          | < 1.0      | < 1.0      | < 1.0      | 11                                  | < 1.0      | -          | -                                                                                        | < 1.0      | 2.1        | 16                                                                             | < 1.0      | < 1.0      | 5.4                                                                                              | < 1.0      | < 1.0      | 13                                                                                                     | < 1.0      |  |                                                          |  |  |                                                        |  |  |                     |
| Sulphate as SO4                   | 4477     | 2020       | 174         | 2350       | 2050       | 184                           | 2600       | 2100       | 191                                              | 874        | 2070       | 175          | 2540       | -          | 179        | 1970       | 2080       | 210                                 | 2670       | -          | -                                                                                        | 2580       | 1610       | 796                                                                            | 1960       | 2280       | 282                                                                                              | 1240       | 1890       | 371                                                                                                    | 2180       |  |                                                          |  |  |                                                        |  |  |                     |
| Sulphide                          | 5        | < 5.0      | < 5.0       | < 5.0      | < 5.0      | < 5.0                         | < 5.0      | < 5.0      | < 5.0                                            | < 5.0      | < 5.0      | < 5.0        | < 5.0      | -          | < 5.0      | < 5.0      | < 5.0      | < 5.0                               | < 5.0      | -          | -                                                                                        | < 5.0      | < 5.0      | U/S*                                                                           | < 5.0      | < 5.0      | < 5.0                                                                                            | < 5.0      | < 5.0      | < 5.0                                                                                                  | < 5.0      |  |                                                          |  |  |                                                        |  |  |                     |
| Ammonia as NH3                    | 2420     | 650        | 1800        | 1200       | 870        | 1500                          | 1300       | 720        | 1300                                             | 960        | 550        | 1200         | 260        | -          | 1200       | 700        | 1000       | 4100                                | 900        | -          | -                                                                                        | 650        | 430        | 34000                                                                          | 850        | 550        | 9600                                                                                             | 900        | 450        | 15000                                                                                                  | 400        |  |                                                          |  |  |                                                        |  |  |                     |
| Total Suspended Solids            |          |            |             |            |            |                               |            |            |                                                  |            |            |              |            |            |            |            |            |                                     |            |            |                                                                                          |            |            |                                                                                |            |            |                                                                                                  |            |            |                                                                                                        |            |  |                                                          |  |  |                                                        |  |  |                     |
| Total Phenols (monohydric)        | 10       | < 10       | < 10        | < 10       | < 10       | < 10                          | < 10       | < 10       | < 10                                             | < 10       | < 10       | < 10         | < 10       | -          | < 10       | < 10       | < 10       | < 10                                | < 10       | -          | -                                                                                        | < 10       | < 10       | 83                                                                             | < 10       | < 10       | < 10                                                                                             | < 10       | < 10       | < 10                                                                                                   | < 10       |  |                                                          |  |  |                                                        |  |  |                     |
| Naphthalene                       | 0.01     | < 0.01     | < 0.01      | < 0.01     | < 0.01     | < 0.01                        | < 0.01     | < 0.01     | < 0.01                                           | < 0.01     | < 0.01     | < 0.01       | < 0.01     | -          | < 0.01     | < 0.01     | < 0.01     | < 0.01                              | < 0.01     | -          | -                                                                                        | < 0.01     | < 0.01     | < 0.01                                                                         | < 0.01     | < 0.01     | < 0.01                                                                                           | < 0.01     | < 0.01     | < 0.01                                                                                                 | < 0.01     |  |                                                          |  |  |                                                        |  |  |                     |
| Acenaphthylene                    | 0.01     | < 0.01     | < 0.01      | < 0.01     | < 0.01     | < 0.01                        | < 0.01     | < 0.01     | < 0.01                                           | < 0.01     | < 0.01     | < 0.01       | < 0.01     | -          | < 0.01     | < 0.01     | < 0.01     | < 0.01                              | < 0.01     | -          | -                                                                                        | < 0.01     | < 0.01     | < 0.01                                                                         | < 0.01     | < 0.01     | < 0.01                                                                                           | < 0.01     | < 0.01     | < 0.01                                                                                                 | < 0.01     |  |                                                          |  |  |                                                        |  |  |                     |
