

Haringey Civic Centre

Generic Quantitative Risk Assessment

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Executive Summary

Background	The report describes the geological, geoenvironmental and hydrogeological conditions present at the site that could result in geoenvironmental risks with respect to the proposed future use. It also identifies the measures necessary to mitigate those potential risks. This report also provides information relevant for future use of the Site in accordance with the requirements of the National Planning Policy Framework (NPPF) and with respect to potential liability under Part 2a of the Environmental Protection Act 1990. This assessment is based upon the existing desk study report prepared by Buro Happold in 2021 and an intrusive investigation, specified by Buro Happold and undertaken by Concept Consultants in 2021.
Site Setting	The existing Civic Centre located onsite is currently vacant and comprises a three-storey building within a single storey basement and a two-storey extension to the west with ground floor undercroft space. The Civic Centre consists of three individual structures, referred to as the Council Chambers, Office Block and West Wing. The area surrounding the Civic Centre comprises three car parks, one to the north-west and two smaller ones to the south and east. Areas of soft landscaping are also present to the south and centre of the Site. The Site can be accessed from the north, south or east however the main entrance to the building is located to the East and accessed via the A105 running in an approximately north-south orientation along the eastern boundary. At present, the proposals for development are unconfirmed and being at an early stage will naturally develop further during the design process. The proposed development is formed of two main parts which are currently under consideration: • Refurbishment and restoration of the existing Civic Centre; and • Development of the Car Park Site with either an extension / annexe to the Civic Centre, residential blocks, or a mixture of office and residential use. Details of these two parts can be found in Section 2.4.
History	From 1864, the Site was occupied by 'The Fishmongers Asylum' a single building, divided into terraced homes. By 1896, a Fire Station had been developed to the south with an Allotment Gardens appearing to the west by 1935. The existing Civic Centre building was constructed between 1956 and 1958, with an electricity substation assumed to have been constructed at the same time. Since then, the Site has remained generally unchanged.
Site Investigation	A site investigation completed by Concept Consultants in 2022, comprised 6 No. Cable Percussion Boreholes, 10 No. Dynamic Sampler Boreholes, 7 No. Trial Pits, 3 No. Vertical Diamond Core Coreholes with follow on Hand Augers, and 6 No. Horizontal Diamond Core Coreholes.
Geological Setting	The Site is underlain by varying thickness of Made Ground, over a significant thickness of London Clay proven up to 30m bgl. No groundwater strikes were encountered during the investigation although one borehole was recorded as damp. Stabilised groundwater readings confirmed the presence of localised 'perched' groundwater deposits underlying the Site, although, it should be noted that 'perched' groundwater was not recorded at all locations. The presence of a 'deep' groundwater body located within Upper Chalk was not proven during this phase of investigation.
Contamination Risk Assessment	The soil chemical results from up to 42no. samples from the 2021 investigation were screened against industry standard thresholds. Some metals including lead and arsenic were elevated above their respective residential thresholds. Concentrations of some PAH constituents (Naphthalene, Phenanthrene, Benzo[a]anthracene, Chrysene and Indeno[123-cd]pyrene) were recorded above residential thresholds and other constituents including Benzo[b]fluoranthene, Benzo[a]pyrene and Dibenzo[ah]anthracene were recorded above commercial / industrial thresholds. Elevated concentrations of some hydrocarbon fractions

including aromatic TPH bands C12 to C16, C16 to C21 and C21 to 35 were also recorded above their respective residential threshold values. No concentrations identified to pose acute risks.

No groundwater samples underwent geochemical analysis except for those to help inform on concrete classification (e.g., pH, sulphur and sulphate).

The ground gas regime falls within Characteristic Situation 1 and no development specific gas protection measures are needed.

Summary of risks

Following this assessment, the risks to sensitive receptors have been assessed as suitably low such that they can be mitigated by standard good construction or health and safety practise. These are as follows:

- That in landscape areas suitable topsoil and subsoil materials will be used (thickness and chemical quality);
- The adoption of good construction practice, use of PPE and dust control measures will help further reduce risk. A watching brief for unexpected contamination should also be maintained by the contractor during the earthworks;
- Depending on the material they are to be installed into future water supply pipes may require the use of specific materials to mitigate the identified risk. Appropriate concrete class should be used in both Made Ground and natural soils. Further assessment is required to ascertain the design criteria for both Made Ground underlying London Clay;
- Potential risks posed to the underlying Thanet Sand / Chalk aquifer are capable of mitigation with good construction practice (e.g. control of hazardous substances) and the conduct of a foundation works risk assessment.

1 Introduction

1.1 Background and commission

This report presents the results and assessment of a ground investigation for the Haringey Civic Centre Site prepared by Buro Happold Engineering on behalf of Haringey Borough Council. The report describes the geological, geoenvironmental and hydrogeological conditions present at the site that could result in geoenvironmental risks with respect to the proposed future use. It also identifies the measures necessary to mitigate those potential risks. It is based upon existing reports including the 2021 Ground Engineering Desk Study [1] prepared by Buro Happold and an intrusive ground investigation undertaken by Concept Consultants in 2021 and the associated 2022 factual report [2].

The proposed development site occupies approximately 1.1ha and is centred around grid reference 530825E, 190734N. The site is located west of the A105, in the London Borough of Haringey, northeast London, N22 8LE (Figure 1-1 and Figure 1-2).

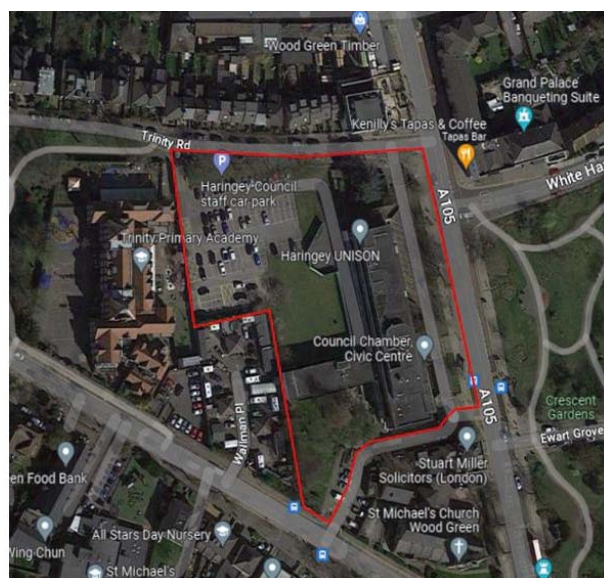
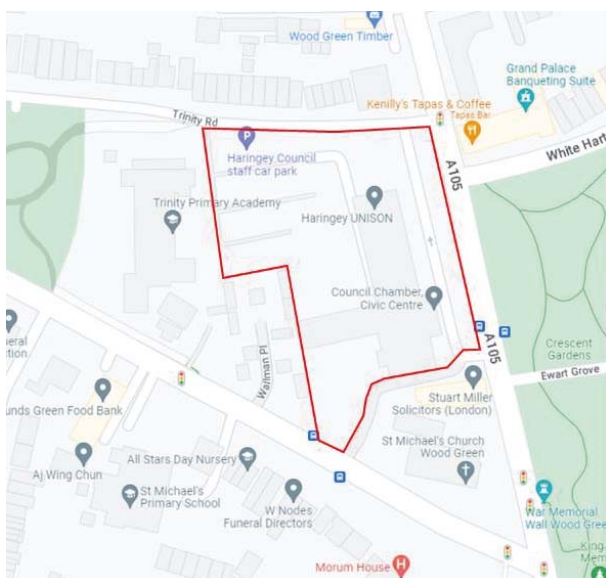


Figure 1-1 Red line boundary for Haringey Civic Centre and Figure 1-2 and Ariel photography of the Site (Google maps 2022)

1.2 Aims and objectives

The overall aim of the work reported here was to assess the geological and geoenvironmental conditions of the Site and assess the associated geoenvironmental risks. Accordingly, this report presents the results of ground investigations (desk based and intrusive), describes the conceptual site model and presents an assessment of contamination related risks for the proposed future site use.

The objectives of the investigations were to provide an assessment of:

- The ground model and groundwater regime;
- Location, nature and extent of contamination within the Made Ground and underlying natural strata;
- Nature and extent of contamination within controlled waters; and

- Ground gas and vapour regime to enable an outline assessment of the potential risks associated with hazardous gases and vapours.

The report has the following objectives:

- To identify any constraints associated with the ground and/or below ground infrastructure on the basis of available general information;
- To assess potential risks to people and the environment (natural and built) associated with ground contamination (solid, liquid or gas) during construction and for future Site use; and
- To provide recommendations and outline scope, if necessary, for further works such as intrusive ground investigation and / or remedial action or design.

The report also provides information relevant for future use of the Site in accordance with the requirements of the National Planning Policy Framework (NPPF) [3] and also with respect to potential liability under Part 2a of the Environmental Protection Act 1990. The work was carried out in general accordance with the Environment Agency (EA) / Land Contamination and Risk Management (LCRM) [4], the relevant British Standards (BS) [5] [6], the EA Guiding Principles for Land Contamination [7], Groundwater Protection Policy [8] and other current good practice guidance.

1.3 Information sources

The principal sources of historic information were a previous Desk Study [1] prepared by Buro Happold and an intrusive ground investigation [2] prepared by a third party (Concept Consultants). The third-party data has been accepted at face value and has not been independently verified. Buro Happold can therefore give no warranty, representation or assurance as to the accuracy or completeness of such information.

1.4 Competencies

The work reported here was carried out by an appropriately qualified geoenvironmental scientist with relevant qualifications, training and experience. The work has been overseen by an Associate at Buro Happold with substantial experience in the assessment of land affected by contamination who is Chartered through CIWEM.

1.5 Limitations

The scope and design of the site investigation has reflected the known history of site use and the results of previous desk-based studies. On this basis the spacing of the exploratory holes and the sampling and analysis plan for this investigation are considered to have provided a reasonable level of certainty about the ground conditions.

No investigation, however comprehensive, can be expected to determine absolutely the nature and variation of all the geology or contamination which could be present on any site. There will always be an element of uncertainty about the ground conditions including contamination. This potential for currently undetected contamination or variations in geology must therefore be taken into account not only in the risk assessment presented here but also in consideration of future development activities, for example, health and safety planning, financial planning and risk management and in the implementation of the below ground works during construction.

This report is concerned solely with the ground conditions and geoenvironmental risk.

2 Site Setting

2.1 Information sources

The site setting has been informed from the 2021 Desk Study [1] and a 2022 ground investigation [2].

2.2 Current site use

The existing Civic Centre located onsite is currently vacant and comprises a three-storey building within a single storey basement and a two-storey extension to the west with ground floor undercroft space. The Civic Centre consists of three individual structures, referred to as the Council Chambers, Office Block and West Wing – see Figure 2-1. The area surrounding the Civic Centre comprises three car parks, one to the north-west and two smaller ones to the south and east. Areas of soft landscaping are also present to the south and centre of the Site.

The Site can be accessed from the north, south or east however the main entrance to the building is located to the East and accessed via the A105 running in an approximately north-south orientation along the eastern boundary.



Figure 2-1 Haringey Civic Centre comprising three separate structures (north is up)

The site is within a predominately residential area and is bound;

- To the north by Trinity Road, with residential dwelling beyond;
- To the east the site is bound by the A105, with Crescent Gardens beyond;
- To the south by residential dwellings, some commercial properties and a hospital beyond to the south / south-east; and
- To the west by Trinity Primary Academy, with Trinity Gardens beyond.

2.3 Site history

The following summary of the site history has been derived from the previous desk study [1] which should be referred to for detailed information. The Site has a limited history of development. By 1864, it was occupied by 'The Fishmongers Asylum' (Figure 2-2) (later known as 'Fishmongers' and Poulterers' Institution'). This was a single building, divided into terraced homes with gardens (in approximately the same location as the existing Civic Centre). At this time, there was also a School located in the far south. The remaining area was undeveloped. By 1896, a Fire Station had been developed next to the school, which was no longer labelled by 1914. The 1935 map shows the western part of the Site to be Allotment Gardens. There is a record of some bombardment in the area during WW2, but no record directly related to the Site. Records of this can be seen within the Relevant Drawings Section towards the end of the report.

The existing Civic Centre building was constructed between 1956 and 1958, with the existing electricity substation assumed to have been constructed at the same time. The Civic Centre was built to act as the local seat of government. The design envisaged a public area in the southern part of the building and workspace for council officers and their departments in the northern part (see Figure 2-3). Internally, the principal rooms were the council chambers on the first floor and the mayor's parlour in the West Wing. An underground nuclear fall-out shelter was established in the basement but a public hall, which was intended for the site, was never built. A Citizens Advice Bureau was established in the building in 1975. Many of the council officers and their departments moved to Rover Park House further south on High Road in 2005. English Heritage listed the building in 2018 [9].



Figure 2-2 (left) Extract of 1896 map, Figure 2-3 (right) Extract of 1969-1974 map.

The earliest available map shows the three principal roads that currently bound the Site to be present. The existing St Michael's Church was also present adjacent to the southeast, with the surrounding area suburban and predominantly residential. By 1896, there had been substantial further residential and light commercial development in the surrounding area. The next significant change had occurred by 1914, when a School had been developed adjacent to the west. At this time, there were also Tramways along the High Road (adjacent to east) and Bounds Green Road (adjacent to south) and a Tramway Depot about 150m south. There was some redevelopment to the area following WW2 (residential and commercial). By 1955, the Tramways were no longer shown there was some further commercial / industrial development, including a Fireplace Factory (80m south), Chemical Works (100m south) and Engineering Works (50m north). The local surrounds have been mostly unchanged since this time, except for some redevelopment to residential areas.

2.4 Proposed development

General

At present, the proposals for development are unconfirmed and being at an early stage will naturally develop further during the design process. The proposed development is formed of two main parts which are currently under consideration:

- Refurbishment and restoration of the existing Civic Centre; and
- Development of the Car Park Site with either an extension / annexe to the Civic Centre, residential blocks, or a mixture of office and residential use.

Civic Centre refurbishment

It is proposed to completely refurbish and restore the existing Civic Centre for use as London Borough of Haringey's new headquarters. These works would deliver a building life expectancy of minimum 60 years occupancy. This proposal includes a setback roof extension on the 3rd floor constructed of a lightweight structure to minimise loads. The under-croft space will also be enclosed to become an interior space. Associated works would also include the enhancement of all landscaped areas around the building.

Car Part Site development

London Borough of Haringey Council has recognised that the office space provided by the Civic Centre refurbishment is not going to meet all its headquarters needs. Therefore, the Council is exploring the option of building additional office accommodation in the form of annexe or extension to the Civic Centre on the adjacent Car Park Site. Various options for the development of the Car Park Site are currently under consideration, including an office-only scheme, mixed use residential / office and residential only (various options with blocks between four and eight storeys).

The favoured option is the office-only scheme. This proposal delivers a four-storey, deep-plan office with a square footprint, located in the centre of the Car Park Site. A two-storey link block would connect this with the west wing of the Civic Centre. The ground floor of both of these structures would be used as café / hub space.

2.5 Anticipated ground model

The anticipated Site geology is summarised in Table 2-1. This has been determined with reference to the relevant 1:50,000 BGS map (Sheet 256 – North London) [10], the 1:10,000 BGS Map (Sheet TQ39SW – Edmonton) [11], and other information presented in the Desk Study [1]. In summary, these sources indicate that the Site is underlain by

London Clay, beneath which are the Lambeth Group, Thanet Sand Formation and Chalk Group at depth. This anticipated geological sequence is detailed in Table 2-1.

Table 2-1 – Summary of anticipated geology

Strata		Description	Depth to top [Approximate Thickness]	Aquifer status
Made Ground		Bricks and concrete rubble with soft brown clay and gravel	Surface [up to about 1m]	Unproductive Strata
Weathered London Clay		Firm brown to grey mottled finely laminated. Fissured silty CLAY	Approx. 1m bgl [about 10m]	Unproductive Strata
London Clay		Stiff to very stiff laminated fissured silty CLAY with occasional thin bands of grey mudstone	Approx. 11m bgl [about 15m]	Unproductive Strata
Lambeth Group	Reading Beds	Very stiff slightly fissured friable grey and occasionally light brown silty CLAY	Approx. 26m bgl [about 7m]	Unproductive Strata
	Woolwich Beds	Red and variegated CLAY and SAND	Approx. 33m bgl [about 6m]	Unproductive Strata
Thanet Sand Formation		Grey silty fine SAND	Approx. 39m bgl [about 8m]	Principal Aquifer
Chalk		White CHALK	Approx. 47m bgl [regionally extensive]	Principal Aquifer

2.6 Unexploded ordnance (UXO)

A Preliminary UXO Risk Assessment has been carried out by Buro Happold in accordance with CIRIA C681 [12] and is presented within Appendix E of the Desk Study [1]. The risks associated with UXO for the development have been assessed as Moderate. In the event of extensive below ground works a detailed UXO risk assessment will be required in advance of these works.

2.7 Previous reports

No previous ground investigation data for the Site is currently available.

3 Preliminary risk assessment

The following provides a summary of the risk identified as part of the Desk Study [1]. A summary of the approach is presented in Section 10.

3.1 Contamination risks

Potential contamination sources from former uses of the Site were identified following a review of Site setting and desk study information. An Initial Conceptual Site Model (CSM) was determined, and a Preliminary Risk Assessment was carried out for the site based on this data. At this preliminary stage, the main sources of potential contamination were identified, and the potential risks qualitatively assessed. The assessment is based upon the Site in its current condition, but it also includes consideration of the potential risks associated with any below ground works (e.g., site investigation or future foundation works etc.) and the potential future use. A summary of the potentially significant risks (i.e., greater than Low) is presented below.