| Acenaphthene                      | 0.01     | < 0.01     | < 0.01      | < 0.01     | < 0.01     | < 0.01                        | < 0.01     | < 0.01     | < 0.01                                           | < 0.01     | < 0.01     | < 0.01       | < 0.01     | -          | < 0.01     | < 0.01     | < 0.01     | < 0.01                              | < 0.01     | -          | -                                                                                        | < 0.01     | < 0.01     | < 0.01                                                                         | < 0.01     | < 0.01     | < 0.01                                                                                           | < 0.01     | < 0.01     | < 0.01                                                                                                 | < 0.01     |  |                                                          |  |  |                                                        |  |  |                     |
| Fluorene                          | 0.01     | < 0.01     | < 0.01      | < 0.01     | < 0.01     | < 0.01                        | < 0.01     | < 0.01     | < 0.01                                           | < 0.01     | < 0.01     | < 0.01       | < 0.01     | -          | < 0.01     | < 0.01     | < 0.01     | < 0.01                              | < 0.01     | -          | -                                                                                        | < 0.01     | < 0.01     | < 0.01                                                                         | < 0.01     | < 0.01     | < 0.01                                                                                           | < 0.01     | < 0.01     | < 0.01                                                                                                 | < 0.01     |  |                                                          |  |  |                                                        |  |  |                     |
| Phenanthrene                      | 0.01     | < 0.01     | < 0.01      | < 0.01     | < 0.01     | < 0.01                        | < 0.01     | < 0.01     | < 0.01                                           | < 0.01     | < 0.01     | < 0.01       | < 0.01     | -          | < 0.01     | < 0.01     | < 0.01     | < 0.01                              | < 0.01     | -          | -                                                                                        | < 0.01     | < 0.01     | < 0.01                                                                         | < 0.01     | < 0.01     | < 0.01                                                                                           | < 0.01     | < 0.01     | < 0.01                                                                                                 | < 0.01     |  |                                                          |  |  |                                                        |  |  |                     |
| Anthracene                        | 0.01     | < 0.01     | < 0.01      | < 0.01     | < 0.01     | < 0.01                        | < 0.01     | < 0.01     | < 0.01                                           | < 0.01     | < 0.01     | < 0.01       | < 0.01     | -          | < 0.01     | < 0.01     | < 0.01     | < 0.01                              | < 0.01     | -          | -                                                                                        | < 0.01     | < 0.01     | < 0.01                                                                         | < 0.01     | < 0.01     | < 0.01                                                                                           | < 0.01     | < 0.01     | < 0.01                                                                                                 | < 0.01     |  |                                                          |  |  |                                                        |  |  |                     |
| Fluoranthene                      | 0.01     | < 0.01     | < 0.01      | < 0.01     | < 0.01     | < 0.01                        | < 0.01     | < 0.01     | < 0.01                                           | < 0.01     | < 0.01     | < 0.01       | < 0.01     | -          | < 0.01     | < 0.01     | < 0.01     | < 0.01                              | < 0.01     | -          | -                                                                                        | < 0.01     | < 0.01     | < 0.01                                                                         | < 0.01     | < 0.01     | < 0.01                                                                                           | < 0.01     | < 0.01     | < 0.01                                                                                                 | < 0.01     |  |                                                          |  |  |                                                        |  |  |                     |
| Pyrene                            | 0.01     | < 0.01     | < 0.01      | < 0.01     | < 0.01     | < 0.01                        | < 0.01     | < 0.01     | < 0.01                                           | < 0.01     | < 0.01     | < 0.01       | < 0.01     | -          | < 0.01     | < 0.01     | < 0.01     | < 0.01                              | < 0.01     | -          | -                                                                                        | < 0.01     | < 0.01     | < 0.01                                                                         | < 0.01     | < 0.01     | < 0.01                                                                                           | < 0.01     | < 0.01     | < 0.01                                                                                                 | < 0.01     |  |                                                          |  |  |                                                        |  |  |                     |
| Benzo(a)anthracene                | 0.01     | < 0.01     | < 0.01      | < 0.01     | < 0.01     | < 0.01                        | < 0.01     | < 0.01     | < 0.01                                           | < 0.01     | < 0.01     | < 0.01       | < 0.01     | -          | < 0.01     | < 0.01     | < 0.01     | < 0.01                              | < 0.01     | -          | -                                                                                        | < 0.01     | < 0.01     | < 0.01                                                                         | < 0.01     | < 0.01     | < 0.01                                                                                           | < 0.01     | < 0.01     | < 0.01                                                                                                 | < 0.01     |  |                                                          |  |  |                                                        |  |  |                     |
| Chrysene                          | 0.01     | < 0.01     | < 0.01      | < 0.01     | < 0.01     | < 0.01                        | < 0.01     | < 0.01     | < 0.01                                           | < 0.01     | < 0.01     | < 0.01       | < 0.01     | -          | < 0.01     | < 0.01     | < 0.01     | < 0.01                              | < 0.01     | -          | -                                                                                        | < 0.01     | < 0.01     | < 0.01                                                                         | < 0.01     | < 0.01     | < 0.01                                                                                           | < 0.01     | < 0.01     | < 0.01                                                                                                 | < 0.01     |  |                                                          |  |  |                                                        |  |  |                     |