Table 3-1 Summary of potential risks

Receptor	Source	Potential risk
Investigation / Construction workers	Made Ground / infilled land	Moderate
Future residents / visitors (residents and workers)	Made Ground / infilled land	Low to Moderate
	Hazardous ground gas	
Offsite occupiers / visitors of neighbouring land	Made Ground / infilled land	Low to Moderate
Below ground services / infrastructure	Made Ground / infilled land	Low to Moderate

4 2021 / 2022 Ground Investigation

4.1 Objectives and scope

The 2021 / 2022 intrusive ground investigation was designed to meet the aims and objectives as set out in Section 1.2, refining the ground model and assessing the Conceptual Site Model to inform if remediation is required. Buro Happold designed and specified the ground investigation with Concept Consultants providing the investigation contractor services and producing the factual ground investigation report [2]. A copy of this report can be found within Appendix A.

The fieldwork was carried out between 16th of November and 1st of December 2021. The scope of works comprised:

- 6 No. Cable Percussion Boreholes to a maximum depth of 30.00m;
- 10 No. Dynamic Sampler Boreholes to a maximum depth of 6.00m;
- 7 No. Trial Pits to a maximum depth of 1.45m;
- 3 No. Vertical Diamond Core Coreholes with follow on Hand Auger to a maximum length of 3.50m;
- 6 No. Horizontal Diamond Core Coreholes to a maximum length of 0.65m;
- Logging and Photographing;
- Installation of monitoring standpipes (groundwater and ground gas)
- Instrumentation Monitoring and Sampling;
- Geotechnical, Chemical Testing and Concrete Core Testing; and
- Preparation of a factual ground investigation report [2] by Concept Consulting.

Ground gas monitoring

Ground gas monitoring of six gas monitoring wells (BH02, BH03, WS03 and WS06-08) was undertaken on six occasions between 12th January 2022 and 16th February 2022. An additional three visits were undertaken between 24th February 2022 and 11th March 2022 to monitor BH02 which was omitted from the first three original visits by mistake.

During each round of gas and vapour monitoring the gas and vapour concentrations and groundwater level for each borehole were recorded in accordance with CIRIA C665 [13]. An infrared gas meter was used to measure concentrations of carbon dioxide (CO₂), methane (CH₄) and oxygen (O₂) in percentage volume while carbon monoxide (CO) and hydrogen sulphide (H₂S) were recorded in parts per million (ppm). Initial and steady state conditions were recorded. An integral flow meter was used to measure gas flow rates (initial and steady state) in litres per hour. In addition, the atmospheric pressure before and during the monitoring together with the weather conditions were noted.

Ground gas samples were taken on one occasion 9th of February from three exploratory hole locations however no laboratory analysis was undertaken.

Groundwater monitoring

Groundwater levels were monitored on six occasions between 12th January 2022 and 16th February 2022. The monitoring was undertaken using a hand-held dip-meter. Groundwater samples were obtained on two occasions (27th of January and 9th of February) however were not subject to chemical analysis.

Utility survey

The detection of underground services followed the guidelines of PAS 128:2014 [14]. Prior to boring commencing all exploratory hole locations were checked for utilities / buried services using a CAT and genny, existing utility information and hand dug inspection pits to an appropriate depth as identified by the services plans typically to a maximum depth of 1.20m.

Where surface concrete and asphalt were encountered, these were broken out by handheld electric breaker or diamond cored.

5 Ground Model

5.1 Encountered geology

The ground conditions encountered beneath the Site during the 2021 / 2022 ground investigation are summarised in Table 5-1.

Table 5-1 Summary of the ground conditions encountered

Strata	Description	Thickness (m)	Depth (mbgl)	Level (mAOD)
Made Ground	- Soft to firm gravelly (silty) sandy Clay to sandy Gravel. - Gravel typically comprises angular to rounded fine to coarse flint, concrete, ceramic, glass brick fragments. - Occasionally encountered with roots and rootlets. - BH01 encountered fabric material. - BH01, BH02 and BH04 encountered asphalt at the surface. - BH04 and BH05 encountered concrete and reinforced concrete.	0.2 to 3.2	0.0	34.0 to 37.6
Weathered London Clay	- Soft to firm slightly gravelly silty Clay that becomes stiffer with depth. - Gravel is angular to subangular to rounded fine to coarse flint. - Encountered with roots and rootlets, lignite modules, claystone fragment, pockets of silt, rare selenite crystals, white silt, off-white flecks, partings of fine sand.	8.7 to 10 [Only proven in boreholes]	0.2 to 3.2	33.0 to 37.0
London Clay	- Very stiff sandy silty Clay with occasional white flecks - BH01 encountered very stiff clayey Silt (Harwich Formation). BGS incorporate this formation as part of the base of London Clay. - Encountered with partings of sand and pockets of silt, pyrite nodule, claystone fragments, lignite fragment. - Only encountered in boreholes, except BH06. This may be because the top of London Clay is at a depth greater than 10.5mbgl.	Not proven.	9.0 to 11.5	24.6 to 27.3

5.1.1 Visual and olfactory evidence of contamination in soils

No visual or olfactory evidence of gross contamination was recorded during the ground investigation. Occasional anthropogenic tertiary fragments such as brick, concrete, asphalt, ceramic, glass, and clinker were all observed within the Made Ground. Fragments of coal were also observed at two locations (WS03 and WS06) between ground level and 0.60m bgl and 0.50-1.20m bgl respectively.

5.2 Groundwater

Groundwater was not encountered within any of the exploratory hole locations during the ground investigation works. WS02B was however noted to be damp at approximately 1.00m bgl at the boundary of the Made Ground and London Clay.

Whilst no groundwater was encountered during the ground investigation works, subsequent monitoring visits confirmed the presence of localised 'perched' groundwater deposits underlying the Site, although, it should be noted that 'perched' groundwater was not recorded at all locations. The presence of a 'deep' groundwater body located within Upper Chalk was not proven during this phase of investigation. Stabilised groundwater level readings are summarised in Table 5-2.

Table 5-2 Stabilised groundwater level readings

Exploratory Hole Reference	Response Zone (m bgl)	Response Zone Strata	Recorded Groundwater Level (mb TOC)								
			12/01/22	20/01/22	27/01/22	02/02/22	10/02/22	16/02/22	24/02/22	04/03/22	11/03/22
BH01 (GWMP)	25.00-30.00	LCF + HAR	No Access	10.21	12.72	11.91	10.82	9.48	9.41	9.10	9.05
BH02 (GMP)	0.50-1.50	MG + LCF	-	-	-	Dry	0.60	0.03	0.07	0.75	1.00
BH02 (GWMP)	5.00-20.00	LCF	No Access	0.60	2.80	5.58	2.23	0.35	0.03	1.63	2.15
BH03 (GMP)	0.50-2.00	MG + LCF	No Access	1.81	Dry	Dry	Dry	Dry	Dry	Dry	Dry
BH04 (GWMP)	1.00-11.00	MG + LCF	9.68	10.02	9.83	10.33	10.15	10.42	10.33	10.15	9.97
BH05 (VWP)	-	LCF	No Access	11.71	11.83	11.89	11.91	No Access	11.94	11.96	12.07
WS03 (GMP)	1.00-1.60	LCF	1.05	1.28	1.27	1.54	1.52	1.48	1.41	1.27	1.22
WS06 (GMP)	1.00-1.50	MG + LCF	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	No Access
WS07 (GMP)	1.00-1.50	MG + LCF	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	No Access
WS08 (GMP)	1.00-1.50	MG + LCF	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	No Access

NB: GMP = Gas and groundwater standpipe, GWMP = Groundwater standpipe, VWP = Vibrating wire piezometer, MG = Made Ground, LCF = London Clay Formation, HAR = Harwich Formation, mb TOC = metres below top of cover

6 Geoenvironmental Risk Assessment Criteria

6.1 Soil risk assessment criteria

In order to perform a Generic Quantitative Risk Assessment (GQRA), the soil will be compared with available Soil Guideline Values (SGVs), Category 4 Screening Values (C4SLs), and BuroHappold and other industry Generic Assessment Criteria (GAC), the details of which are presented in Appendix B.

6.1.1 Risks to human health

Chronic: For human health risk assessment, soil results will be assessed using GACs, C4SLs and SGVs for the Contaminated Land Exposure Assessment (CLEA) residential with plant uptake (Resi₁ scenario), residential without plant uptake (Resi₂ scenario) and commercial land use scenarios. The residential and commercial land use scenarios are applied to give context to the data and to provide indicative upper and lower bounds for discussion purposes only. The residential without plant uptake use is considered to be the most appropriate land use scenario against which the data is to be compared to establish suitability for use.

Acute: For acute risks to human health, soil results will be assessed using the SoBRA Acute Generic Assessment Criteria (AGAC) [15]. These AGACs have been derived for seven determinands: arsenic, benzene, cadmium, free cyanide, phenol, trichloroethylene (TCE) and vinyl chloride (VC). Lead was also considered but due to the limited toxicological data available, no threshold was determined. The exposure scenarios modelled are:

- General public exposure (or trespasser) via a single large dose (or potentially sum of several smaller doses over a short duration) of a 1–2-year-old female child (averaged across ages of 0–6 years).
- Occupational exposure of female adult commercial/industrial worker exposed to contaminated soil during their work, such as construction, utility, site investigation or remediation worker over the working day.

Acute exposure has been defined and modelled based on an irregular (i.e. not repeated) exposure of up to 24 hours duration based on the assumption lasting for 30 minutes or less.

For determinands other than the 7 modelled by SoBRA, maximum concentrations (not the average concentration which is relevant to chronic / long term risk) were considered. Comparison of maximum concentrations are made with the other GACs and other screening values which provides a conservative benchmark for such short-term risks (as the values are based on long term exposure).

6.1.2 Plant health (phytotoxicity)

It is not anticipated that direct planting will take place within the material currently on Site. However, as a conservative approach and in the case of future planting, soil test results indicating phytotoxicity are assessed using the British Standards Specification for Topsoil (BS3882 2015) [16].

6.1.3 Risks to below ground structures

The water industry and several water utility companies have published guidance regarding the construction of new water supply pipework on Brownfield sites [17] and [18] but there is no universally accepted guidance (or contaminant thresholds). The most recent guidance published by Water UK [19] has been adopted as best practice but is not mandatory.

Attack on below ground concrete is assessed using the relevant BRE Special Digest [20] on brownfield locations.

6.2 Controlled waters risk assessment criteria

The Site is underlain by an unproductive stratum (London Clay); therefore, no geochemical testing was conducted on samples obtained during the groundwater monitoring period except for those to help inform on concrete classification (e.g., pH, sulphur and sulphate). As such groundwater has not been addressed.

6.3 Ground gas risk assessment criteria

Ground gas data obtained from the Site will be used to assess the risks to the Site with reference to CIRIA report C665 [13], National Housing Building Council (NHBC) guidance [21] and BS 8485 [22]. Consideration to both methane (CH₄) and carbon dioxide (CO₂) concentrations as well as flow rates will be given. The borehole hazardous gas flow rate (Qhg) is calculated (as the product of gas concentration multiplied by flow rate) for each monitoring location at each monitoring event. If the data set is considered comprehensive and representative and consistent with the conceptual site model, the site characteristic Gas Screening Value (GSV) will be the maximum Qhg. If the data set is temporally or spatially limited, a plausible worst-case condition should be determined (based upon maximum concentration and maximum flow rate from relevant monitoring wells) and this worst case Qhg will be adopted to determine the site characteristic GSV. [Note – BS8485 advises that this worst-case scenario should be adopted only if it is prudent and reasonable to do so and that it would not result in unnecessarily conservative assessment and recommendations]. The site characteristic GSV for both methane and carbon dioxide is then used to determine the characteristic gas situation (CS). Further consideration of the appropriateness of this Characteristic Situation is given by reference to additional factors (e.g. recorded maximum concentrations and flow rates). Once this check is complete, the Characteristic Situation (and hazard potential) is confirmed, in turn enabling the identification of the need for and scope of gas protection measures.

6.3.1 Soil vapour

Soil vapour has not been assessed at the Site as the concentrations of volatile determinands in soil or groundwater were not found to be present in concentrations that may pose a risk to human health at the Site.

6.4 Waste classification

In order to determine the likely waste classification, soil test results have been assessed using the EA (Environment Agency 'Technical Guidance WM3', 'Guidance on the classification and assessment of waste' 1st Edition 2015 [23].

7 Analytical Results for Soil

7.1 Analytical Scope for Soil

Chemical analysis was undertaken on a total of 42 soils samples collected during the 2022 intrusive ground investigation. 31 of these were of Made Ground / topsoil and 11 were London Clay. The testing suites are summarised in Table 7-1. The soil assessment spreadsheet is in Appendix C.

Table 7-1 Laboratory testing suites for soil

Suite Reference	Contaminant Analysis Suite
Suite 1 (Made Ground)	pH, Asbestos screen, CLEA metals suite, total cyanide, total mercury, speciated PAHs, TPH CWG and Soil Organic Matter
Suite 2 (Natural Ground)	pH, CLEA metals suite, total cyanide, total mercury, speciated PAHs, TPH CWG and PCBs

The analytical test results for contaminants in soil are presented in full in the factual report [2].

7.2 Chronic Risks

7.2.1 Topsoil and Made Ground

Inorganic Determinands

All 31 Made Ground / Topsoil samples were analysed for inorganic determinands (as per Table 7-1). A summary of the results are presented in Table 7-2, with the full screening assessment in Appendix C.

It should be noted that the green coloration denotes an exceedance for a given contaminant over a given screening threshold.

Table 7-2 Concentrations of inorganic determinands (mg/kg)

Determinand	No. of samples	GAC (No of samples exceeding GAC). SGV; C4SL			Min.	Max.	90% confidence Limit (upper)
		Resi ₁	Resi ₂	Commercial / Industrial			
Cyanide (total)	31	4.6 (0)	760 (0)	16000 (0)	0.50	0.50	-
Arsenic	31	37 (1)	40 (0)	640 (0)	6.10	39.00	19.11
Boron	31	290 (0)	11000 (0)	240000 (0)	0.40	1.90	-
Cadmium	31	26 (0)	149 (0)	410 (0)	0.10	0.73	-
Chromium	31	910 (0)	910 (0)	8600 (0)	15.00	82.00	-
Copper	31	2400 (0)	7100 (0)	68000 (0)	6.60	240.00	-
Lead	31	200 (13)	310 (5)	2330 (0)	16.00	670.00	254.93
Mercury (inorganic)	31	40 (0)	56 (0)	58 (0)	0.10	5.40	-
Nickel	31	130 (0)	180 (0)	980 (0)	12.00	90.00	-
Selenium	31	250 (0)	430 (0)	12000 (0)	0.20	5.10	-
Zinc	31	3700 (0)	40000 (0)	730000 (0)	23.00	380.00	-

From the 31 samples analysed all other inorganic determinands, except for lead and arsenic, were below the Resi₁, Resi₂ and commercial / industrial screening values. 13 samples (~42% of dataset) recorded concentrations of lead above the Resi₁ screening value up to 670mg/kg, with 5 (~16%) also above the Resi₂ value. All concentrations were however below the commercial / industrial screening value (considered the most relevant for this proposed development at this stage). The 90% confident limit for the mean concentration was 254.93mg/kg for lead which is above the Resi₁ value but below the more relevant Resi₂ and commercial / industrial criteria. 1 sample also recorded elevated concentrations of arsenic up to 39mg/kg slightly exceeding the Resi₁ screening value.

Organic determinands

A total of 31 samples were analysed for PAHs. Concentrations were compared with relevant screening values for human health risk assessment. Table 7-3 presents a summary of the PAHs, with the full screening assessment in Appendix C.

Table 7-2 Concentrations of PAHs (mg/kg)

Determinand	No. of samples	GAC (No of samples exceeding GAC). SGV; C4SL			Min.	Max.	90% confidence Limit (upper)
		Resi ₁	Resi ₂	Commercial / Industrial			
Naphthalene	31	2.3 (2)	2.3 (2)	190 (0)	0.10	4.60	0.69
Acenaphthylene	31	170 (0)	2900 (0)	83000 (0)	0.10	8.80	-
Acenaphthene	31	210 (0)	3000 (0)	84000 (0)	0.10	14.00	-
Fluorene	31	170 (0)	2800 (0)	63000 (0)	0.03	10.00	-
Phenanthrene	31	95 (1)	1300 (0)	22000 (0)	0.10	99.00	15.58
Anthracene	31	2400 (0)	31000 (0)	520000 (0)	0.10	30.00	-
Fluoranthene	31	280 (0)	1500 (0)	23000 (0)	0.10	130.00	-
Pyrene	31	620 (0)	3700 (0)	54000 (0)	0.10	110.00	-
Benzo[a]anthracene	31	7.2 (5)	11 (4)	170 (0)	0.10	66.00	12.69
Chrysene	31	15 (3)	30 (3)	350 (0)	0.10	58.00	10.97
Benzo[b]fluoranthene	31	2.6 (15)	3.9 (10)	44 (3)	0.10	87.00	15.53
Benzo[k]fluoranthene	31	77 (0)	110 (0)	1200 (0)	0.10	33.00	-
Benzo[a]pyrene	31	2.2 (13)	3.2 (10)	35 (3)	0.10	71.00	12.81
Indeno[123-cd]pyrene	31	27 (3)	45 (1)	500 (0)	0.10	62.00	10.18
Dibenzo[ah]anthracene	31	0.24 (17)	0.31 (14)	3.5 (3)	0.10	10.00	1.99
Benzo[ghi]perylene	31	320 (0)	360 (0)	3900 (0)	0.10	51.00	-

From the 31 samples analysed a number recorded concentrations of some PAH constituents over Resi₁, Resi₂ and commercial / industrial screening values. This included Benzo[b]fluoranthene, Benzo[a]pyrene and Dibenzo[ah]anthracene, with 3 samples (~10% of dataset) all exceeding their respective commercial / industrial threshold values. Whilst the 90% confidence limit for the mean concentration for each of these determinands did not exceed the commercial / industrial values they did exceed both Resi₁ and Resi₂ screening criteria. Exceedances were also recorded from other determinands including, Naphthalene, Phenanthrene, Benzo[a]anthracene, Chrysene and Indeno[123-cd]pyrene with concentrations exceeding both Resi₁ and Resi₂ screening criteria with the exception of Phenanthrene which only exceeded the Resi₁ value in 1 of the samples analysed. The most common exceedance was

for Dibenzo[ah]anthracene, with 17 samples (~55% of dataset) recording concentrations above the Resi₁ value. Concentrations of all determinands including all exceedances are summarised in Table 7-3 above.

Petroleum Hydrocarbons

A total of 31 samples were analysed for petroleum hydrocarbons. The results are presented in Table 7-4 below, with the full screening assessment in Appendix C.

Table 7-3 Concentrations of Petroleum Hydrocarbons (mg/kg)

Determinand	No. of samples	GAC (No of samples exceeding GAC). SGV; C4SL			Min.	Max.	90% confidence Limit (upper)
		Resi ₁	Resi ₂	Commercial / Industrial			
Aliphatic C5 - C6	31	42 (0)	42 (0)	3200 (0)	1.00	1.00	-
Aliphatic C6 - C8	31	100 (0)	100 (0)	7800 (0)	1.00	1.00	-
Aliphatic C8 - C10	31	27 (0)	27 (0)	2000 (0)	1.00	1.00	-
Aliphatic C10 - C12	31	130 (0)	130 (0)	9700 (0)	1.00	1.00	-
Aliphatic C12 - C16	31	1100 (0)	1100 (0)	59000 (0)	1.00	39.00	-
Aliphatic C16 - C21	31	65000 (0)	65000 (0)	1600000 (0)	1.00	74.00	-
Aliphatic C21 - C35	31	65000 (0)	64000 (0)	1600000 (0)	1.00	290.00	-
Total Aliphatic	31	N/A (0)	N/A (0)	N/A (0)	5.00	400.00	-
Aromatic C5 - C7	31	70 (0)	370 (0)	26000 (0)	1.00	1.00	-
Aromatic C7 - 8	31	130 (0)	860 (0)	56000 (0)	1.00	74.00	-
Aromatic C8 - C10	31	34 (0)	47 (0)	3500 (0)	1.00	1.00	-
Aromatic C10 - 12	31	74 (0)	250 (0)	16000 (0)	1.00	23.00	-
Aromatic C12 - C16	31	140 (3)	1800 (0)	36000 (0)	1.00	580.00	84.26
Aromatic C16 - C21	31	260 (5)	1900 (1)	28000 (0)	1.00	2400.00	355.56
Aromatic C21 - C35	31	1100 (4)	1900 (3)	28000 (0)	1.00	6600.00	948.35
Total Aromatic	31	N/A (0)	N/A (0)	N/A (0)	5.00	11000.00	-

S4UL used where there is no C4SL

*The calculations of the US95 average concentrations is not required where exceedances of the relevant S4UL / C4SL have not been identified

From the 31 samples analysed most hydrocarbon fractions were recorded below the Resi₁, Resi₂ and commercial / industrial screening values. Exceedances were however recorded for aromatic hydrocarbon bands C12-16 (up to 580mg/kg), C16-21 (up to 2400mg/kg) and C21-35 (up to 6600mg/kg). Both the C16-21 and C21-35 bands were recorded at concentrations over their respective Resi₂ screening criteria within ~3% and ~10% of the dataset in exceedance of this value. The 90% confidence limit was recorded above the Resi₁ screening criteria for the aromatic C16-21 hydrocarbon fraction. No such exceedances were recorded for any other hydrocarbon band.

Asbestos

Suspected Asbestos Containing Materials (ACMs) were not observed in the soils encountered during the ground investigation or upon chemical analysis. A total of 31 samples taken from the Made Ground were screened for asbestos. Asbestos was not detected within any of these samples.

pH

Measurements of soil pH in Made Ground and topsoil are typically alkaline with an average pH of 8.5 and a maximum recorded pH of 10.1. The elevated pH is likely to be related to leachate from concrete present within the Made Ground.

7.2.2 London Clay

Inorganic Determinands

All 11 samples of London Clay were analysed for inorganic determinands (as per Table 7-1). A summary of the results are presented below in Table 7-5, with the full screening assessment in Appendix C.

Table 7-5 Concentrations of inorganic determinands (mg/kg)

Determinand	No. of samples	GAC (No of samples exceeding GAC). SGV; C4SL			Min.	Max.
		Resi ₁	Resi ₂	Commercial / Industrial		
Cyanide (total)	11	4.6 (0)	760 (0)	16000 (0)	0.50	0.50
Arsenic	11	37 (0)	40 (0)	640 (0)	8.50	16.00
Boron	11	290 (0)	11000 (0)	240000 (0)	0.40	1.90
Cadmium	11	26 (0)	149 (0)	410 (0)	0.10	0.43
Chromium	11	910 (0)	910 (0)	8600 (0)	31.00	82.00
Copper	11	2400 (0)	7100 (0)	68000 (0)	16.00	59.00
Lead	11	200 (1)	310 (0)	2330 (0)	16.00	240.00
Mercury (inorganic)	11	40 (0)	56 (0)	58 (0)	0.10	1.30
Nickel	11	130 (0)	180 (0)	980 (0)	19.00	90.00
Selenium	11	250 (0)	430 (0)	12000 (0)	0.20	1.20
Zinc	11	3700 (0)	40000 (0)	730000 (0)	53.00	160.00

From the 11 samples analysed all other inorganic determinands, except for lead, were below the Resi₁, Resi₂ and commercial / industrial screening values. 1 sample (~9% of dataset) recorded concentrations of lead up to 240mg/kg, slightly over the Resi₁ threshold.

Organic determinands

A total of 11 samples were analysed for PAHs. Concentrations were compared with relevant screening values for human health risk assessment. Table 7-6 presents a summary of the PAHs, with the full screening assessment in Appendix C.

Table 7-6 Concentrations of PAHs (mg/kg)

Determinand	No. of samples	GAC (No of samples exceeding GAC). SGV; C4SL			Min.	Max.
		Resi ₁	Resi ₂	Commercial / Industrial		
Naphthalene	11	2.3 (0)	2.3 (0)	190 (0)	0.10	0.10
Acenaphthylene	11	170 (0)	2900 (0)	83000 (0)	0.10	0.10
Acenaphthene	11	210 (0)	3000 (0)	84000 (0)	0.10	0.10
Fluorene	11	170 (0)	2800 (0)	63000 (0)	0.03	0.10

Phenanthrene	11	95 (0)	1300 (0)	22000 (0)	0.10	0.62
Anthracene	11	2400 (0)	31000 (0)	520000 (0)	0.10	0.37
Fluoranthene	11	280 (0)	1500 (0)	23000 (0)	0.10	1.20
Pyrene	11	620 (0)	3700 (0)	54000 (0)	0.10	1.10
Benzo[a]anthracene	11	7.2 (0)	11 (0)	170 (0)	0.10	1.50
Chrysene	11	15 (0)	30 (0)	350 (0)	0.10	1.40
Benzo[b]fluoranthene	11	2.6 (0)	3.9 (0)	44 (0)	0.10	1.40
Benzo[k]fluoranthene	11	77 (0)	110 (0)	1200 (0)	0.10	1.20
Benzo[a]pyrene	11	2.2 (0)	3.2 (0)	35 (0)	0.10	1.20
Indeno[123-cd]pyrene	11	27 (0)	45 (0)	500 (0)	0.10	1.20
Dibenzo[ah]anthracene	11	0.24 (3)	0.31 (3)	3.5 (0)	0.10	1.10
Benzo[ghi]perylene	11	320 (0)	360 (0)	3900 (0)	0.10	1.30

From the 11 samples analysed all other organic determinands, except for Dibenzo[ah]anthracene, were below the Res₁, Res₂ and commercial / industrial screening values. 3 samples (~27% of dataset) recorded concentrations of Dibenzo[ah]anthracene up to 1.1mg/kg, exceeding both Res₁ and Res₂ screening criteria.

Petroleum Hydrocarbons

A total of 11 samples were analysed for petroleum hydrocarbons. Concentrations of hydrocarbon fractions in all samples of London Clay were recorded below both residential and commercial thresholds.

Asbestos

A total of 6 samples taken from the underlying London Clay were screened for asbestos. Asbestos was not detected within any of these samples.

pH

Measurements of soil pH in the London Clay are typically alkaline with an average pH of 8.3 and a maximum recorded pH of 9.1.

Polychlorinated bipheynls (PCBs)

A total of 2 samples were analysed for PCBs. All determinands from both samples were below laboratory limits of detection.

7.3 Acute Risk to Human Health

All the relevant determinands were below the SoBRA Acute Generic Assessment Criteria (AGAC) [15] for both adult receptors and the more sensitive child receptor. Where there are no guidance values for assessing acute risk related to soil contamination, a comparison of the maximum concentrations of the determinands discussed above has been made with the various GACs derived for chronic risks. In the majority of the Made Ground and London Clay tested, no samples contained highly elevated maximum values of any determinands with most samples recording concentrations of determinands below residential thresholds.

7.4 Phytotoxicity Risk

7.4.1 Topsoil and Made Ground

The soils data have also been compared with phytotoxicity screening values for heavy metals (copper, nickel, and zinc), summarised in Table 7-9. The average pH in these samples was 8.5, so the phytotoxicity criteria for pH >7 was used. From the 31 samples analysed, 1 sample (BH04 at 0.30m) recorded a concentration of copper slightly above the threshold value and 1 sample (WS02 at 0.30m) recorded a concentration of zinc slightly above the threshold value.

Table 7-9 Concentrations of copper, nickel and zinc (mg/kg)

Determinand	No. of Samples	Screening threshold criteria, pH >7 (No. of samples exceeding)	Max.	Min.
Copper	31	200 (1)	240	6.6
Nickel	31	110 (0)	90	12
Zinc	31	300 (1)	380	23

7.4.2 London Clay

The soils data have also been compared with phytotoxicity screening values for heavy metals (copper, nickel, and zinc), summarised in Table 7-10. The average pH in these samples was 8.3, so the phytotoxicity criteria for pH >7 was used. All 11 samples recorded concentrations of copper, nickel, and zinc below their respective thresholds.

7.5 Risks to Below Ground Structures

7.5.1 Concrete Class

The concrete classification against aggressive ground will combine Made Ground, Weathered London Clay and London Clay samples. A total of 5 soil and 4 water samples were scheduled for BRE SD1 [20] suite, however, none of the tests were completed with the appropriate suite. As such not all the results were deemed suitable for concrete classification. Chemical results used for concrete classification are from soil only (pH, water soluble sulphate, total sulphur).

The design sulphate class (DS), aggressive chemical environment class (ACEC) and design chemical class (DC) for any substructure buried within Made Ground or London Clay are summarised in Table 7-11 below. The results are based on: Brownfield Site, mobile groundwater mobility and a structural design life of 50 years.

Table 7-11 Concrete classification

Class type	Class No.
DS	DS-3
ACEC	AC-3
DC	DC-3

Further to the above it is recommended that additional chemical analysis is undertaken in accordance with BRE SD1 [20] prior to construction to confirm appropriate concrete class in both Made Ground and natural soils.

7.5.2 UKWIR assessment

The Desk Study identified potential risks to buried services (potable water supply pipework) associated with the proposed development and the potential for contamination to permeate any plastic water supply pipework laid directly in contaminated ground.

The data for the shallow Made Ground has been discussed in some detail in Section 7.2 with respect to human health assessment criteria. Some of the determinands assessed in that chapter (particular organic compounds) have the potential to impact not only on human health but also to affect below-ground water supply. This is because there is potential for particular organic contaminants to permeate plastic pipes and taint water supply if those pipes are laid in contact with contaminated soils.

Table 7-12 Summary of data applicable for water supply pipework analysis

Test Group	Determinand used	No. of samples	Threshold concentrations for Polyethylene (PE) pipework, mg/kg [No. of exceedances]	Mean mg/kg	Maximum mg/kg
Total VOCs	Naphthalene	42	0.5 [4]	0.33	4.6
EC5-EC10 aliphatic and aromatic hydrocarbons	Aliphatic and Aromatic >C5-C10	42	2 [1]	~2.7	~74
EC10-EC16 aliphatic and aromatic hydrocarbons	Aliphatic and Aromatic >C10-C16	42	10 [5]	~35.5	~624
EC16-EC40 aliphatic and aromatic hydrocarbons	Aliphatic and Aromatic >C16-C35	42	500 [6]	~546	~9115
Corrosive (conductivity redox and pH)	pH only	42	N/A	8.43	10.1

***PAHs, ethers, nitrobenzene, ketones, aldehydes, phenols, cresols and chlorinated phenols (phenols, cresols and chlorinated phenols are given their own assessment criteria)*

Four samples (~10% of dataset) exceeded the threshold for naphthalene, but in all other samples the concentrations were either below the screening value or below the laboratory limits of detection. Exceedances were also recorded in the sum of aliphatic and aromatic TPH >C5 to C10 bands, TPH >C10 to C16 bands and TPH >C16 to 35 bands respectively. One sample (~2% of dataset) exceeded the >C5 to C10 band, five samples (~12% of dataset) exceeded the >C10 to C16 band and six samples (~14% of dataset) exceeded the >C16 to C35 band. All other samples recorded concentrations either below their respective threshold value or below the laboratory limits of detection.

Based on the known history of the Site, the encountered ground conditions and chemical data obtained during the ground investigation, it is unlikely that PE water supply pipework will be suitable in the redevelopment of the Site. As

such alternative options would have to be considered (e.g., barrier pipework) to protect the plastic pipes from permeation. Confirmation of appropriate supply pipe specification should be agreed in advance with the local water provider (Thames Water).

8 Analytical Results for Ground Gas and Characterisation

8.1 General

Up to six rounds of ground gas monitoring were undertaken at the site between 12th January 2022 and 16th February 2022 following the completion of the intrusive site investigation. An additional three visits were undertaken between 24th February 2022 and 11th March 2022 to monitor BH02 which was omitted from the first three original visits by mistake. Monitoring data was collected from six monitoring wells. The ground gas monitoring results are presented within the Contractors Factual Report [2].

8.2 Monitoring regime

The ground gas monitoring was carried out and recorded by Concept Consultants in general accordance with guidance and protocols presented in CIRIA good guidance [13] and relevant British Standard (BS8485) [22]. During each round of monitoring gas concentrations and groundwater level for each relevant borehole were recorded. An infrared gas meter was used to measure concentrations of carbon dioxide (CO₂), methane (CH₄) and oxygen (O₂) in percentage volume while carbon monoxide (CO) and hydrogen sulphide (H₂S) were recorded in parts per million (ppm). An integral flow meter was used to measure gas flow rates in litres per hour. In addition, the atmospheric pressure before and during the monitoring were recorded.

The data has been summarised below in **Error! Reference source not found.**. The highest recorded concentrations and highest recorded flow rate have been used. A full set of the ground gas results are presented in Appendix C of the Contractors Factual Report [2]

The Gas Screening Value (GSV) is defined as the product of gas concentration multiplied by flow rate. The GSV was then considered (with other parameters) to define a Characteristic Situation (CS) which broadly identifies the level of hazard associated with the ground gas regime.

Table 8-1 Summary of ground gas monitoring data

Sample ID	No. readings	Response zone mbgl	Depth to water mbgl	Response zone flooded?	Strata	Max flow rate l/hr	Peak methane %	Peak carbon dioxide %	Min oxygen %	Peak carbon monoxide ppm	Peak hydrogen sulphide ppm
BH02	6	0.50-1.50	0.03-DRY (1.50)	Mostly flooded to Dry	Made Ground + London Clay Formation	99.7	0	2.7	15.9	0	0
BH03	5	0.50-2.00	1.81-DRY (2.00)	Partially flooded to Dry	Made Ground + London Clay Formation	0.4	0	3.0	11.5	0	0
WS03	6	1.00-1.60	1.05-1.54	Partially flooded	London Clay Formation	119.7*	0	3.3	13.1	0	0
WS06	6	1.00-1.50	DRY (1.50)	Dry	Made Ground + London Clay Formation	1.7	0	1.1	18.2	0	0

Sample ID	No. readings	Response zone mbgl	Depth to water mbgl	Response zone flooded?	Strata	Max flow rate l/hr	Peak methane %	Peak carbon dioxide %	Min oxygen %	Peak carbon monoxide ppm	Peak hydrogen sulphide ppm
WS07	6	1.00-1.50	DRY (1.50)	Dry	Made Ground + London Clay Formation	0	0	0.8	19.1	0	0
WS08	6	1.00-1.50	DRY (1.50)	Dry	Made Ground + London Clay Formation	1.0	0	0.3	19.5	0	0
Worst case example	-	-	-	-	-	119.7*	0	3.3	11.5	0	0

*The high flow rate was recorded in one location on two of six visits. This is associated with initial flow, reduces to below limits of detection after 30 seconds (steady state). The other four visits did not record initial or steady flow rates above 1l/hr.

8.3 Description of Monitoring Data

8.3.1 Response Zone

Most exploratory hole locations on most monitoring visits were noted to be dry, with unsaturated response zones, affording sufficient ingress of gas from the target strata (Made Ground). Where groundwater was present, response zones were only partially flooded (e.g., BH03 and WS03) and not completely saturated. BH02 recorded very shallow groundwater on two separate visits (0.03m bgl and 0.07m bgl respectively) as such the response zone during these visits were almost completely saturated.

Shallow 'perched' groundwater was present within 2 of the 6 installations (BH02 and WS03) during all the monitoring visits. Perched groundwater was recorded in BH03 when it was first monitored however was recorded as dry on all subsequent visits. As such perched groundwater is likely to be variable across the site both in depth and location. This is likely due to variations in the make-up of Made Ground (granular or fine), with perched groundwater present in areas underlain by either low permeability London Clay or over pockets / bands of low permeability Made Ground.

8.3.2 Atmospheric Conditions

Monitoring was carried out on nine different occasions post ground investigation. Atmospheric pressures were recorded by field instrument and weather data obtained by the meteorological office. The maximum atmospheric pressure recorded on the days of monitoring across all six boreholes was 1033mb and the minimum was 986mb. The results indicate, six occasions of steady atmospheric pressure and three occasions of falling atmospheric pressure. The atmospheric pressures and ranges in pressure are summarised below:

- 12th January 2022: 1032/1033mb (steady)
- 20th January 2022: 1029-1027mb (falling)
- 27th January 2022: 1018mb (steady)
- 2nd February 2022: 1015/1016mb (steady)
- 10th February 2022: 1016-1014mb (falling)
- 16th February 2022: 989-986mb (falling)
- 24th February 2022: 1000mb (steady)

- 4th March 2022: 1012mb (steady)
- 11th March 2022: 994mb (steady)

8.3.3 Data Description

It should be noted that for the purpose of this assessment the maximum gas flow rate has not been used in calculating the worst-case scenario for the Site. As our understanding of the Site has developed it is deemed more appropriate to use other data which are considered more representative of onsite conditions.