| Benzo(b)fluoranthene              | 0.01     | < 0.01     | < 0.01      | < 0.01     | < 0.01     | < 0.01                        | < 0.01     | < 0.01     | < 0.01                                           | < 0.01     | < 0.01     | < 0.01       | < 0.01     | -          | < 0.01     | < 0.01     | < 0.01     | < 0.01                              | < 0.01     | -          | -                                                                                        | < 0.01     | < 0.01     | < 0.01                                                                         | < 0.01     | < 0.01     | < 0.01                                                                                           | < 0.01     | < 0.01     | < 0.01                                                                                                 | < 0.01     |  |                                                          |  |  |                                                        |  |  |                     |
| Benzo(k)fluoranthene              | 0.01     | < 0.01     | < 0.01      | < 0.01     | < 0.01     | < 0.01                        | < 0.01     | < 0.01     | < 0.01                                           | < 0.01     | < 0.01     | < 0.01       | < 0.01     | -          | < 0.01     | < 0.01     | < 0.01     | < 0.01                              | < 0.01     | -          | -                                                                                        | < 0.01     | < 0.01     | < 0.01                                                                         | < 0.01     | < 0.01     | < 0.01                                                                                           | < 0.01     | < 0.01     | < 0.01                                                                                                 | < 0.01     |  |                                                          |  |  |                                                        |  |  |                     |
| Benzo(a)pyrene                    | 0.01     | < 0.01     | < 0.01      | < 0.01     | < 0.01     | < 0.01                        | < 0.01     | < 0.01     | < 0.01                                           | < 0.01     | < 0.01     | < 0.01       | < 0.01     | -          | < 0.01     | < 0.01     | < 0.01     | < 0.01                              | < 0.01     | -          | -                                                                                        | < 0.01     | < 0.01     | < 0.01                                                                         | < 0.01     | < 0.01     | < 0.01                                                                                           | < 0.01     | < 0.01     | < 0.01                                                                                                 | < 0.01     |  |                                                          |  |  |                                                        |  |  |                     |
| Indeno(1,2,3-cd)pyrene            | 0.01     | < 0.01     | < 0.01      | < 0.01     | < 0.01     | < 0.01                        | < 0.01     | < 0.01     | < 0.01                                           | < 0.01     | < 0.01     | < 0.01       | < 0.01     | -          | < 0.01     | < 0.01     | < 0.01     | < 0.01                              | < 0.01     | -          | -                                                                                        | < 0.01     | < 0.01     | < 0.01                                                                         | < 0.01     | < 0.01     | < 0.01                                                                                           | < 0.01     | < 0.01     | < 0.01                                                                                                 | < 0.01     |  |                                                          |  |  |                                                        |  |  |                     |
| Dibenz(a,h)anthracene             | 0.01     | < 0.01     | < 0.01      | < 0.01     | < 0.01     | < 0.01                        | < 0.01     | < 0.01     | < 0.01                                           | < 0.01     | < 0.01     | < 0.01       | < 0.01     | -          | < 0.01     | < 0.01     | < 0.01     | < 0.01                              | < 0.01     | -          | -                                                                                        | < 0.01     | < 0.01     | < 0.01                                                                         | < 0.01     | < 0.01     | < 0.01                                                                                           | < 0.01     | < 0.01     | < 0.01                                                                                                 | < 0.01     |  |                                                          |  |  |                                                        |  |  |                     |
| Benzo(ghi)perylene                | 0.01     | < 0.01     | < 0.01      | < 0.01     | < 0.01     | < 0.01                        | < 0.01     | < 0.01     | < 0.01                                           | < 0.01     | < 0.01     | < 0.01       | < 0.01     | -          | < 0.01     | < 0.01     | < 0.01     | < 0.01                              | < 0.01     | -          | -                                                                                        | < 0.01     | < 0.01     | < 0.01                                                                         | < 0.01     | < 0.01     | < 0.01                                                                                           | < 0.01     | < 0.01     | < 0.01                                                                                                 | < 0.01     |  |                                                          |  |  |                                                        |  |  |                     |
| Total EPA-16 PAHs                 | 0.16     | < 0.16     | < 0.16      | < 0.16     | < 0.16     | < 0.16                        | < 0.16     | < 0.16     | < 0.16                                           | < 0.16     | < 0.16     | < 0.16       | < 0.16     | -          | < 0.16     | < 0.16     | < 0.16     | < 0.16                              | < 0.16     | -          | -                                                                                        | < 0.16     | < 0.16     | < 0.16                                                                         | < 0.16     | < 0.16     | < 0.16                                                                                           | < 0.16     | < 0.16     | < 0.16                                                                                                 | < 0.16     |  |                                                          |  |  |                                                        |  |  |                     |
| Arsenic (dissolved)               | 3.92     | 1.24       | 1.25        | 2.63       | 1.53       | 2.69                          | 4.13       | 1.9        | 3.37                                             | 2.12       | 1.66       | 2.77         | 3.51       | -          | 2          |            |            |                                     |            |            |                                                                                          |            |            |                                                                                |            |            |                                                                                                  |            |            |                                                                                                        |            |  |                                                          |  |  |                                                        |  |  |                     |