CIRIA C665 [13] state that in order to calculate the worst-case conditions for the site, the assessor should be convinced that the ground gas regime, in particular the flow rates have been appropriately characterised. In the case of this assessment, have the flow rates been characterised over a suitable length of time? The data shows that these exceptionally high flow rates are recorded during the first 30 seconds and then fall to negligible rates after this period. These negligible rates are consistent with all other exploratory hole locations and as such these data are considered more appropriate and reliable when calculating the worst-case scenario for the Site.

Given the above a maximum gas flow rate of 1.2l/hr has been used for this assessment. All borehole hazardous gas flow rates for the individual locations are representative of Characteristic Situation 1 (CS1), as is the worst-case hazardous gas flow rate. Individual concentrations of both CH₄ and CO₂ were below any thresholds where CS1 should not be considered. A full summary of ground gas monitoring data is present in Table 8-1 above.

8.4 Assessment of Ground Gas Regime

The monitoring data described above has been assessed in accordance with CIRIA 665 [13] and BS8485 [22]. In accordance with this guidance the reliability of this data and thus characterisation of the ground gas regime is influenced by the following;

- The Made Ground is of limited and variable thickness for the majority of the site (up to 3.20m) with limited organic material and detritus that may have contributed to the generation of methane gas;
- All concentrations of methane, hydrogen sulphide and carbon monoxide were below the equipment limits of detection;
- Concentrations of oxygen were depleted / variable at most locations, with the worst case ranging between % v/v and 19.5% v/v;
- Flow rates were typically low, although two initial readings in one location were recorded significantly elevated, all other readings, including all steady state readings, were low. These elevated readings are not considered representative of the gas regime.
- Alluvial deposits were not identified beneath the site;
- The underlying London Clay Formation is not deemed to be a source of hazardous gases and vapours;
- Groundwater is variable and has a limited presence at shallow depth with typically most of the wells comprising unsaturated response zones – thus much of the data is considered reliable;
- The data was considered reliable and representative of a realistic worst-case scenario based on the following:
 - The monitoring programme obtained adequate data over a sufficient period of time and under varying atmosphere pressures (see section 8.3.2).

- The majority of data was obtained from installations that were dry or partially flooded.
 - Installations were constructed with response zones to screen the appropriate strata (Made Ground / boundary London Clay).
- The monitoring has been carried out during periods of low, steady, and falling atmospheric pressure conditions;
- The borehole hazardous gas flow rate values were representative of CS1 as was the absolute worst case characteristic situation (maximum concentrations and maximum flow rate).

Consideration of all of the above indicates that it is appropriate to consider the ground gas regime to fall within Characteristic Situation 1 and no development specific gas protection measures are needed. This assessment considers the available data, particularly maximum concentrations, but also reflects its reliability and the uncertainty associated with the dataset.

9 Waste Management

9.1 General

It is anticipated that the development will include earthworks over various parts of the Site prior and during construction. This will involve the excavation and disposal of spoil materials including Made Ground. Deeper excavations or piling would likely generate arising from the underlying natural material (London Clay). At this current stage a preliminary waste classification report has been completed for the event that spoil arisings will require removal from site as waste. The assessment rationale is presented in Appendix D.

The data from the site investigation has been assessed based on the Hazard Properties of the contaminants using the online tool HazWasteOnline™. The software follows the latest Environment Agency guidance and European regulations. HazWasteOnline™ provides an audible tool for the classification of potentially hazardous waste materials such as contaminated soils.

The most applicable Waste Codes for the material on site (Made Ground or natural soils) are 17 05 03* (Hazardous) and 17 05 04 (Non-Hazardous). In order to classify uncontaminated natural soils (i.e., London Clay) as inert, further assessment is required.

9.2 Chemical composition of waste

As discussed in Section 7, chemical analysis was undertaken on a total of 42 soils samples. 11 of these were of London Clay and 31 of Made Ground / topsoil. Preliminary waste classification has been carried out, which indicates that 37 of these samples would be classified as 17 05 04 (Non-Hazardous Waste), whilst 5 samples would be classified as 17 05 03* (Hazardous Waste). The assessment information is provided in Appendix E.

Currently, no single stage WAC analysis has been undertaken on any of the soil samples analysed. As such natural materials (i.e., London Clay) cannot be classified as inert waste at this time and will require further analysis. In addition, if any waste soils are to be disposed of to landfill, the material must also meet the relevant Waste Acceptance Criteria (WAC) for that facility. Accordingly, single stage WAC analysis on waste soil materials will be required prior to offsite disposal to landfill.

9.3 Concluding comments

Notwithstanding the comments and assessment above, it will be the enabling works contractor's responsibility, in association with the operator and / or owner of the landfill to classify the materials appropriately and ensure disposal in accordance with the relevant regulations.

10 Geoenvironmental Risk Assessment

10.1 General approach

In the UK, the assessment of risk from contamination follows the source-pathway-target approach. If one of these three elements is absent it is considered that there is no risk of harm. If, however, there is considered to be a linkage between any given source and any given target / receptor then a risk-based approach is used to assess the significance or impact of any such linkage.

Source	The contaminants that have the potential to negatively affect human health and/or the health of the environment (i.e. the hazard).
Pathway	The potential route by which a receptor may come into contact with the source.
Receptor	The specific group of human beings or aspect of the environment (e.g. controlled waters) that could be affected by the source.

Risks are defined as the probability of an event occurring combined with the severity of the consequence of that event occurring. Particularly, to assess the risk to site end users posed by any given source, the sensitivity of each receptor is considered. For example, the concentration of contamination acceptable at a site to be developed as a residential property, with a garden used to grow vegetables and accessible to young children, is set lower than that for a commercial site where soil is exposed in minor areas of landscaping and the only long-term users of the site are adults. Similarly, a site overlying a major aquifer supplying potable water to a large population will be considered more stringently than a site overlying an impermeable geology with only minor seepages of groundwater.

10.2 Climate Change

It is accepted that the climate is changing and that this will affect future weather patterns. Recent regulations [24] requires factoring climate change into risk assessments and remedial solutions. The British Standard, 'Adaptation to Climate Change – Principles, Requirements and Guidelines' [25] states that 'climate change impacts shall be assessed comprehensively...including...contamination' and should focus 'upon understanding the implications of future climate change trends and climate events over the full lifespan of a decision'.

The changes to weather patterns in the UK may include: an increase in warmer weather; an increase in the frequency and intensity of rainfall events; and an increase in the duration or frequency of dry spells in the summer. Such events are also likely to become more extreme. There is the potential for these scenarios to impact upon potential contaminant migration pathways in particular with respect to both hazardous ground gas and contaminated groundwater via permeable strata, during both construction and operation of the proposed development. As ground conditions at the proposed development may be vulnerable to extreme weather events due to climate change during the demolition, construction and operation phases, these potential impacts have been considered in the risk assessment.

10.3 Conceptual Site Model (CSM)

The potential risks posed to the groundwater, human health and the environment by ground contamination at this site have been evaluated by a generic quantitative risk assessment which incorporates the 'source-pathway-receptor' identification and assessment methodology in accordance with the Model Procedures The risk assessment process

therefore involves the identification of each source based on the site setting information and ground investigation results and the identification of the relevant exposure pathway and each potential receptor. The potential risks to the receptors are then assessed by considering the potential effect of the source on the receptor as well as the likelihood of a pathway linking the two, i.e. a contaminant linkage as discussed above.

It should be noted at this current stage both the design of the proposed development and its end use are still under consideration (see Section 2.4 for details). However, for the purpose of this assessment, the current CSM is based on the proposed commercial use of the site. As such, any changes to the use should be documented and the CSM updated accordingly.

10.4 Contamination sources

Potential contamination sources from former uses of the Site have been identified following a review of Site setting and desk study information and from information gained during the ground investigation. The potential sources of contamination and associated contaminants of concern are listed in Table 10-1.

Table 10-1 Principal potential sources of contamination at the Site

Potential Source	Location	Likely Age	Potential contaminants of concern
Made Ground (Construction/ demolition debris from previous development)	On Site	<100 years to <10 years.	Maximum concentrations of lead and arsenic elevated above residential thresholds. Maximum concentrations of some PAH constituents (Naphthalene, Phenanthrene, Benzo[a]anthracene, Chrysene and Indeno[123-cd]pyrene) above residential thresholds and other constituents (Benzo[b]fluoranthene, Benzo[a]pyrene and Dibenzo[ah]anthracene) above commercial / industrial thresholds Maximum concentrations of some hydrocarbon fractions (aromatic TPH bands C12 to C16, C16 to C21 and C21 to 35) over residential thresholds <i>No Asbestos identified.</i>

10.5 Pollutant linkages

Off-site historic land uses are not considered potential sources of contamination due to the confined nature of the Site. In addition, the intrusive ground investigation revealed that the Site had not been impacted from these sources either. Therefore, such uses have been excluded from the risk assessment undertaken. The ground gas regime has been classified as Characteristic Situation 1 (CS1) therefore has been excluded from the risk assessment.

Site specific pathway receptor linkages have been identified for the site in Table 10-2 below with respect to the sources outlined above and the anticipated future use of the site as a commercial development.

Table 10-2: Receptors and pathways

Receptor		Pathway
Human Health	Future site users, staff and visitors	Direct contact and dermal uptake, soil and dust ingestion.
	Construction / future maintenance workers	
	Off-site occupiers / visitors of neighbouring land	Inhalation of contaminated dusts.
Controlled Waters	Underlying Principal Aquifer (Chalk)	Migration via preferential pathways (i.e., deep piling)
Natural Environment	Flora and fauna.	Direct contact
Buildings/ Services	Below ground concrete and water supply pipework	Direct contact / permeation of plastic pipe work (if constructed) by contaminants in soil.

Based on the results of the intrusive ground investigation and the preliminary conceptual site model, the geoenvironmental risk assessment is presented in Table 10-3.

Table 10-3 Results of Geoenvironmental Risk Assessment

Source		Hazard to Receptor [bold text] / Pathway [normal text]	Risk Assessment (following CIRIA C552)			Description of source [bold text]. Comment on hazard realisation [normal text]
Origin	Contaminants of concern		Consequence	Probability	Risk	
On site: Made Ground: (Construction/ demolition debris from previous development)	Metals including lead and arsenic Some PAH constituents (Naphthalene, Phenanthrene, Benzo[a]anthracene, Chrysene and Indeno[123-cd]pyrene, Benzo[b]fluoranthene, Benzo[a]pyrene and Dibenzo[ah]anthracene) Some hydrocarbon fractions (aromatic TPH bands C12 to C16, C16 to C21 and C21 to 35)	Description of the Source: From 1864, the Site was occupied by ‘The Fishmongers Asylum’ a single building, divided into terraced homes. By 1896, a Fire Station had been developed to the south with an Allotment Gardens appearing to the west by 1935. The existing Civic Centre building was constructed between 1956 and 1958, with an electricity substation assumed to have been constructed at the same time. Since then, the Site has remained generally unchanged. The ground investigation recorded Made Ground up to 3.20m bgl. No visual or olfactory evidence of gross contamination was identified. Upon chemical analysis concentrations of some metals including lead and arsenic were elevated above their respective residential thresholds. Concentrations of some PAH constituents (Naphthalene, Phenanthrene, Benzo[a]anthracene, Chrysene and Indeno[123-cd]pyrene) were recorded above residential thresholds and other constituents including Benzo[b]fluoranthene, Benzo[a]pyrene and Dibenzo[ah]anthracene were recorded above commercial / industrial thresholds. Elevated concentrations of some hydrocarbon fractions including aromatic TPH bands C12 to C16, C16 to C21 and C21 to 35 were also recorded above their respective residential threshold values. No concentrations identified to pose acute risks.				
		Future site users, staff and visitors Direct contact and dermal uptake, soil and dust ingestion	Medium	Unlikely	Low	Preferred development proposals include rejuvenation of Civic Centre and construction of an office building on the existing car parking area. Landscaping is limited and comprises predominately hardstanding and the rejuvenation of existing soft landscaped areas that surround the Civic Centre. <i>Mitigation of potential risks can be achieved by use of suitable imported soil materials (thickness and quality) for areas of soft landscaping.</i>
		Construction workers / future maintenance workers Direct contact and dermal uptake, soil and dust ingestion	Medium	Unlikely	Low	Proposed redevelopment will require some earthworks (extensive earthworks if basement included within the final development plans) to facilitate the substructure construction (e.g., service run and piles). Potential for exposure during earthworks / construction. Potential for unexpected contamination to be encountered however not likely to be widespread or gross. Period of exposure relatively limited. Standard health and safety precautions to be used. <i>Mitigation of potential risks can be achieved by implementation of site controls to prevent dust generation, adoption of good construction practice and appropriate health and safety controls. A watching brief for unexpected contamination should be maintained by the contractor during the earthworks.</i>
		Off-site occupiers / visitors of neighbouring land Inhalation of contaminated dusts	Mild	Unlikely	Very Low	Site neighbours include a school, residential properties, and public parks (all adjacent). Potential for exposure to contaminated dusts during the earthworks / construction however likely limited to areas around the Site’s perimeter. Limited period of exposure. <i>Mitigation of potential risks can be achieved by implementation of site controls to prevent dust generation, adoption of good construction practice and appropriate health and safety controls. A watching brief for unexpected contamination should be maintained during earthworks.</i>
		Underlying Principal Aquifer (Thanet Sand Formation and Chalk) Migration via preferential pathways (i.e. piling)	Mild	Unlikely	Very Low	London Clay is present beneath the Site to depth of >30m bgl followed by the cohesive Lambeth Group. Based on the anticipated ground model it is likely that cohesive material extends to ~39m bgl. These unproductive formations provide a suitable thickness (~39m combined) to protect the underlying Thanet Sand Formation and Chalk (Principal) Aquifer(s). Potential contamination of the aquifers is only plausible if new preferential pathways are created i.e., migration of near surface contamination via deep piles (>39mbgl / on interface with the Thanet Sand / Chalk). <i>Capable of mitigation with good construction practice (e.g., control of hazardous substances) and the conduct of a foundation works risk assessment.</i>
		Flora and fauna Direct contact	Minor	Unlikely	Very Low	Elevated concentrations of phytotoxic metals including copper and zinc were recorded in one sample analysed (~2% of dataset). Concentrations were recorded slightly above their respective threshold values.

						<i>A suitable thickness of imported material will likely be required for horticultural purposes. It is anticipated that this material will be suitable for landscaping, mitigating any potential risk associated with previously identified contamination.</i>
		Below ground concrete Direct contact	Mild	Low likelihood	Low	Potential for direct contact with contamination in shallow soils. <i>Capable of mitigation by using the relevant design criteria for below ground concrete. Correct design criteria subject to confirmatory chemical testing in accordance with BRE SD1 [20]. Both Made Ground and natural soils will require chemical analysis to determine their respective concrete class.</i>
		Below ground water supply pipework Direct contact	Mild	Low likelihood	Low	Potential for direct contact with contamination in shallow soils, above UK Water threshold. <i>Capable of mitigation by using barrier pipework and / or clean service trenches / corridors. Pipework specification should be agreed with the water provider (Thames Water) in advance.</i>

11 Conclusions and recommendations

11.1 Risk assessment summary

A ground investigation to assess residual contamination-related risks associated with the Haringey Civic Centre Site has been completed. The locations of the exploratory holes were positioned to provide general coverage of the site and to target potential sources of contamination identified by the desk study and is considered to provide a reasonable level of certainty with respect to ground conditions. The results from the investigation have been assessed in a Generic Quantitative Risk Assessment (GQRA). The risks to sensitive receptors have been assessed as suitably low such that they can be mitigated by standard good construction or health and safety practise.

Further detail with respect to each of the receptors and suggested mitigation / remediation measures to be implemented during construction are provided below in Section 11.2. This includes recommendations to ensure compliance to regulatory and good practise requirements.

11.2 Recommendations

The generally low / very low level of risk to sensitive receptors summarised in Section 11.1 has assumed some degree of mitigation. Accordingly, the following should be implemented in order to help further reduce the level risk.

- Use of standard health and safety precautions and good construction practice;
- Raising awareness within the workforce by delivery of toolbox talks, with specific precautions reflected in the contractor's risk assessments and method statements.
- Use of appropriate PPE / RPE;
- Implementation of dust management during earthworks and construction in accordance with relevant good practice guidance (e.g., BRE [26], HSE [27] and Mayor of London [28]), including, control of earthworks and vehicle movements and the implementation of dust suppression by damping down / spraying where required;
- Maintain a watching brief in case of encountering unexpected contamination with appropriate provision in place for such an occurrence;
- Conduct of a foundation works risk assessment;
- Use of appropriately designed below ground concrete (correct design criteria to be confirmed) and potable water supply pipework materials; and
- Use of suitable topsoil and subsoil materials (thickness and chemical quality) in areas of soft landscaping.

Additional Recommendations

- Conduct of WAC analysis on soil samples (Made Ground and natural soil) to inform on disposal pathway to landfill; and
- If the re-use of site won soils is proposed, a Materials Management Plan (MMP) should be prepared to demonstrate compliance with the regulatory regime for waste soils. An MMP will require sign-off by a Qualified Person (QP) and included within the Verification Report.