| BHID | Criteria | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | BHS10 | BHS13 | BHS14 | 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BHS10 | BHS13 | BHS14 | BHS |
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| BHID                              | Criteria | BH513                                                          | BH514B     | BH510                                                                                         | BH513      | BH514B     | BH510                                                    | BH513      | BH514B     | BH510                                                    | BH513      | BH514B     | BH510                                                                                   | BH513      | BH514B                                                                                                                    | BH514B FILTERED | BH510                                                                                   | BH513      | BH514B                                                                                       | BH514B FILTERED | BH510      | BH513      | BH514B     | BH514B FILTERED | BH510      | BH513      | BH514B     | BH514B FILTERED | BH510      | BH513      | BH514B     | BH514B FILTERED | BH510 |
|-----------------------------------|----------|----------------------------------------------------------------|------------|-----------------------------------------------------------------------------------------------|------------|------------|----------------------------------------------------------|------------|------------|----------------------------------------------------------|------------|------------|-----------------------------------------------------------------------------------------|------------|---------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------------|------------|----------------------------------------------------------------------------------------------|-----------------|------------|------------|------------|-----------------|------------|------------|------------|-----------------|------------|------------|------------|-----------------|-------|
| Date sampled                      | -        | 02/03/2022                                                     | 02/03/2022 | 09/03/2022                                                                                    | 09/03/2022 | 14/03/2022 | 16/03/2022                                               | 16/03/2022 | 16/03/2022 | 01/04/2022                                               | 01/04/2022 | 01/04/2022 | 13/04/2022                                                                              | 13/04/2022 | 13/04/2022                                                                                                                | 13/04/2022      | 22/04/2022                                                                              | 22/04/2022 | 22/04/2022                                                                                   | 22/04/2022      | 27/04/2022 | 27/04/2022 | 27/04/2022 | 27/04/2022      | 27/04/2022 | 27/04/2022 | 04/05/2022 | 04/05/2022      | 04/05/2022 | 04/05/2022 | 11/05/2022 |                 |       |
| mAOQ                              | -        | -                                                              | -          | -                                                                                             | -          | -          | -                                                        | -          | -          | -                                                        | -          | -          | -                                                                                       | -          | -                                                                                                                         | -               | -                                                                                       | -          | -                                                                                            | -               | -          | -          | -          | -               | -          | -          | -          | -               | -          | -          | -          | -               |       |
| DTW                               | -        | 31.1                                                           | 33.06      | 35.1                                                                                          | 31.28      | 36.28      | 35.15                                                    | 31.24      | 35.8       | 34.85                                                    | 31.1       | 36.86      | 34.63                                                                                   | 31.29      | 33.9                                                                                                                      | 33.9            | 34.55                                                                                   | 31.12      | 33.38                                                                                        | 33.03           | 34.63      | 31.33      | 33.03      | 33.03           | 34.63      | 31.08      | 33.11      | 33.11           | 34.37      |            |            |                 |       |
| DTB                               | -        | 46.59                                                          | 41.45      | 46.85                                                                                         | 46.65      | 41.2       | 46.9                                                     | 46.7       | 40.78      | 46.87                                                    | 46.68      | 40.42      | 46.74                                                                                   | 46.85      | 37.3                                                                                                                      | 37.3            | 46.79                                                                                   | 46.49      | 36.11                                                                                        | 36.33           | 46.74      | 46.6       | 36.33      | 36.33           | 46.75      | 46.55      | 36.3       | 36.3            | 46.82      |            |            |                 |       |
| NAPL present?                     | N        | -                                                              | N          | N                                                                                             | N          | N          | N                                                        | N          | N          | N                                                        | N          | N          | N                                                                                       | N          | N                                                                                                                         | N               | N                                                                                       | N          | N                                                                                            | N               | N          | N          | N          | N               | N          | N          | N          | N               | N          | N          | N          |                 |       |
| NAPL thickness                    | -        | -                                                              | -          | -                                                                                             | -          | -          | -                                                        | -          | -          | -                                                        | -          | -          | -                                                                                       | -          | -                                                                                                                         | -               | -                                                                                       | -          | -                                                                                            | -               | -          | -          | -          | -               | -          | -          | -          | -               | -          | -          | -          |                 |       |
| DO                                | 139      | 10.1                                                           | 8.4        | 4.5                                                                                           | 7.5        | U/S        | 5.5                                                      | 7.8        | <1.0       | 6.7                                                      | 8.2        | <1.0       | 4.4                                                                                     | 9.6        | 2.5                                                                                                                       | 8.4             | 12.7                                                                                    | 5.5        | <1                                                                                           | 8.1             | 5.8        | 9.8        | <1.0       | 10              | 4.4        | 5.5        | 7.3        | 3.8             | 5.2        |            |            |                 |       |
| pH                                | 8.6      | 7.36                                                           | 8.57       | 7.8                                                                                           | 7.26       | 8.2        | 7.95                                                     | 7.25       | 8.3        | 7.37                                                     | 7.35       | 8.4        | 7.57                                                                                    | 7.29       | 8.6                                                                                                                       | 8.3             | 7.45                                                                                    | 7.35       | 8.3                                                                                          | 8.7             | 7.41       | 7.38       | 8.4        | 8.6             | 7.27       | 7.27       | 8.4        | 8.2             | 7.25       |            |            |                 |       |
| Temp                              | 20.6     | 10                                                             | 9.7        | 12                                                                                            | 12.9       | 7.3        | 11.5                                                     | 12.2       | 7.2        | 9.7                                                      | 11.7       | 6.3        | 12.6                                                                                    | 13.1       | 6.8                                                                                                                       | 6.8             | 12.3                                                                                    | 13.3       | 6.5                                                                                          | 6.4             | 12.1       | 12.5       | 6.7        | 6.3             | 13         | 12.7       | 5.8        | 5.8             | 12.3       |            |            |                 |       |
| EC                                | N/A      | 3692                                                           | 2295       | 5195                                                                                          | 4021       | 1800       | 8018                                                     | 3972       | 1500       | 4028                                                     | 3944       | 1400       | 6824                                                                                    | 3948       | 1000                                                                                                                      | 820             | 7336                                                                                    | 3845       | 1000                                                                                         | 1000            | 7013       | 3645       | 1000       | 960             | 7105       | 7137       | 940        | 970             | 6941       |            |            |                 |       |
| Redox(orp)                        | 580      | 108.7                                                          | 119.9      | 216.6                                                                                         | 112.2      | -162.8     | 191.3                                                    | 160.9      | -161.8     | 195.8                                                    | 140.8      | 47.5       | -112.3                                                                                  | 154.8      | -216.4                                                                                                                    | 168.7           | 4770                                                                                    | -40.2      | 100.7                                                                                        | 156.5           | 218        | 232.8      | 142.7      | 121.7           | 166.2      | 130.2      | -86.4      | -48.8           | 217.3      |            |            |                 |       |
| Turbidity (TDS) (Lab data in NTU) | 88       | 2400                                                           | 1492       | 5195                                                                                          | 2614       | U/S        | 5211                                                     | 2582       | U/S        | 2618                                                     | 2564       | 32         | 4436                                                                                    | 2566       | 350                                                                                                                       | 2               | 240.8                                                                                   | 2499       | -                                                                                            | 5.9             | 4561       | 2368       | 31         | <1.0            | 4618       | 4635       | 2700       | 930             | 4511       |            |            |                 |       |
| Comments                          |          | Sample taken from new BH514B. Water slightly cloudy. No odour. |            | Pump stuck in well on 09/03. Pulled free on 14/03. Very cloudy water. Bailed sample.No odour. |            |            | Very cloudy water. Bailed sample.Slight sulphurus odour. |            |            | Very cloudy water. Bailed sample.Slight sulphurus odour. |            |            | Very cloudy water. Bailed sample.Slight sulphurus odour. New AOD +21.28 , it was +24.39 |            | Very silty sample. Bailed sample.Slight sulphurus odour. Well further reduced with groundlevel. New level to be recorded. |                 | Bailed sample. Less sulphurous odour than from previous samples. Water slightly cloudy. |            | Bailed sample. Less sulphurous odour then from previous samples. Water cloudy from sediment. |                 |            |            |            |                 |            |            |            |                 |            |            |            |                 |       |
| Lab Report Ref No.                |          | 22-43094                                                       | 22-43094   | 22-44648                                                                                      | 22-44648   | 22-45296   | 22-46278                                                 | 22-46278   | 22-46278   | 22-49337                                                 | 22-49337   | 22-49337   | 22-52149                                                                                | 22-52149   | 22-52149                                                                                                                  | 22-52149        | 22-53798                                                                                | 22-53798   | 22-53798                                                                                     | 22-55654        | 22-54946   | 22-54946   | 22-54946   | 22-54946        | 22-56383   | 22-56383   | 22-56383   | 22-56383        | 22-58010   |            |            |                 |       |
| Total Cyanide (Low Level 1 µg/l)  | 38.5     | <1.0                                                           | 790        | 31                                                                                            | <1.0       | 640        | 16                                                       | <1.0       | 520        | <1.0                                                     | 11         | 220        | 16                                                                                      | <1.0       | 200                                                                                                                       | 200             | 8                                                                                       | <1.0       | 180                                                                                          | 190             | 7.7        | <1.0       | 110        | 110             | 6.2        | <1.0       | 83         | 86              | 2.4        |            |            |                 |       |
| Free Cyanide (Low Level 1 µg/l)   | 2.2      | <1.0                                                           | 64         | <1.0                                                                                          | <1.0       | 3.8        | <1.0                                                     | <1.0       | 2.1        | <1.0                                                     | <1.0       | <1.0       | <1.0                                                                                    | <1.0       | 5.1                                                                                                                       | 1.6             | <1.0                                                                                    | <1.0       | 1.2                                                                                          | 5.9             | <1.0       | <1.0       | 8.1        | 5.2             | <1.0       | <1.0       | <1.0       | <1.0            | <1.0       |            |            |                 |       |
| Sulphate as SO4                   | 4477     | 1420                                                           | 789        | 3880                                                                                          | 1700       | 746000     | 3740**                                                   | 1830       | 537        | 1850                                                     | 1700       | 341        | 2840                                                                                    | 1690       | 233                                                                                                                       | 207             | 3610                                                                                    | 1650       | 217                                                                                          | 233             | 2660       | 1390       | 187        | 197             | 2700       | 1850       | 232        | 241             | 2900       |            |            |                 |       |
| Sulphide                          | 5        | <5.0                                                           | <5.0       | <5.0                                                                                          | <5.0       | 5.1        | <5.0                                                     | <5.0       | <5.0       | <5.0                                                     | <5.0       | <5.0       | <5.0                                                                                    | <5.0       | <5.0                                                                                                                      | <5.0            | <5.0                                                                                    | <5.0       | <5.0                                                                                         | <5.0            | <5.0       | <5.0       | <5.0       | <5.0            | <5.0       | <5.0       | <5.0       | <5.0            | <5.0       |            |            |                 |       |