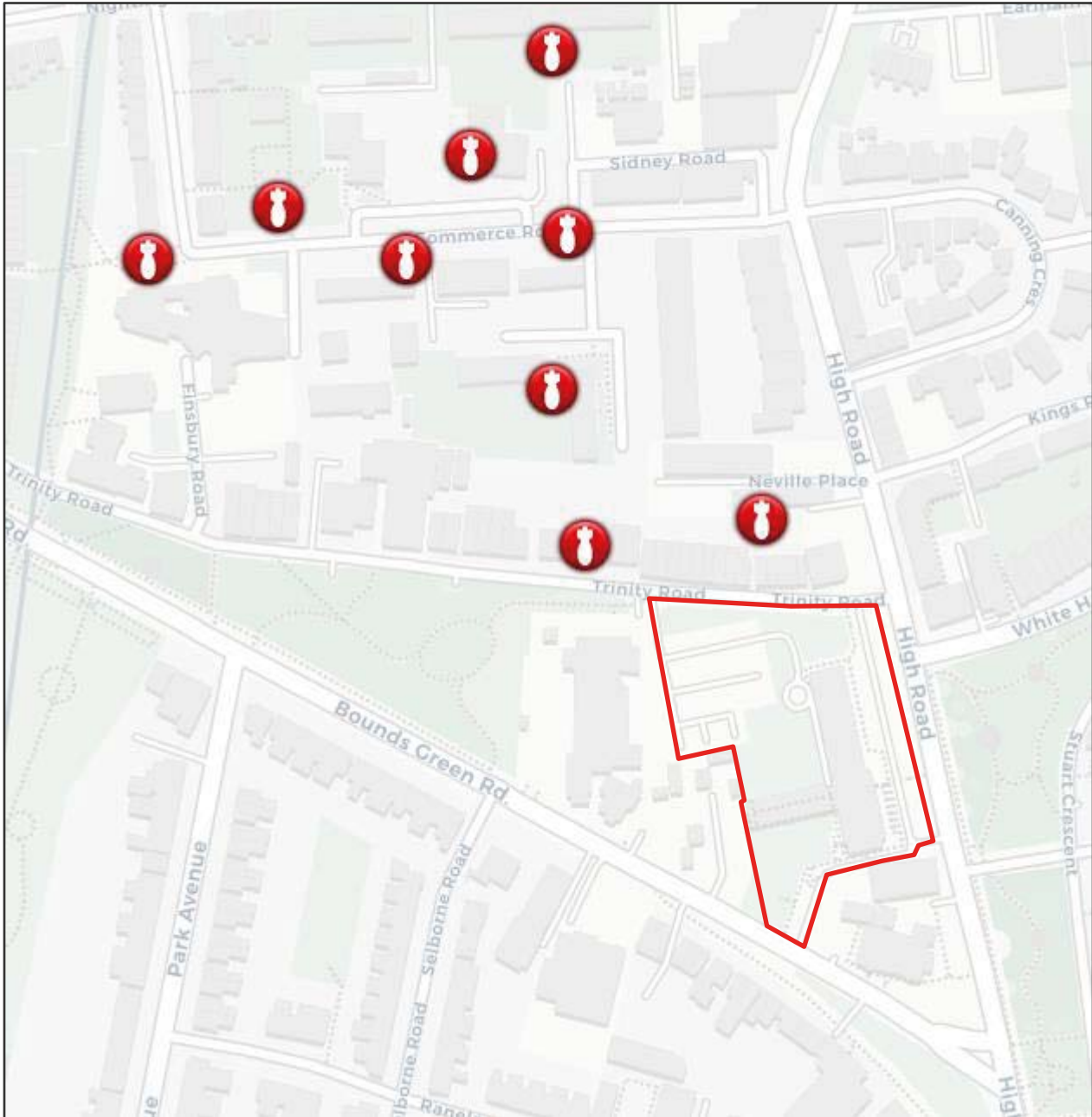
The mitigation measures outlined above should be formalised in a Remediation Strategy once the development is finalised which should be suitable for submission to the local planning authority with respect to the relevant planning conditions.

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Relevant Drawings



Records of bombardment record during WW2 locally to the Site (Bombsight.org)

Appendix A – Factual report

FACTUAL REPORT

Haringey Civic Centre

PREPARED FOR: Haringey Council

ISSUE 01

Concept: 21/3628- FR01

06/04/2022

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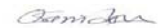
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DOCUMENT ISSUE REGISTER			
Project Name:	Haringey Civic Centre		
Project Number:	21/3628		
Document Reference:	21/3628- FR01	Current Issue	Issue 01
Document Type:	Site Investigation Report		

Development	Name	Signature	Date
Prepared by:	N Carsandas		06/04/2022
Checked by:	O Savvidou		06/04/2022
Approved by:	D Freeland		06/04/2022

Issued to:	Buro Happold
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Date	Issue	Amendment Details/ Reason for issue	Issued to
30/03/2022	Issue 00	DRAFT	Buro Happold
06/04/2022	Issue 01	FINAL: Updated with comments	Buro Happold

Notes:

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1. PROJECT PARTICULARS

Site Location:	Haringey Civic Centre 255 High Road, London N22 8LE
Client:	Haringey Council
Investigation Supervisor:	Buro Happold
Fieldwork:	16/11/2021 – 01/12/2021
Laboratory Work:	29/11/2021 29/03/2022

2. PURPOSE AND SCOPE OF WORKS

The purpose of the investigation was to determine:

- The groundwater regime behind the basement of the Council Chamber and Office Block forming part of the investigation and assessment of the leaking basement and to determine groundwater pressures on the underside of the basement slab;
- The underlying strata beneath the ground bearing basement slab of the Council Chamber and Office Block to assess the suitability of adding additional load to the ground. The slab was a 760mm thick RC ground bearing raft;
- Structural inspection cores through both the concrete walls and floor / slab within the basement;
- The size and depth of the reinforced concrete strip footings of the West Wing;
- The founding strata and geotechnical properties of the reinforced concrete strip footings of the West Wing;
- The underlying strata beneath the West Wing to assess the suitability of adding additional load to the ground;
- The impact of Clay desiccation due to trees and potential for swelling in areas where mature / semi-mature trees were present;
- Local variations in ground conditions in area of existing Civic Centre building and Car Park Site (where new build development was proposed);
- The ground gas regime in the area of proposed new build development (the Car Park Site) and within the West Wing undercroft, which may become an enclosed space;
- Chemistry of shallow soils / Made Ground in areas of new development and for landscaping purposes;
- The chemistry of groundwater to aid in the assessment of potential for aggressive ground conditions.

The site was currently occupied by the Civic Centre building (15%), hard landscaped area/carparking (40%), soft landscaped areas (40%) and a structure housing an electricity substation (<5%).

The proposed development was formed to two main parts which at the time of this report were under consideration:

- Refurbishment and restoration of the existing Civic Centre building; and
- Development of the Car Park Site with either an extension / annexe to the Civic Centre, residential blocks, or a mixture of office and residential use.

The scope of the works comprised the following:

- 6 No. Cable Percussion Boreholes to a maximum depth of 30.00m;
- 10 No. Dynamic Sampler Boreholes to a maximum depth of 6.00m;
- 7 No. Trial Pits to a maximum depth of 1.45m;
- 3 No. Vertical Diamond Core Coreholes with follow on Hand Auger to a maximum length of 3.50m;
- 6 No. Horizontal Diamond Core Coreholes to a maximum length of 0.65m;
- Logging and Photographing;
- Instrumentation Monitoring and Sampling;
- Geotechnical, Chemical Testing and Concrete Core Testing.

Table 1 – Exploratory Hole List

Hole ID	Hole Type	Depth / Length (m)	Easting	Northing	Level (mOD)
BH01	CP	30.00	530808.28	190733.01	36.28
BH02	CP	25.50	530800.62	190763.01	35.85
BH03	CP	25.50	530828.58	190770.32	36.15
BH04	CP	25.45	530866.63	190764.15	36.37
BH05	CP	25.50	530870.68	190679.86	37.05
BH06	CP	10.50	530838.11	190716.06	37.17
CC01	DC/HA	3.30	530853.36	190752.12	34.07
CC02	DC/HA	2.90	530860.39	190723.43	34.07
CC03	DC/HA	3.50	530862.74	190718.22	34.07
C001	TP	0.18	530857.29	190740.44	34.07
TP01	TP	0.70	530819.69	190703.26	37.36
TP02	TP	1.10	530829.37	190705.63	37.38
TP03	TP	1.45	530841.92	190701.01	37.39
TP04	TP	1.35	530852.86	190703.70	37.35
TP05-CC01	DC	0.63	530864.01	190740.37	34.65
TP05-CC02	DC	0.63	530864.01	190740.37	35.39
TP05-CC03	DC	0.64	530864.01	190740.37	35.95

Hole ID	Hole Type	Depth / Length (m)	Easting	Northing	Level (mOD)
TP05/WS09	TP/DS	4.00	530869.98	190722.75	37.21
TP06-CC01	DC	0.64	530847.26	190743.77	34.82
TP06-CC02	DC	0.65	530847.26	190743.77	35.59
TP06-CC03	DC	0.64	530847.26	190743.77	36.14
TP06/WS10	TP/DS	4.00	530842.00	190758.61	37.56
WS01	DS	4.00	530783.85	190779.71	35.56
WS02	IP	1.10	530810.71	190782.58	35.88
WS02A	IP	1.10	530808.56	190782.86	35.90
WS02B	DS	6.00	530803.90	190780.58	35.79
WS03	DS	6.00	530820.93	190725.66	36.87
WS04	DS	4.00	530835.43	190682.24	37.25
WS05	DS	4.00	530848.34	190669.50	37.29
WS06	DS	3.00	530826.85	190701.49	37.47
WS07	DS	3.00	530837.39	190704.24	37.46
WS08	DS	3.00	530850.13	190707.47	37.42

Key

CP	– Cable Percussion Borehole
DS	– Dynamic Sampler Borehole
TP	– Trial Pit / Dynamic Sampling
TP/DS	– Trial Pit
DC	– Horizontal Diamond Core
DC/HA	– Diamond Coring/Hand Auger
IP	– Inspection Pit / Aborted Borehole Location

3. DESCRIPTION OF WORKS

The works were carried out in accordance with the Buro Happold “Haringey Civic Centre” Specification for Ground Investigation document with reference 004501-BHE-XX-XX-SP-YG-0001, Issue P02 dated 03/07/2021 and Concept’s Method Statement with reference no: 21/3628, dated 02/11/2021.

The site was located in the London Borough of Haringey, in northeast London. Was bounded by Trinity Road to the north, High Road to the east, St Micheals’s Church, Bounds Green Road, and Trinity Primary Academy to the west. The approximate centre of the site was located at National Grid Reference: E530825, N190734.

The locations of all exploratory holes are shown in the Exploratory Hole Location Plan presented in [Section 7](#) of this report.

4. INVESTIGATION METHODS

4.1 Utilities Survey and Inspection Pits

The detection of underground services followed the guidelines of PAS 128:2014. Prior to boring commencing all exploratory hole locations were checked for utilities / buried

services using a CAT and genny, existing utility information and hand dug inspection pits to an appropriate depth as identified by the services plans typically to a maximum depth of 1.20m.

Where surface concrete and asphalt were encountered, these were broken out by hand held electric breaker or diamond cored.

4.2 Cable Percussion Drilling

6 No. Cable Percussion Boreholes (BH01 - BH06) were drilled to a maximum depth of 30.00m using a standard cable percussion rig (Dando 2000) with 150mm diameter casing as appropriate.

4.2.1 Sampling and Testing during Cable Percussion Drilling

Bulk samples were taken at regular intervals in the Made Ground and thereafter at each change in strata. Undisturbed 102mm (U100) nominal diameter samples were taken using a down-hole sliding hammer in cohesive material at specified intervals or as instructed by the Investigation Supervisor.

Standard Penetration Tests (SPT) were carried out at specified intervals or as otherwise instructed by the Investigation Supervisor. The resulting SPT "N" blowcount values are presented in the relevant borehole records. Where an SPT using a split spoon sampler was not possible, due to the granular nature of the material, a solid cone was used. The SPT hammer calibration sheets are included in [Section 8](#) of this report.

Environmental samples (tubs, jars and vials) were taken for chemical analysis in the Made Ground or at each change of strata and where visual or olfactory evidence of contamination was noted or as instructed by the Investigation Supervisor. Headspace readings for volatile organic compound (VOC) content were taken in all of the samples using a Phocheck Tiger photoionization detector with a 10.6 eV Krypton PID lamp. The PID was tested with a source of vapours at the start of each shift to ensure that it was not blocked.

The borehole logs are presented in [Section 8](#) of this report.

4.3 Dynamic Sampling Boreholes

10 No. Dynamic Sampling Boreholes (WS01 - WS10) were carried out to a maximum depth of 6.00m. The boreholes were drilled using a tracked Geo drive-tube sampling rig. WS02 and WS02A were aborted at 1.10m depth due the presence of clay pipe. WS09 and WS10 were advanced from the base of TP05 and TP06 respectively.

Semi-rigid plastic core liners were recovered from each borehole location. The excavated soil was logged in accordance with BS5930:2015+A1:2020 and photographed.

Environmental samples (tubs, jars and vials) were taken for chemical analysis from the liners at approximately 1.00m intervals for the full depth of the borehole. Headspace readings for volatile organic compound (VOC) content were taken using a Phocheck Tiger photoionization detector. with a 10.6 eV Krypton PID lamp. The PID was tested with a source of vapours at the start of each shift to ensure that it was not blocked. Representative bulk and disturbed samples were taken for soil analysis.

The borehole logs are presented in [Section 9](#) and the core photographs are presented in [Section 16](#) of this report.

4.4 Hand Excavated Trial Pits

7 No. Hand Excavated Trial Pits (CO01 & TP01-TP06) were carried out to a maximum depth of 1.45m to determine the basement backfill material and enable inspection of the West Wing's strip footings. TP05 and TP06 were carried out determine the basement backfill material. The objective of CO01 was to reveal junctions between reinforcement bars.

Environmental samples (tubs, jars and vials) were taken for chemical analysis in the Made Ground or at each change of strata and where visual or olfactory evidence of contamination was noted or as instructed by the Investigation Supervisor. Headspace readings for volatile organic compound (VOC) content were taken in all of the samples using a Phocheck Tiger photoionization detector with a 10.6 eV Krypton PID lamp. The PID was tested with a source of vapours at the start of each shift to ensure that it was not blocked. Bulk and small disturbed samples were also taken for soils analysis.

The pits were logged, sketched and photographed. The logs and sketches are presented in [Section 10](#) of this report and the photographs are presented in [Section 16](#).

4.5 Diamond Coring & Hand Augering

6 No. Ø100mm horizontal structural inspection coreholes (TP05-CC01-CC02-CC03 & TP06-CC01-CC02-CC03) were carried out using a water-cooled diamond coring rig Hilti DD350. The cores were carried out through the concrete walls within the basement of the Civic Centre. The length of the cores varied between 0.63m and 0.65m. The locations were sketched and photographed.

3 No. Vertical coreholes follow on by hand auger were carried out to a maximum depth of 3.50m through the basement slab of the Civic Centre for geotechnical purposes.

Concrete core, bulk and small disturbed samples were taken from all locations for testing.

The core logs and sketches are presented in [Section 11](#) and the photographs are included in [Section 16](#) of this report.

4.6 Standpipe Installations and Backfill

Monitoring wells were installed in the boreholes as follows:

Table 2 – Monitoring Installation Details

Hole ID	Base of Borehole (m bgl)	Diameter of Installation (mm)	Type of Installation	Base of Installation (m bgl)	Response Zone	
					Top (m bgl)	Bottom (m bgl)
BH01	30.00	50	GWMP	30.00	25.00	30.00

Hole ID	Base of Borehole (m bgl)	Diameter of Installation (mm)	Type of Installation	Base of Installation (m bgl)	Response Zone	
					Top (m bgl)	Bottom (m bgl)
BH02	25.50	50	GMP	1.50	0.50	1.50
		50	GWMP	20.00	5.00	20.00
BH03	25.50	50	GMP	2.00	0.50	2.00
BH04	25.45	50	GWMP	11.00	1.00	11.00
BH05	25.50		VWP	20.00		
WS03	6.00	50	GMP	1.60	1.00	1.60
WS06	3.00	50	GMP	1.50	1.00	1.50
WS07	3.00	50	GMP	1.50	1.00	1.50
WS08	3.00	50	GMP	1.50	1.00	1.50

KEY

GMP	– Gas and groundwater Standpipe
GWMP	– Groundwater Standpipe
VWP	– Vibrating Wire Piezometer

The boreholes were backfilled at the base with bentonite pellets with the gas/groundwater response zones backfilled with a 10mm pea shingle filter with a geosock surround. All installations were finished with bentonite pellets to the surface with concrete and a lockable stopcock cover flush with the ground.

The boreholes with no installations were backfilled with bentonite pellets and the trial pits with soil arising. The coreholes were reinstated using a rapid-set structural grout.

On completion of works the ground surface at all fieldwork locations was permanently re-instated to its original condition with concrete or tarmac as appropriate.

All waste was handled in accordance to the waste management plan of the project.

4.7 Instrumentation Monitoring and Sampling

Gas and groundwater monitoring and sampling was carried out by Concept subsequent to completion of the boreholes on 6 No. scheduled visits between the 12/01/2022 and 16/02/2022.

Upon BH02 completion the deep installation was slotted to ground level and the shallow was omitted by error. Therefore 3 No. additional visits were carried out once the installations were corrected between 24/02/2021 and 11/03/2021. These visits included gas and groundwater monitoring in BH02 as well as groundwater monitoring at all other locations.

All boreholes were developed on the 12/01/2022 and 20/01/2022 prior to sampling using a Wasp pump which provides a relatively high pumping rate to remove water and

entrained sediment. Development continued until either the well ran dry, the water ran clear or at least 10 well volumes were removed.

Water samples were taken on the 27/01/2022 and 09/02/2022 from BH01, BH02 and BH04. No samples were collected from the rest of the installations as they were dry. The samples were collected using a peristaltic pump at a low pumping rate. The pump tubing was lowered to target the standpipe response zone and a dipmeter was used during purging to ensure that the pumping rate did not reduce the water level. Generally, the water level remained steady at pumping rates of 1 litre every 3 minutes. Water parameters (pH, conductivity, dissolved oxygen, temperature and Redox levels) were recorded during purging using a flow cell and a YSI Professional Probe. Purging was considered complete when parameters stabilised to within 10%. Generally the water was noted as clear and the purging complete after 3 litres were removed. On completion of purging, the water samples were collected in containers (3x300ml and 3xvial). They were then transferred to Concept laboratory inside cool boxes protected by bubble wrap and kept in the fridge until collection from the chemical laboratory was arranged. Each borehole was purged and sampled using a new length of tubing.

Gas samples were taken on the 09/02/2022 from BH03, WS06 and WS08. The gas canister samples were collected using Exova Silocans. No testing was carried out on these samples as these were misplaced by the subcontracted laboratory.

An In-Situ Rugged interface probe was used to prove/disprove the presence LNAPL and DNAPL. However neither LNAPL nor DNAPL were detected throughout the water column in the boreholes therefore a Geosense dipmeter was used for the subsequent visits. The gas concentrations were recorded using two Gas data GFM436 monitors. Where 0.00 is shown on the results indicates value lower than the detection limit of the machine. PID readings were taken during all monitoring rounds. The accuracy of the instruments is summarised in [Section 12](#) where the gas monitoring reports and groundwater results are presented along with the instruments calibration sheets. The vibrating wires were monitored using a Geosense G200 Vibrating Wire Readout unit and the results are presented in the same section.

4.8 Logging / Laboratory Testing

Logging of all soil samples was carried out in accordance with BS5930:2015+A1:2020.

Geotechnical testing was performed at Concept Site Investigations laboratory in accordance with BS1377:1990 unless otherwise stated in the report. Concept is accredited by UKAS for tests where the UKAS logo is appended to the individual test report or summary. Approved signatories for laboratory testing are as follows:

- LG – Lynn Griffin (Quality Manager)
- KM – Kasia Mazerant (Laboratory Manager)

Where subcontracted analysis has been carried out, the details of the laboratory (and accreditation where applicable) are shown in the individual test report or summary.

The results are presented in tabular format in [Section 13](#) of this report.

Concrete core testing was carried out by Sandberg LLP and the results are presented in [Section 14](#).

All chemical testing was specified and scheduled by Buro Happold and carried out by Eurofins Chemtest Ltd in accordance with the requirements of UKAS ISO17025 and MCERTS. The results are presented in tabular format in [Section 15](#) of this report.

4.9 Setting Out

The locations of all exploratory holes were agreed with the Investigation Supervisor and set out prior to commencement of the site works.

Following completion of the ground works the locations and elevations of the boreholes and pits were established by Concept's specialist subcontractor JPP Surveying Ltd using total survey equipment with accuracy between +/- 2mm and 5mm and GPS equipment with an accuracy between +/- 10mm and 20mm.

The co-ordinates and levels of the as-built locations of the boreholes and pits are shown in the Exploratory Hole Location Plan presented in [Section 7](#) of this report.

5. GEOLOGICAL GROUND PROFILE

The geological strata encountered during the investigation are summarised in the table below. The Top and Bottom of the strata noted in the table indicates the highest and lowest boundaries encountered in all exploratory holes.

Table 3 - Geological Ground Profile

STRATUM	TOP (mOD)	BASE (mOD)	DESCRIPTION
MADE GROUND	37.56	34.01	Topsoil, asphalt and concrete over, Firm, orangish brown gravelly sandy CLAY with occasional silt nodules (<6mm), rare roots and rootlets and bands of organic matter (<60mm). Gravel comprises angular to subrounded fine to coarse flint, brick, clinker and concrete fragments. Sand is fine to coarse. Dark brownish grey silty fine to medium SAND with medium brick and concrete cobble content and occasional pockets of brownish grey clay (<100mm). Gravel comprises angular to subangular fine to coarse flint, brick, concrete and asphalt fragments. Dark grey and pinkish brown sandy GRAVEL with frequent pockets of soft dark grey clay (<100mm). Gravel comprises angular to subangular fine to coarse flint, brick and limestone fragments. Sand is fine to coarse. Reddish brown and grey gravelly slightly sandy COBBLES. Cobbles are angular brick and concrete.

STRATUM	TOP (mOD)	BASE (mOD)	DESCRIPTION
			Gravel comprises angular to subangular fine to coarse flint, brick and concrete fragments. Sand is fine to coarse.
WEATHERED LONDON CLAY	36.84	24.65	'Firm, brown mottled grey and orangish brown slightly gravelly slightly micaceous silty CLAY with frequent off-white silt nodules (<10mm) and occasional decomposed roots and rootlets. Gravel is subangular to rounded fine to coarse flint.
LONDON CLAY	27.28	6.28	Very stiff, brownish grey slightly micaceous silty CLAY with frequent partings of light brown and light grey fine sand, occasional pockets of light grey fine sand (<15mm), rare lenses of white silt (<5mm), white fleck and bioturbation.
HARWICH FORMATION	6.28	Extent not proved	Firm to very stiff, frequently very closely to extremely closely fissured grey to greyish brown slightly micaceous slightly sandy silty CLAY with occasional pockets of light grey to orangish brown fine sand (<45mm), rare pockets of dark grey silt (<40mm), occasional bioturbation and rare foraminifera.

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British Geological Survey (1996) London and the Thames Valley 4th Edition, London HMSO.

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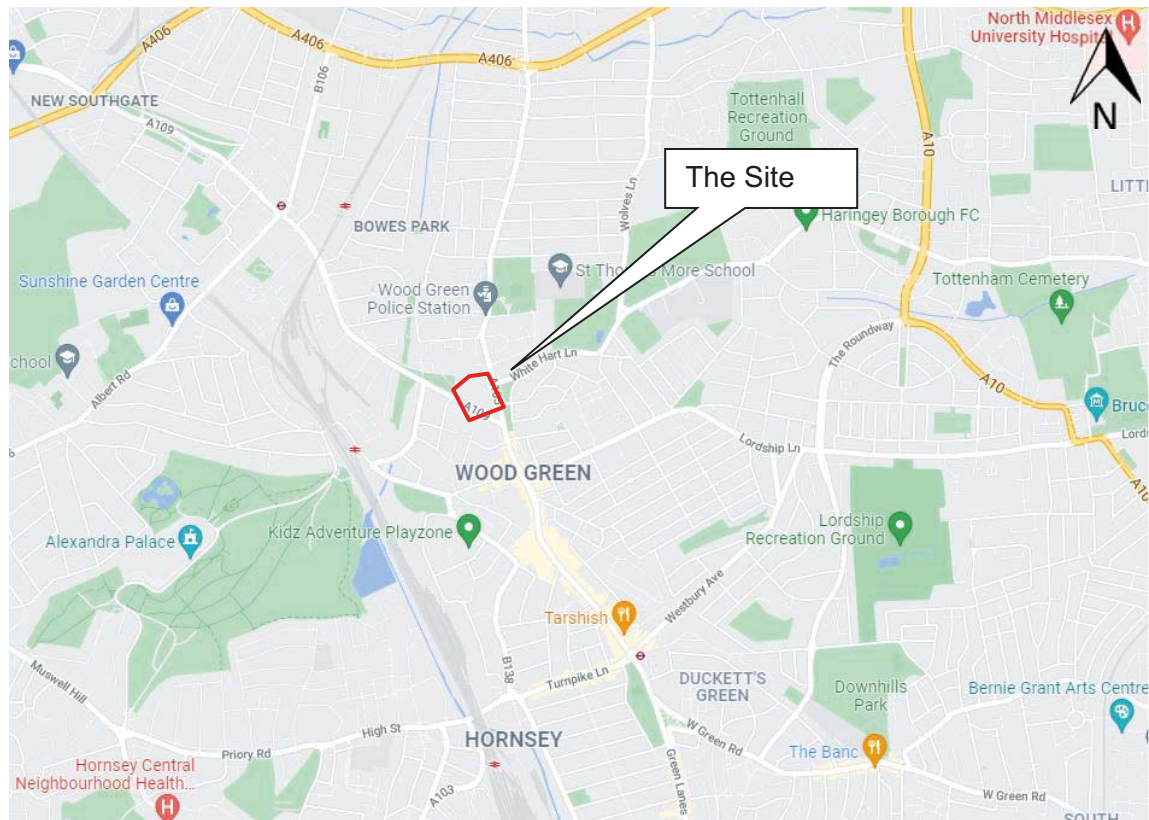
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6. SITE LOCATION PLAN



Not to Scale / Map data ©2022 Google

7. EXPLORATORY HOLE LOCATION PLAN

Hole ID	Easting	Northing	Level (mOD)
BH01	530808.28	190733.01	36.28
BH02	530800.62	190763.01	35.85
BH03	530828.58	190770.32	36.15
BH04	530866.63	190764.15	36.37
BH05	530870.68	190679.86	37.05
BH06	530838.11	190716.06	37.17
CC01	530853.36	190752.12	34.07
CC02	530860.39	190723.43	34.07
CC03	530862.74	190718.22	34.07
TP05-CC01	530864.01	190740.37	34.65
TP05-CC02	530864.01	190740.37	35.39
TP05-CC03	530864.01	190740.37	35.95
TP06-CC01	530847.26	190743.77	34.82
TP06-CC02	530847.26	190743.77	35.59
TP06-CC03	530847.26	190743.77	36.14
CO01	530857.29	190740.44	34.07
TP01	530819.69	190703.26	37.36
TP02	530829.37	190705.63	37.38
TP03	530841.92	190701.01	37.39
TP04	530852.86	190703.70	37.35
WS01	530783.85	190779.71	35.56
WS02	530810.71	190782.58	35.88
WS02A	530808.56	190782.86	35.90
WS02B	530803.90	190780.58	35.79
WS03	530820.93	190725.66	36.87
WS04	530835.43	190682.24	37.25
WS05	530848.34	190669.50	37.29
WS06	530826.85	190701.49	37.47
WS07	530837.39	190704.24	37.46
WS08	530850.13	190707.47	37.42
TP05-WS09	530869.98	190722.75	37.21
TP06-WS10	530842.00	190758.61	37.56



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KEY

BH - Cable Percussion Borehole

CC

- Diamond Coring

TP - Trial Pit

WS - Dynamic Sampling Borehole

NOTES

1. Coordinates and levels quoted refer to Ordnance Survey (OS) National Grid.

2. Base drawing provided by Gledes Building Surveying Ltd, with drawing number LNBS0923_T01.

3. This drawing should not be scaled.

4. All levels are in mOD (metres above Ordnance Datum).

ISSUES			
Revision	Details	By	Date
00	Drawing completed and corrected	AC	01/02/22

Client

Haringey Council

Project

Haringey Civic Centre

Address

High Road, Haringey N22 8LE

Plan title

Exploratory Hole Location Plan

Project no	21/3628	Drawing no	01	Revision	00
Scale	NTS	Sheet size	A3	(297.00x420.00mm)	
Date	February 2022	Status	Issue		

Surveyed by	Drawn by	Checked by	Passed by
JPP	AC	CS	OS

8. CABLE PERCUSSION BOREHOLE LOGS

Project

Haringey Civic Centre

Job No

21/3628

Date Started

23/11/21

Date Completed

23/11/21

Ground Level (mOD)

36.28

Co-Ordinates

E 530808.28 N 190733.01

Final Depth

30.00m

Client

Haringey Council

BOREHOLE SUMMARY

Top (m)	Base (m)	Type	Date Started	Date Ended	Crew	Logged By	Barrel Type	Core Bit	Plant Used/ Method	SPT Hammer Reference
0.00	1.20	IP	23/11/2021	23/11/2021	DE	JKH/ BW			Hand Excavated	
1.20	30.00	CP	23/11/2021	23/11/2021	DE	BW			Dando 2000	AR3698

WATER STRIKES

WATER ADDED

CHISELLING / SLOW DRILLING

Strike at (m)	Rise to (m)	Time to Rise (min)	Casing Depth (m)	Sealed (m)	From (m)	To (m)	From (m)	To (m)	Duration (hr)	Remarks

HOLE

CASING

Depth (m)	Diameter (mm)	Depth (m)	Diameter (mm)
0.00	150	0.00	150
30.00	150	3.00	150

DYNAMIC SAMPLING /ROTARY RECOVERY

From (m)	To (m)	Duration (hr)	Recovery (%)

ROTARY FLUSH DETAIL

From (m)	To (m)	Flush Type	Flush Return (%)	Flush Colour

INSTALLATION DETAILS

Type	Diameter (mm)	Depth of Installation (m)	Top of Response Zone (m)	Bottom of Response Zone (m)	Date of Installation
GWMP	50	30.00	25.00	30.00	23/11/2021

BACKFILL DETAILS

Top (m)	Bottom (m)	Material	Backfill Date	Remarks
0.00	0.20	Concrete	23/11/2021	Flush Cover
0.20	25.00	Bentonite Pellets		
25.00	30.00	Pea Shingle		

Project

Haringey Civic Centre

Job No

21/3628

Date Started

23/11/21

Date Completed

23/11/21

Ground Level (mOD)

36.28

Co-Ordinates

E 530808.28 N 190733.01

Final Depth

30.00m

Client

Haringey Council

PROGRESS

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)	Remarks
23/11/21	0.00		Dry	
23/11/21	1.20		Dry	
23/11/21	30.00	3.00	Dry	

SPT DETAILS

Type	Depth (m)	N Value	Blow Count / 75mm	Casing Depth (m)	Water Depth (m)
S	1.20	N4	1, 0 / 1, 1, 1, 1		Dry
S	3.00	N7	1, 2 / 2, 1, 2, 2		Dry
S	5.00	N13	1, 2 / 2, 3, 4, 4	3.00	Dry
S	7.00	N13	2, 2 / 3, 3, 4, 3	3.00	Dry
S	9.00	N22	4, 3 / 5, 6, 5, 6	3.00	Dry
S	11.50	N24	3, 4 / 5, 6, 6, 7	3.00	Dry
S	14.50	N28	4, 4 / 6, 7, 7, 8	3.00	Dry
S	17.50	N30	4, 5 / 6, 8, 7, 9	3.00	Dry
S	20.50	N31	4, 5 / 7, 7, 8, 9	3.00	Dry
S	23.50	N32	5, 6 / 7, 8, 8, 9	3.00	Dry
S	26.50	N43	7, 8 / 11, 9, 11, 12	3.00	Dry
S	29.50	N45	7, 8 / 10, 11, 13, 11	3.00	Dry

GENERAL REMARKS

KEY

SAMPLES

ES - Environmental Sample (Tub, Vial, Jar) AZCL: Assumed Zone of Core Loss
U - 100mm Diameter Undisturbed Sample
UT - 100mm Diameter Thin Wall Undisturbed Sample
U38 - 38mm Diameter Undisturbed Sample
D - Disturbed Sample, B-Bulk Sample, LB- Large Bulk Sample, BLK-Block Sample
C - Core Sample, W-Water Sample, R-Root Sample

INSTALLATION DETAILS

GMP - Gas monitoring point
GWMP - Groundwater monitoring point
SPIE - Standpipe piezometer
EPIE - Electronic Piezometer
SP - Standpipe
HOLE TYPES
IP - Inspection Pit, TP-Trial Pit TT - Trial Trench
CP - Cable Percussion, RC-Rotary Coring, R/S-Rotary/Sonic
DS - Dynamic Sampling, DS/R-Dynamic Sampling /Rotary
DC - Diamond Coring, CP/R-Cable Percussion Rotary follow on

TESTS S/C-SPT / CPT, V-Shear Vane, PP-Pocket Penetrometer, MP-Mackintosh Probe, VOC-Volatile Organic Compounds

Note: All depths are in metres, all diameters in millimetres, water strike rise time in minutes. For details of abbreviations see Key

Issue: FINAL

CHD: AN

APRV: OS

Log Print Date & Time:

30/03/2022 10:50

Project

Haringey Civic Centre

Job No

21/3628

Date Started

23/11/21

Ground Level (mOD)

36.28

Co-Ordinates

E 530808.28 N 190733.01

Final Depth

30.00m

Client

Haringey Council

Method

Cable Percussion

Sheet

1 of 3

PROGRESS

STRATA

SAMPLES & TESTS

Date	Casing	Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth (m)	Type No	Test Result	Field Records	Instrument/Backfill
23/11/21		Dry	36.13		0.15	Asphalt.	0.15			VOC 1ppm	
			36.03		0.25	(MADE GROUND)	0.15-0.30	ES1			
						Firm, dark grey and pinkish brown gravelly sandy CLAY. Gravel comprises angular to subangular fine to coarse flint and brick fragments. Sand is fine to coarse.	0.15-0.30	B2			
						(MADE GROUND)	0.20	D2A			
						0.25 ...with fabric material	0.50			VOC 0.6ppm	
					(0.95)		0.50-1.00	ES3			
							0.50-1.00	B4			
23/11/21		Dry	35.08		1.20		0.70	D4A			
						Firm, brown mottled greenish grey, dark grey and grey slightly gravelly silty CLAY with rare roots and rootlets. Gravel is angular to subangular fine to medium flint.	1.20	D5	N4	1, 0 / 1, 1, 1, 1	
						(THAMES GROUP: WEATHERED CLAY FORMATION)	1.20-1.65				
						Soft to firm, brown mottled orangish brown and bluish grey CLAY.	2.00-2.45	U6	28 blows	100% Recovery	
						(THAMES GROUP: WEATHERED CLAY FORMATION)	2.00	D7			
						3.00 ... becoming firm with occasional lignite nodules (<20mm)	2.50	D8			
							3.00		N7	1, 2 / 2, 1, 2, 2	
							3.00-3.45	D10			
							3.00	D9			
							4.00-4.45	U11	34 blows	100% Recovery	
							4.00	D12			
						4.50 ... with 1No weak light brown claystone fragment	4.50	D13			
							5.00		N13	1, 2 / 2, 3, 4, 4	
						5.00 ... becoming stiff with occasional pockets of brown silt and rare selenite crystals (<20mm)	5.00	D14			
					(7.80)		5.00-5.45	D15			
							6.00-6.45	U16	45 blows	100% Recovery	
							6.00	D17			
							6.50	D18			
							7.00		N13	2, 2 / 3, 3, 4, 3	
							7.00	D19			
							7.00-7.45	D20			
							8.00-8.45	U21	55 blows	100% Recovery	
							8.00	D22			
							8.50	D23			
			27.28		9.00		9.00		N22	4, 3 / 5, 6, 5, 6	
						Very stiff, greyish brown CLAY with occasional white flecks (<1mm).	9.00	D24			
						(THAMES GROUP: LONDON CLAY FORMATION - B)	9.00-9.45	D25			
					(1.50)		10.00-10.45	U26	60 blows	100% Recovery	
							10.00	D27			
			25.78		10.50		10.50	D28			
						Very stiff, brownish grey slightly micaceous silty CLAY with occasional partings of light brown fine sand and pockets of dark grey silt	11.00	D29			