| Ammonia as NH3                    | 2420     | 24                                                             | 2400       | 570                                                                                           | 65         | 3300       | 920                                                      | 270        | 2100       | 580                                                      | 650        | 2800       | 560                                                                                     | <15        | 900                                                                                                                       | 890             | 400                                                                                     | 59         | 1600                                                                                         | 1300            | 480        | 390        | 1300       | 1200            | 660        | 640        | 3700       | 1200            | <15        |            |            |                 |       |
| Total Suspended Solids            |          | 17                                                             | 3100       | 110                                                                                           | 67         | U/S        | 130                                                      | 97         | 19000      | 320                                                      | 160        | 16000      | 110                                                                                     | 96         | 15                                                                                                                        | -               | 150                                                                                     | 59         | 27000                                                                                        | -               | 47         | 14         | 5400       | -               | 35         | 12         | 6200       | -               | 74         |            |            |                 |       |
| Total Phenols (monohydric)        | 10       | <10                                                            | <10        | <10                                                                                           | <10        |            | <10                                                      | <10        | 11         | <10                                                      | <10        | <10        | <10                                                                                     | <10        | <10                                                                                                                       | <10             | <10                                                                                     | <10        | <10                                                                                          | <10             | <10        | <10        | <10        | <10             | <10        | <10        | <10        | <10             | <10        | <10        |            |                 |       |
| Naphthalene                       | 0.01     | <0.01                                                          | <0.01      | <0.01                                                                                         | <0.01      | 2.17       | <0.01                                                    | <0.01      | <0.01      | <0.01                                                    | <0.01      | 1.07       | <0.01                                                                                   | <0.01      | 1.55                                                                                                                      | <0.01           | <0.01                                                                                   | <0.01      | 0.76                                                                                         | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      |            |                 |       |
| Acenaphthylene                    | 0.01     | <0.01                                                          | <0.01      | <0.01                                                                                         | <0.01      | 0.86       | <0.01                                                    | <0.01      | <0.01      | <0.01                                                    | <0.01      | 0.36       | <0.01                                                                                   | <0.01      | 0.59                                                                                                                      | <0.01           | <0.01                                                                                   | <0.01      | <0.01                                                                                        | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      |            |                 |       |
| Acenaphthene                      | 0.01     | <0.01                                                          | <0.01      | <0.01                                                                                         | <0.01      | 0.48       | <0.01                                                    | <0.01      | <0.01      | <0.01                                                    | <0.01      | <0.01      | <0.01                                                                                   | <0.01      | 0.38                                                                                                                      | <0.01           | <0.01                                                                                   | <0.01      | <0.01                                                                                        | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      |            |                 |       |
| Fluorene                          | 0.01     | <0.01                                                          | <0.01      | <0.01                                                                                         | <0.01      | 0.82       | <0.01                                                    | <0.01      | <0.01      | <0.01                                                    | <0.01      | 0.28       | <0.01                                                                                   | <0.01      | 0.53                                                                                                                      | <0.01           | <0.01                                                                                   | <0.01      | <0.01                                                                                        | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      |            |                 |       |
| Phenanthrene                      | 0.01     | <0.01                                                          | <0.01      | <0.01                                                                                         | <0.01      | 4.85       | <0.01                                                    | <0.01      | <0.01      | <0.01                                                    | <0.01      | 1.64       | <0.01                                                                                   | <0.01      | 4.1                                                                                                                       | <0.01           | <0.01                                                                                   | <0.01      | 0.64                                                                                         | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      |            |                 |       |
| Anthracene                        | 0.01     | <0.01                                                          | <0.01      | <0.01                                                                                         | <0.01      | 2.01       | <0.01                                                    | <0.01      | <0.01      | <0.01                                                    | <0.01      | 0.51       | <0.01                                                                                   | <0.01      | 1.39                                                                                                                      | <0.01           | <0.01                                                                                   | <0.01      | <0.01                                                                                        | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      |            |                 |       |
| Fluoranthene                      | 0.01     | <0.01                                                          | <0.01      | <0.01                                                                                         | <0.01      | 9.76       | <0.01                                                    | <0.01      | <0.01      | <0.01                                                    | <0.01      | 3          | <0.01                                                                                   | <0.01      | 7.95                                                                                                                      | <0.01           | <0.01                                                                                   | <0.01      | 0.83                                                                                         | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      |            |                 |       |
| Pyrene                            | 0.01     | <0.01                                                          | <0.01      | <0.01                                                                                         | <0.01      | 9.09       | <0.01                                                    | <0.01      | <0.01      | <0.01                                                    | <0.01      | 2.7        | <0.01                                                                                   | <0.01      | 6.95                                                                                                                      | <0.01           | <0.01                                                                                   | <0.01      | 0.77                                                                                         | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      |            |                 |       |
| Benzo(a)anthracene                | 0.01     | <0.01                                                          | <0.01      | <0.01                                                                                         | <0.01      | 5.6        | <0.01                                                    | <0.01      | <0.01      | <0.01                                                    | <0.01      | 1.66       | <0.01                                                                                   | <0.01      | 3.96                                                                                                                      | <0.01           | <0.01                                                                                   | <0.01      | 0.49                                                                                         | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      |            |                 |       |
| Chrysene                          | 0.01     | <0.01                                                          | <0.01      | <0.01                                                                                         | <0.01      | 5.07       | <0.01                                                    | <0.01      | <0.01      | <0.01                                                    | <0.01      | 1.37       | <0.01                                                                                   | <0.01      | 3.45                                                                                                                      | <0.01           | <0.01                                                                                   | <0.01      | 0.43                                                                                         | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      |            |                 |       |
| Benzo(b)fluoranthene              | 0.01     | <0.01                                                          | <0.01      | <0.01                                                                                         | <0.01      | 5.5        | <0.01                                                    | <0.01      | <0.01      | <0.01                                                    | <0.01      | 1.73       | <0.01                                                                                   | <0.01      | 4.38                                                                                                                      | <0.01           | <0.01                                                                                   | <0.01      | 0.53                                                                                         | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      |            |                 |       |
| Benzo(k)fluoranthene              | 0.01     | <0.01                                                          | <0.01      | <0.01                                                                                         | <0.01      | 3.22       | <0.01                                                    | <0.01      | <0.01      | <0.01                                                    | <0.01      | 0.87       | <0.01                                                                                   | <0.01      | 1.85                                                                                                                      | <0.01           | <0.01                                                                                   | <0.01      | 0.2                                                                                          | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      |            |                 |       |
| Benzo(a)pyrene                    | 0.01     | <0.01                                                          | <0.01      | <0.01                                                                                         | <0.01      | 4.66       | <0.01                                                    | <0.01      | <0.01      | <0.01                                                    | <0.01      | 1.59       | <0.01                                                                                   | <0.01      | 3.97                                                                                                                      | <0.01           | <0.01                                                                                   | <0.01      | 0.4                                                                                          | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      |            |                 |       |
| Indeno(1,2,3-cd)pyrene            | 0.01     | <0.01                                                          | <0.01      | <0.01                                                                                         | <0.01      | 2.42       | <0.01                                                    | <0.01      | <0.01      | <0.01                                                    | <0.01      | 1.01       | <0.01                                                                                   | <0.01      | 2.05                                                                                                                      | <0.01           | <0.01                                                                                   | <0.01      | 0.26                                                                                         | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      |            |                 |       |
| Dibenz(a,h)anthracene             | 0.01     | <0.01                                                          | <0.01      | <0.01                                                                                         | <0.01      | 1.32       | <0.01                                                    | <0.01      | <0.01      | <0.01                                                    | <0.01      | 0.33       | <0.01                                                                                   | <0.01      | 0.65                                                                                                                      | <0.01           | <0.01                                                                                   | <0.01      | <0.01                                                                                        | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      |            |                 |       |
| Benzo(ghi)perylene                | 0.01     | <0.01                                                          | <0.01      | <0.01                                                                                         | <0.01      | 2.31       | <0.01                                                    | <0.01      | <0.01      | <0.01                                                    | <0.01      | 1.18       | <0.01                                                                                   | <0.01      | 2.33                                                                                                                      | <0.01           | <0.01                                                                                   | <0.01      | 0.29                                                                                         | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      | <0.01      | <0.01           | <0.01      | <0.01      |            |                 |       |
| Total EPA-16 PAHs                 | 0.16     | <0.16                                                          | <0.16      | <0.16                                                                                         | <0.16      | 60.1       | <0.16                                                    | <0.16      | <0.16      | <0.16                                                    | <0.16      | 19.3       | <0.16                                                                                   | <0.16      | 46.1                                                                                                                      | <0.16           | <0.16                                                                                   | <0.16      | 5.6                                                                                          | <0.16           | <0.16      | <0.16      | <0.16      | <0.16           | <0.16      | <0.16      | <0.16      | <0.16           | <0.16      | <0.16      |            |                 |       |
| Arsenic (dissolved)               | 3.92     | 3.23                                                           | 3.35       | 3.47                                                                                          | 1.21       | 2.11       | 3.49                                                     | 1.03       | 1.15       | 0.48                                                     | 0.38       | 1.01       | 0.66                                                                                    | 0.21       | 1.04                                                                                                                      | 1.32            | 0.58                                                                                    | 0.27       | 1.09                                                                                         | 0.63            | 0.51       | 0.24       | 1.1        | 1.33            | 0.59       | 0.27       | 1.33       | 1.63            | 0.49       |            |            |                 |       |
| Cadmium (dissolved)               | 0.08     | 0.15                                                           | 0.13       | 0.22                                                                                          | 0.03       | 0.04       | 0.16                                                     | 0.02       | 0.03       | 0.09                                                     | 0.03       | <0.02      | 0.16                                                                                    | <0.02      | <0.02                                                                                                                     | <0.02           | 0.19                                                                                    | 0.07       | 0.0                                                                                          |                 |            |            |            |                 |            |            |            |                 |            |            |            |                 |       |