Issue: FINAL

Logger: JKH/ BW

CHD: AN

APRV: OS

Log Print Date & Time:

30/03/2022 10:50

Project

Haringey Civic Centre

Job No

21/3628

Date Started

23/11/21

Ground Level (mOD)

36.28

Co-Ordinates

E 530808.28 N 190733.01

Final Depth

30.00m

Client

Haringey Council

Method

Cable Percussion

Sheet

2 of 3

PROGRESS

STRATA

SAMPLES & TESTS

Field Records

Instrument/
Backfill

Date	Casing	Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth (m)	Type No	Test Result	Field Records	Instrument/ Backfill
						(<20mm). (THAMES GROUP: LONDON CLAY FORMATION - A3ii)	11.50 11.50-11.95	D30	N24	3, 4 / 5, 6, 6, 7	
							12.00	D31			
							13.00-13.45 13.00	U32 D33	63 blows	100% Recovery	
							13.50	D34			
							14.00	D35			
						14.00 ... with a pocket of light grey silt (<20mm)	14.50 14.50-14.95	D36	N28	4, 4 / 6, 7, 7, 8	
							15.00	D37			
					(9.50)		16.00-16.45 16.00	U38 D39	74 blows	100% Recovery	
							16.50	D40			
							17.00	D41			
							17.50 17.50-17.95	D42	N30	4, 5 / 6, 8, 7, 9	
							18.00	D43			
						19.00 ... with 1No pyrite nodule (<20mm)	19.00-19.45 19.00	U44 D45	78 blows	100% Recovery	
			16.28		20.00		20.00	D46			
						Very stiff, brownish grey slightly micaceous CLAY. (THAMES GROUP: LONDON CLAY FORMATION - A3i)	20.50 20.50-20.95	D47	N31	4, 5 / 7, 7, 8, 9	
					(3.00)		21.00	D48			
							22.00-22.45	U49	95 blows	100% Recovery	

Issue: FINAL

Logger: JKH/ BW

CHD: AN

APRV: OS

Log Print Date & Time:

30/03/2022 10:50

Project

Haringey Civic Centre

Job No

21/3628

Date Started

23/11/21

Ground Level (mOD)

36.28

Co-Ordinates

E 530808.28 N 190733.01

Final Depth

30.00m

Client

Haringey Council

Method

Cable Percussion

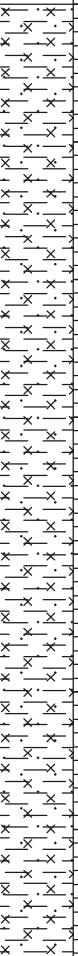
Sheet

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PROGRESS

STRATA

SAMPLES & TESTS

SAMPLING & TESTS												
Date	Casing	Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth (m)	Type No	Test Result	Field Records	Instrument/ Backfill	
23/11/21	3.00	Dry	13.28		23.00	22.00 ... with occasional medium strong light brown claystone fragments (<20mm)	22.00	D50	N32	5, 6 / 7, 8, 8, 9		
						22.50 ... with 1No lignite fragment (<50mm)	22.50	D51				
						23.00	D52					
			Very stiff, brownish grey slightly micaceous sandy silty CLAY with occasional pockets of light brown fine sand (<20mm). (THAMES GROUP: LONDON CLAY FORMATION - A2)	23.50	D53	100 blows	100% Recovery					
				23.50-23.95								
				24.00	D54							
				25.00-25.45	U55 D56							
				25.00								
				25.50	D57							
				25.50 - 26.00 ... with frequent partings of light brown fine sand	26.00	D58						
					26.50	D59	N43	7, 8 / 11, 9, 11, 12				
					26.50-26.95							
					27.00	D60						
					28.00-28.45	U61 D62	100 blows	100% Recovery				
				28.00								
				29.00	D63							
				29.50	D64	N45	7, 8 / 10, 11, 13, 11					
				29.50-29.95								
			30.00	D65								
			6.28		30.00	Very stiff, brownish grey clayey SILT. (THAMES GROUP: HARWICH FORMATION: Swanscombe Member?) End of Borehole						
			6.28		30.00							

Issue: FINAL

Logger: JKH/ BW

CHD: AN

APRV: OS

Log Print Date & Time:

30/03/2022 10:50

Project

Haringey Civic Centre

Job No

21/3628

Date Started

24/11/22

Date Completed

24/11/22

Ground Level (mOD)

35.85

Co-Ordinates

E 530800.62 N 190763.01

Final Depth

25.50m

Client

Haringey Council

BOREHOLE SUMMARY

Top (m)	Base (m)	Type	Date Started	Date Ended	Crew	Logged By	Barrel Type	Core Bit	Plant Used/ Method	SPT Hammer Reference
0.00	1.20	IP	24/11/2021	24/11/2021	DE	JKH			Hand Excavated	
1.20	25.50	CP	24/11/2021	24/11/2021	DE	JKH			Dando 2000	AR3698

WATER STRIKES

WATER ADDED

CHISELLING / SLOW DRILLING

Strike at (m)	Rise to (m)	Time to Rise (min)	Casing Depth (m)	Sealed (m)	From (m)	To (m)	From (m)	To (m)	Duration (hr)	Remarks

HOLE

CASING

Depth (m)	Diameter (mm)	Depth (m)	Diameter (mm)
0.00	150	0.00	150
25.50	150	3.00	150

DYNAMIC SAMPLING /ROTARY RECOVERY

From (m)	To (m)	Duration (hr)	Recovery (%)

ROTARY FLUSH DETAIL

From (m)	To (m)	Flush Type	Flush Return (%)	Flush Colour

INSTALLATION DETAILS

Type	Diameter (mm)	Depth of Installation (m)	Top of Response Zone (m)	Bottom of Response Zone (m)	Date of Installation
GMP	50	1.50	0.50	1.50	24/11/2021
GWMP	50	20.00	5.00	20.00	24/11/2021

BACKFILL DETAILS

Top (m)	Bottom (m)	Material	Backfill Date	Remarks
0.00	0.20	Concrete	24/11/2021	Flush Cover
0.20	0.50	Bentonite Pellets		
0.50	1.50	Pea Shingle		
1.50	5.00	Bentonite Pellets		
5.00	20.00	Pea Shingle		
20.00	25.50	Bentonite Pellets		

Project

Haringey Civic Centre

Job No

21/3628

Date Started

24/11/22

Date Completed

24/11/22

Ground Level (mOD)

35.85

Co-Ordinates

E 530800.62 N 190763.01

Final Depth

25.50m

Client

Haringey Council

PROGRESS

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)	Remarks
24/11/21	0.00		Dry	
24/11/21	1.20		Dry	
24/11/21	25.50	3.00	Dry	

SPT DETAILS

Type	Depth (m)	N Value	Blow Count / 75mm	Casing Depth (m)	Water Depth (m)
S	1.20	N6	1, 0 / 1, 1, 2, 2		Dry
S	3.00	N11	1, 2 / 2, 2, 3, 4		Dry
S	5.00	N20	3, 4 / 4, 5, 5, 6	3.00	Dry
S	7.00	N23	3, 4 / 4, 6, 6, 7	3.00	Dry
S	9.00	N24	3, 4 / 4, 6, 7, 7	3.00	Dry
S	11.50	N31	4, 5 / 6, 7, 8, 10	3.00	Dry
S	14.50	N29	4, 5 / 6, 7, 7, 9	3.00	Dry
S	17.50	N31	4, 5 / 7, 7, 8, 9	3.00	Dry
S	20.50	N28	5, 6 / 6, 7, 7, 8	3.00	Dry
S	23.50	N32	5, 6 / 7, 8, 8, 9	3.00	Dry

GENERAL REMARKS

KEY

SAMPLES

ES - Environmental Sample (Tub, Vial, Jar) AZCL: Assumed Zone of Core Loss
U - 100mm Diameter Undisturbed Sample
UT - 100mm Diameter Thin Wall Undisturbed Sample
U38 - 38mm Diameter Undisturbed Sample
D - Disturbed Sample, B-Bulk Sample, LB- Large Bulk Sample, BLK-Block Sample
C - Core Sample, W-Water Sample, R-Root Sample

INSTALLATION DETAILS

GMP - Gas monitoring point
GWMP - Groundwater monitoring point
SPIE - Standpipe piezometer
EPIE - Electronic Piezometer
SP - Standpipe
HOLE TYPES
IP - Inspection Pit, TP-Trial Pit TT - Trial Trench
CP - Cable Percussion, RC-Rotary Coring, R/S-Rotary/Sonic
DS - Dynamic Sampling, DS/R-Dynamic Sampling /Rotary
DC - Diamond Coring, CP/R-Cable Percussion Rotary follow on
TESTS S/C-SPT / CPT, V-Shear Vane, PP-Pocket Penetrometer, MP-Mackintosh Probe, VOC-Volatile Organic Compounds

Note: All depths are in metres, all diameters in millimetres, water strike rise time in minutes. For details of abbreviations see Key

Issue: FINAL

CHD: AN

APRV: OS

Log Print Date & Time:

30/03/2022 10:50

Project

Haringey Civic Centre

Job No

21/3628

Date Started

24/11/22

Date Completed

24/11/22

Ground Level (mOD)

35.85

Co-Ordinates

E 530800.62 N 190763.01

Final Depth

25.50m

Client

Haringey Council

Method

Cable Percussion

Sheet

1 of 3

PROGRESS

STRATA

SAMPLES & TESTS

Date	Casing	Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth (m)	Type No	Test Result	Field Records	Instrument/ Backfill
24/11/21		Dry	35.70		0.15	Asphalt.	0.15			VOC 0.9ppm	
			35.60		0.25	(MADE GROUND)	0.15-0.25	B2			
						Dark grey and pinkish brown sandy	0.20	D2A			
						GRAVEL with frequent pockets of soft dark	0.25			VOC 0.4ppm	
					(0.75)	grey clay (<100mm). Gravel comprises	0.25-0.75	ES3			
						angular to subangular fine to coarse flint,	0.25-0.75	B4			
						brick and limestone fragments. Sand is fine to	0.70	D4A			
						coarse.	1.00			VOC 0.5ppm	
24/11/21		Dry	34.85		1.00	(MADE GROUND)	1.00-1.20	ES5			
			34.65		1.20	0.25 ... with fabric material	1.00-1.20	B6			
						Soft, drak greenish grey slightly gravelly silty	1.20	D6A	N6	1, 0 / 1, 1, 2, 2	
						CLAY. Gravel is angular to subangular fine	1.20-1.65	D7			
						to coarse brick fragments.	2.00-2.45	U8	28 blows	100% Recovery	
						(MADE GROUND)	2.00	D9			
						Firm, light brown mottled greenish grey and	2.50	D10			
						grey slightly gravelly silty CLAY. Gravel is					
						angular to subangular fine to coarse flint.					
						(THAMES GROUP: WEATHERED CLAY					
						FORMATION)	3.00				
						Firm, brown mottled dark bluish grey and	3.00	D11	N11	1, 2 / 2, 2, 3, 4	
						orangish brown slightly micaceous silty	3.00-3.45	D12			
						CLAY with frequent off-white silt nodules					
						(<10mm) and decomposed roots and rootlets.					
						(THAMES GROUP: WEATHERED CLAY					
						FORMATION)					
						2.00 ... with rare selenite crystals (<5mm)	4.00-4.45	U13	34 blows	100% Recovery	
						2.50 ... with frequent selenite crystals	4.00	D14			
						(<10mm)					
						3.00 ... becoming stiff with frequent off-white	4.50	D15			
						flecks					
						4.00 ... with frequent pockets of light brown					
						silt (<70mm)					
							5.00				
						5.00 ... becoming very stiff with frequent	5.00	D16	N20	3, 4 / 4, 5, 5, 6	
						partings of orangish brown fine sand and	5.00-5.45	D17			
						selenite crystals (<10mm)					
					(9.30)		6.00-6.45	U18	38 blows	100% Recovery	
						6.00 ... with rare lenses of white silt (<5mm)	6.00	D19			
							6.50	D20			
							7.00				
							7.00	D21	N23	3, 4 / 4, 6, 6, 7	
							7.00-7.45	D22			
							8.00-8.45	U23	54 blows	100% Recovery	
						8.00 ... becoming brown mottled orangish	8.00	D24			
						brown and dark bluish grey					
							8.50	D25			
						8.50 ... with occasional selenite crystals					
						(<10mm)					
							9.00				
						9.00 ... with rare off-white shell fragments	9.00	D26	N24	3, 4 / 4, 6, 7, 7	
						(<10mm) and selenite crystals (<10mm)	9.00-9.45	D27			
							10.00-10.45	U28	62 blows	100% Recovery	
						10.00 ... becoming brownish grey mottled	10.00	D29			
						orangish brown with frequent white flecks					
						and bioturbation					
			25.35		10.50		10.50	D30			
						Very stiff, brownish grey slightly sandy					
						slightly micaceous silty CLAY with rare					
						pockets of dark grey silty fine sand (<10mm),	11.00	D31			

Issue: FINAL

Logger: JKH

CHD: AN

APRV: OS

Log Print Date & Time:

30/03/2022 10:50

Project

Haringey Civic Centre

Job No

21/3628

Date Started

24/11/22

Date Completed

24/11/22

Ground Level (mOD)

35.85

Co-Ordinates

E 530800.62 N 190763.01

Final Depth

25.50m

Client

Haringey Council

Method

Cable Percussion

Sheet

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PROGRESS

STRATA

SAMPLES & TESTS

Date	Casing	Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth (m)	Type No	Test Result	Field Records	Instrument/Backfill
					(2.50)	frequent white flecks and bioturbation. (THAMES GROUP: LONDON CLAY FORMATION - B) 11.00 ... with rare lenses of white silt (<5mm) 11.50 ... with rare pockets of light brown fine sand (<5mm)	11.50 11.50-11.95 12.00	D32 D33	N31	4, 5 / 6, 7, 8, 10	
			22.85		13.00	Very stiff, brownish grey slightly sandy slightly micaceous silty CLAY with frequent pockets of light brown fine sand (<10mm) and occasional extremely weak to weak grey claystone fragments (<20mm). (THAMES GROUP: LONDON CLAY FORMATION - A3ii) 14.00 ... with frequent partings of light brown silty fine sand	13.00-13.45 13.00 13.50 14.00	U34 D35 D36 D37	68 blows	100% Recovery	
						15.00 ... with occasional partings of light brown silty fine sand	14.50 14.50-14.95 15.00	D38 D39	N29	4, 5 / 6, 7, 7, 9	
						16.00 ... with rare pockets of light brown fine sand (<5mm)	16.00-16.45 16.00 16.50	U40 D41 D42	72 blows	100% Recovery	
						17.00 ... with rare off-white shell fragments (<10mm)	17.00 17.50 17.50-17.95	D43 D44	N31	4, 5 / 7, 7, 8, 9	
						18.00 ... with frequent pockets of light brown fine sand (<10mm)	18.00	D45			
					(12.50)	19.00 ... with 1No pyrite nodule (<10mm)	19.00-19.45 19.00 19.50	U46 D47 D48	83 blows	100% Recovery	
						19.50 ... with a parting and pocket of brown fine sand and occasional bioturbation	20.00	D49			
						20.00 ... with frequent bioturbation	20.50 20.50-20.95 21.00	D50 D51	N28	5, 6 / 6, 7, 7, 8	
						21.00 ... with frequent bioturbation and 1No pyrite nodule (<40mm)	22.00-22.45	U52	100 blows	100% Recovery	

Issue: FINAL

Logger: JKH

CHD: AN

APRV: OS

Log Print Date & Time:

30/03/2022 10:50

Project

Haringey Civic Centre

Job No
21/3628

Date Started 24/11/22
Date Completed 24/11/22

Ground Level (mOD)
35.85

Co-Ordinates
E 530800.62 N 190763.01

Final Depth
25.50m

Client
Haringey Council

Method
Cable Percussion

Sheet
3 of 3

PROGRESS

STRATA

SAMPLES & TESTS

Date	Casing	Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth (m)	Type No	Test Result	Field Records	Instrument/Backfill
24/11/21	3.00	Dry	10.35		25.50	22.00 ... with a pocket of light grey fine sand (<30mm) and rare bioturbation	22.00	D53	N32	5, 6 / 7, 8, 8, 9	
						22.50 ... with a parting of brown fine sand	22.50	D54			
						23.00 ... with frequent bioturbation	23.00	D55			
						23.50 ... with occasional pockets of grey fine sand	23.50	D56			
							23.50-23.95	D56			
							24.00	D57			
							25.00-25.45	U58	100 blows	100% Recovery	
						End of Borehole					

Issue: FINAL

Logger: JKH

CHD: AN

APRV: OS

Log Print Date & Time: 30/03/2022 10:50

Project

Haringey Civic Centre

Job No

21/3628

Date Started

22/11/21

Date Completed

22/11/21

Ground Level (mOD)

36.15

Co-Ordinates

E 530828.58 N 190770.32

Final Depth

25.50m

Client

Haringey Council

BOREHOLE SUMMARY

Top (m)	Base (m)	Type	Date Started	Date Ended	Crew	Logged By	Barrel Type	Core Bit	Plant Used/ Method	SPT Hammer Reference
0.00	1.20	IP	22/11/2021	22/11/2021	DE	JKH			Hand Excavated	
1.20	25.50	CP	22/11/2021	22/11/2021	DE	JKH			Dando 2000	AR3698

WATER STRIKES

WATER ADDED

CHISELLING / SLOW DRILLING

Strike at (m)	Rise to (m)	Time to Rise (min)	Casing Depth (m)	Sealed (m)	From (m)	To (m)	From (m)	To (m)	Duration (hr)	Remarks