# Decommissioning of Boreholes Report

[illegible]

Client Signature :

Crew Signature:

| Borehole<br>Installation Details | Borehole Number | Client & Site Location |
|----------------------------------|-----------------|------------------------|
|----------------------------------|-----------------|------------------------|

keltbray - wood Green

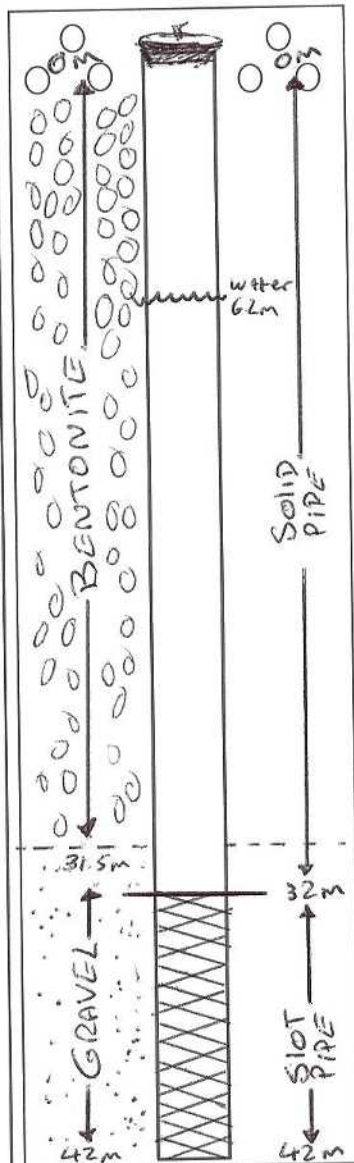
Well Pipe Material & Type (please circle as appropriate)

Hdpe - Upvc - Direct Push Well - Pre-Packed Wells - Black Mild Steel - Stainless Steel - CMT Multi level

Other Material Please Note:

Single Installation Pipe Diameter : 63 mm OD 50 mm ID

Duel Installation 2nd Pipe Diameter : \_\_\_\_\_ mm OD \_\_\_\_\_ mm ID



Cover installed: Chamber / Raised / Flush (Diameter / Size

1m PIPE RAISED / fenced off

Concrete From : \_\_\_\_\_ To \_\_\_\_\_

Top of Pipe Fitting : Cap Only / Cap & Valve

Bung Only / Valve & Bung

None

Bentonite Seal From : 31.5 m To 0 m

Solid Pipe From : 32 m To 0 m

Geo-wrap Yes / No / N/A

Meters Used : 10 m

Filter Pack From : 42 m To 31.5 m

Filter Pack Details: Gravel / Glass / Sand

Filter Material Size : 3-6 mm

Screen Pipe From : 42 m To 32 m

Base of Monitor Well : 40.5 m

Backfill Material Below Installation :

Arisings / Gravel / Bentonite / Sand / Glass

Base of Borehole : 42 m

(this may be the same as the monitor well depth above)

Materials Supplied By

Tick as appropriate

Client ☐

Tor Drilling ☒

General Additional Information

12x Gravel

20x Bento

water @ 6.2m

Duel Wells Installation Additional Information

CMT Multi Level Well Installation Details of Screen Levels:

Upon dipping finished well, Tape measured 40.5m. Possible sands settled within pipe.

Please ensure you use a ruler when drawing any lines to show the installation details

Date of Installation: 24-2-22

Driller: D. Hewlett

Signature: [Signature]

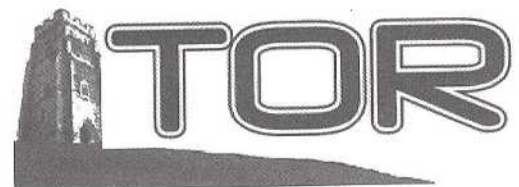




Plate 1: View of silt recovered during attempted purge of BH514A on 3<sup>rd</sup> February 2022



Plate 2: Site attendance by TOR drilling on 22<sup>nd</sup> February 2022 to decommission BH514A. 270-300l of bentonite grout (50kg of grout per 70l of water) was pumped into the standpipe via tremie pipe.



Plate 3: Views of groundwater within a VOC vial and Waterra tubing collected during the sampling round of 19<sup>th</sup> May 2022. The level of silt has become much reduced in recent sampling rounds