HOLE

CASING

Depth (m)	Diameter (mm)	Depth (m)	Diameter (mm)
0.00	150	0.00	150
25.50	150	3.00	150

DYNAMIC SAMPLING /ROTARY RECOVERY

From (m)	To (m)	Duration (hr)	Recovery (%)

ROTARY FLUSH DETAIL

From (m)	To (m)	Flush Type	Flush Return (%)	Flush Colour

INSTALLATION DETAILS

Type	Diameter (mm)	Depth of Installation (m)	Top of Response Zone (m)	Bottom of Response Zone (m)	Date of Installation
GMP	50	2.00	0.50	2.00	22/11/2021

BACKFILL DETAILS

Top (m)	Bottom (m)	Material	Backfill Date	Remarks
0.00	0.20	Concrete	22/11/2021	Flush Cover
0.20	0.50	Bentonite Pellets		
0.50	2.00	Pea Shingle		
2.00	25.50	Bentonite Pellets		

Project

Haringey Civic Centre

Job No

21/3628

Date Started

22/11/21

Date Completed

22/11/21

Ground Level (mOD)

36.15

Co-Ordinates

E 530828.58 N 190770.32

Final Depth

25.50m

Client

Haringey Council

PROGRESS

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)	Remarks
19/11/21	0.00		Dry	
19/11/21	1.20		Dry	
22/11/21	1.20		Dry	
22/11/21	25.50	3.00	Dry	

SPT DETAILS

Type	Depth (m)	N Value	Blow Count / 75mm	Casing Depth (m)	Water Depth (m)
S	1.20	N6	1, 0 / 1, 1, 2, 2		Dry
S	3.00	N11	1, 2 / 2, 2, 3, 4		Dry
S	5.00	N18	2, 3 / 4, 4, 5, 5	3.00	Dry
S	7.00	N25	3, 4 / 5, 6, 7, 7	3.00	Dry
S	9.00	N27	4, 4 / 6, 6, 7, 8	3.00	Dry
S	11.50	N29	6, 4 / 6, 7, 7, 9	3.00	Dry
S	14.50	N29	4, 5 / 6, 7, 8, 8	3.00	Dry
S	17.50	N28	6, 5 / 7, 7, 6, 8	3.00	Dry
S	20.50	N30	5, 6 / 7, 6, 8, 9	3.00	Dry
S	23.50	N29	5, 6 / 6, 7, 8, 8	3.00	Dry

GENERAL REMARKS

KEY

SAMPLES

ES - Environmental Sample (Tub, Vial, Jar) AZCL: Assumed Zone of Core Loss
U - 100mm Diameter Undisturbed Sample
UT - 100mm Diameter Thin Wall Undisturbed Sample
U38 - 38mm Diameter Undisturbed Sample
D - Disturbed Sample, B-Bulk Sample, LB- Large Bulk Sample, BLK-Block Sample
C - Core Sample, W-Water Sample, R-Root Sample

INSTALLATION DETAILS

GMP - Gas monitoring point
GWMP - Groundwater monitoring point
SPIE - Standpipe piezometer
EPIE - Electronic Piezometer
SP - Standpipe
HOLE TYPES
IP - Inspection Pit, TP-Trial Pit TT - Trial Trench
CP - Cable Percussion, RC-Rotary Coring, R/S-Rotary/Sonic
DS - Dynamic Sampling, DS/R-Dynamic Sampling /Rotary
DC - Diamond Coring, CP/R-Cable Percussion Rotary follow on

TESTS S/C-SPT / CPT, V-Shear Vane, PP-Pocket Penetrometer, MP-Mackintosh Probe, VOC-Volatile Organic Compounds

Note: All depths are in metres, all diameters in millimetres, water strike rise time in minutes. For details of abbreviations see Key

Issue: FINAL

CHD: AN

APRV: OS

Log Print Date & Time:

30/03/2022 10:50

Project

Haringey Civic Centre

Job No

21/3628

Date Started

22/11/21

Ground Level (mOD)

36.15

Co-Ordinates

E 530828.58 N 190770.32

Final Depth

25.50m

Client

Haringey Council

Method

Cable Percussion

Sheet

1 of 3

PROGRESS

STRATA

SAMPLES & TESTS

Date	Casing	Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth (m)	Type No	Test Result	Field Records	Instrument/Backfill
19/11/21		Dry				Soft, brownish grey slightly gravelly slightly sandy silty CLAY with frequent roots and rootlets. Gravel comprises angular to subangular fine to coarse flint, brick and concrete fragments. Sand is fine to medium. (MADE GROUND)	0.00			VOC 0ppm	
19/11/21		Dry			(1.60)	0.60 ... becoming mottled brown with no sand	0.00-0.50	ES1		VOC 0ppm	
22/11/21		Dry					0.00-0.50	D1A			
							0.00-0.50	B2			
							0.60	ES3			
							0.60-1.20	D3A			
							0.60-1.20	B4			
							1.20		N6	1, 0 / 1, 1, 2, 2	
							1.20-1.65	D5			
			34.55		1.60	Firm, brown mottled grey and orangish brown slightly gravelly slightly micaceous silty CLAY with frequent off-white silt nodules (<10mm) and occasional decomposed roots and rootlets. Gravel is subangular to rounded fine to coarse flint. (THAMES GROUP: WEATHERED CLAY FORMATION)	2.00-2.45	U6	33 blows	100% Recovery	
							2.00	D7			
							2.50	D8			
						2.50 ... becoming brown mottled bluish grey and orangish brown with rare silt nodules (<5mm) and selenite crystals (<5mm)	3.00		N11	1, 2 / 2, 2, 3, 4	
						3.00 ... becoming stiff	3.00-3.45	D10			
							3.00	D9			
							4.00-4.45	U11	47 blows	100% Recovery	
							4.00	D12			
							4.50	D13			
						5.00 ... becoming very stiff	5.00		N18	2, 3 / 4, 4, 5, 5	
							5.00-5.45	D14			
								D15			
						6.00 ... with frequent selenite crystals (<10mm) and occasional white flecks	6.00-6.45	U16	55 blows	100% Recovery	
							6.00	D17			
							6.50	D18			
							7.00		N25	3, 4 / 5, 6, 7, 7	
							7.00	D19			
							7.00-7.45	D20			
						8.00 ... with frequent pockets of light brown silt (<50mm)	8.00-8.45	U21	74 blows	100% Recovery	
							8.00	D22			
						8.50 ... with occasional selenite crystals (<5mm)	8.50	D23			
							9.00		N27	4, 4 / 6, 6, 7, 8	
						9.00 ... with frequent selenite crystals (<10mm)	9.00	D24			
							9.00-9.45	D25			
							10.00-10.45	U26	73 blows	100% Recovery	
							10.00	D27			
							10.50	D28			
							11.00	D29			

Issue: FINAL

Logger: JKH

CHD: AN

APRV: OS

Log Print Date & Time:

30/03/2022 10:50

Project

Haringey Civic Centre

Job No

21/3628

Date Started

22/11/21

Date Completed

22/11/21

Ground Level (mOD)

36.15

Co-Ordinates

E 530828.58 N 190770.32

Final Depth

25.50m

Client

Haringey Council

Method

Cable Percussion

Sheet

2 of 3

PROGRESS

STRATA

SAMPLES & TESTS

Date	Casing	Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth (m)	Type No	Test Result	Field Records	Instrument/Backfill
			24.65		11.50	11.00 ... becoming grey mottled orangish brown with frequent white flecks and bioturbation	11.50		N29	6, 4 / 6, 7, 7, 9	
					(2.50)	Very stiff, brownish grey slightly micaceous silty CLAY with occasional lenses of white silt (<5mm), frequent white flecks and bioturbation. (THAMES GROUP: LONDON CLAY FORMATION: B)	11.50-11.95	D30			
							12.00	D31			
							13.00-13.45	U32	75 blows	100% Recovery	
						13.00 ... with rare white shell fragments (<10mm)	13.00	D33			
							13.50	D34			
			22.15		14.00		14.00	D35			
						Very stiff, brownish grey slightly micaceous silty CLAY with frequent partings of light brown and light grey fine sand, occasional pockets of light grey fine sand (<15mm), rare lenses of white silt (<5mm), white fleck and bioturbation. (THAMES GROUP: LONDON CLAY FORMATION: A3ii)	14.50		N29	4, 5 / 6, 7, 8, 8	
						15.00 ... with frequent pockets of drak grey fine sand (<10mm) and bioturbation	14.50-14.95	D36			
							15.00	D37			
						16.00 ... with rare pockets of drak grey and light grey fine sand (<5mm)	16.00-16.45	U38	94 blows	100% Recovery	
							16.00	D39			
							16.50	D40			
						17.00 ... with frequent pockets of light brown fine sand (<50mm) and occasional off-white shell fragments (<10mm)	17.00	D41			
							17.50		N28	6, 5 / 7, 7, 6, 8	
							17.50-17.95	D42			
						18.00 ... with frequent pockets of light grey silt (<30mm) and occasional pockets of light brown fine sand (<30mm)	18.00	D43			
							19.00-19.45	U44	96 blows	100% Recovery	
						19.00 ... with occasional white flecks	19.00	D45			
							19.50	D46			
					(11.50)	19.50 ... with frequent pockets of light brown silty fine sand (<15mm)	20.00	D47			
							20.50		N30	5, 6 / 7, 6, 8, 9	
							20.50-20.95	D48			
							21.00	D49			
							22.00-22.45	U50	100 blows	100% Recovery	

Issue: FINAL

Logger: JKH

CHD: AN

APRV: OS

Log Print Date & Time:

30/03/2022 10:50

Project

Haringey Civic Centre

Job No

21/3628

Date Started

22/11/21

Date Completed

22/11/21

Ground Level (mOD)

36.15

Co-Ordinates

E 530828.58 N 190770.32

Final Depth

25.50m

Client

Haringey Council

Method

Cable Percussion

Sheet

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PROGRESS

STRATA

SAMPLES & TESTS

Date	Casing	Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth (m)	Type No	Test Result	Field Records	Instrument/Backfill
22/11/21	3.00	Dry	10.65		25.50		22.00	D51			
							22.50	D52			
						22.50 ... with rare partings of light brown silt	23.00	D53			
						23.00 ... with rare off-white shell fragments (<10mm) and 1 No pyrite nodule (<20mm)	23.50		N29	5, 6 / 6, 7, 8, 8	
							23.50-23.95	D54			
						24.00 ... with occasional partings of light brown silt	24.00	D55			
							25.00-25.45	U56	100 blows	100% Recovery	
						25.00 ... with occasional partings of light brown fine sand	25.00	D57			
						25.50 ... with rare partings of dark grey and light brown fine sand	25.50	D58			
						End of Borehole					

Issue: FINAL

Logger: JKH

CHD: AN

APRV: OS

Log Print Date & Time:

30/03/2022 10:50

Project

Haringey Civic Centre

Job No

21/3628

Date Started

16/11/21

Date Completed

17/11/21

Ground Level (mOD)

36.37

Co-Ordinates

E 530866.63 N 190764.15

Final Depth

25.45m

Client

Haringey Council

BOREHOLE SUMMARY

Top (m)	Base (m)	Type	Date Started	Date Ended	Crew	Logged By	Barrel Type	Core Bit	Plant Used/ Method	SPT Hammer Reference
0.00	1.20	IP	16/11/2021	16/11/2021	DE	JKH			Hand Excavated	
1.20	25.45	CP	16/11/2021	17/11/2021	DE	JKH			Dando 2000	AR3698

WATER STRIKES

WATER ADDED

CHISELLING / SLOW DRILLING

Strike at (m)	Rise to (m)	Time to Rise (min)	Casing Depth (m)	Sealed (m)	From (m)	To (m)	From (m)	To (m)	Duration (hr)	Remarks

HOLE

CASING

Depth (m)	Diameter (mm)	Depth (m)	Diameter (mm)
0.00	150	0.00	150
25.45	150	3.00	150

DYNAMIC SAMPLING /ROTARY RECOVERY

From (m)	To (m)	Duration (hr)	Recovery (%)

ROTARY FLUSH DETAIL

From (m)	To (m)	Flush Type	Flush Return (%)	Flush Colour

INSTALLATION DETAILS

Type	Diameter (mm)	Depth of Installation (m)	Top of Response Zone (m)	Bottom of Response Zone (m)	Date of Installation
GWMP	50	11.00	1.00	11.00	17/11/2021

BACKFILL DETAILS

Top (m)	Bottom (m)	Material	Backfill Date	Remarks
0.00	0.20	Concrete	17/11/2021	Flush Cover
0.20	1.00	Bentonite Pellets		
1.00	11.00	Pea Shingle		
11.00	25.45	Bentonite Pellets		

Project

Haringey Civic Centre

Job No

21/3628

Date Started

16/11/21

Date Completed

17/11/21

Ground Level (mOD)

36.37

Co-Ordinates

E 530866.63 N 190764.15

Final Depth

25.45m

Client

Haringey Council

PROGRESS

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)	Remarks
16/11/21	0.00		Dry	
16/11/21	1.20		Dry	
16/11/21	12.00	3.00	Dry	
17/11/21	12.00	3.00	Dry	
17/11/21	25.45	3.00	Dry	

SPT DETAILS

Type	Depth (m)	N Value	Blow Count / 75mm	Casing Depth (m)	Water Depth (m)
S	1.20	N4	1, 0 / 1, 1, 1, 1		Dry
S	3.00	N12	1, 2 / 2, 2, 5, 3	3.00	Dry
S	4.50	N24	3, 4 / 4, 5, 7, 8	3.00	Dry
S	6.00	N20	3, 3 / 4, 4, 6, 6	3.00	Dry
S	8.00	N23	4, 4 / 5, 5, 6, 7	3.00	Dry
S	10.00	N25	4, 4 / 5, 6, 7, 7	3.00	Dry
S	13.00	N24	4, 5 / 5, 6, 6, 7	3.00	Dry
S	16.00	N28	5, 6 / 6, 7, 7, 8	3.00	Dry
S	19.00	N30	6, 6 / 7, 7, 8, 8	3.00	Dry
S	22.00	N31	3, 5 / 6, 8, 8, 9	3.00	Dry
S	25.00	N34	5, 8 / 8, 8, 9, 9	3.00	Dry

GENERAL REMARKS

KEY

SAMPLES

ES - Environmental Sample (Tub, Vial, Jar) AZCL: Assumed Zone of Core Loss
U - 100mm Diameter Undisturbed Sample
UT - 100mm Diameter Thin Wall Undisturbed Sample
U38 - 38mm Diameter Undisturbed Sample
D - Disturbed Sample, B-Bulk Sample, LB- Large Bulk Sample, BLK-Block Sample
C - Core Sample, W-Water Sample, R-Root Sample

INSTALLATION DETAILS

GMP - Gas monitoring point IP - Inspection Pit, TP-Trial Pit TT - Trial Trench
GWMP - Groundwater monitoring point CP - Cable Percussion, RC-Rotary Coring, R/S-Rotary/Sonic
SPIE - Standpipe piezometer DS - Dynamic Sampling, DS/R-Dynamic Sampling / Rotary
EPIE - Electronic Piezometer DC - Diamond Coring, CP/R-Cable Percussion Rotary follow on
SP - Standpipe

TESTS S/C-SPT / CPT, V-Shear Vane, PP-Pocket Penetrometer, MP-Mackintosh Probe, VOC-Volatile Organic Compounds

Note: All depths are in metres, all diameters in millimetres, water strike rise time in minutes. For details of abbreviations see Key

Issue: FINAL

CHD: AN

APRV: OS

Log Print Date & Time:

30/03/2022 10:50

Project

Haringey Civic Centre

Job No

21/3628

Date Started

16/11/21

Date Completed

17/11/21

Ground Level (mOD)

36.37

Co-Ordinates

E 530866.63 N 190764.15

Final Depth

25.45m

Client

Haringey Council

Method

Cable Percussion

Sheet

1 of 3

PROGRESS

STRATA

SAMPLES & TESTS

Date	Casing	Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth (m)	Type No	Test Result	Field Records	Instrument/Backfill
16/11/21		Dry	36.27		0.10	Asphalt.	0.30			VOC 2.8ppm	
			36.07		0.30	(MADE GROUND)	0.30				
			35.87		0.50	CONCRETE.	0.30	ES1			
							0.30	D1A			
							0.30	B2			
							0.50			VOC 0.6ppm	
							0.50	ES3			
							0.50	D3A			
							0.50	B4			
16/11/21		Dry			(1.00)	Dark grey gravelly silty clayey fine to medium SAND with medium brick cobble content. Gravel comprises angular to subangular fine to coarse flint, brick and concrete fragments.	1.00			VOC 0.5ppm	
						(MADE GROUND)	1.00	ES5			
			34.87		1.50	Soft to firm, greenish and bluish grey slightly gravelly silty CLAY. Gravel comprises angular to subrounded fine to coarse flint, brick and concrete fragments.	1.00	D5A			
						(MADE GROUND)	1.20	B6			
						Firm, brown mottled orangish brown and dark bluish grey slightly gravelly slightly micaceous silty CLAY with frequent off-white silt nodules (<10mm). Gravel is angular to subangular fine to medium flint. (THAMES GROUP: WEATHERED CLAY FORMATION)	1.20-1.65	D7	N4	1, 0 / 1, 1, 1, 1	
						2.50 ... becoming brown mottled orangish brown and bluish grey with occasional pyrite nodules (<15mm)	2.00-2.45	U8	16 blows	100% Recovery	
						3.00 ... becoming stiff with frequent white flecks	2.00	D9			
						4.00 ... becoming very stiff with occasional decomposed roots and rare pyrite nodules (<10mm)	2.50	D10			
							3.00		N12	1, 2 / 2, 2, 5, 3	
							3.00-3.45	D11			
								D12			
						5.00 ... with frequent selenite crystals (<5mm)	4.00-4.45	U13	32 blows	100% Recovery	
							4.00	D14			
						5.50 ... with rare off-white shell fragments	4.00-4.50	B15			
							4.50		N24	3, 4 / 4, 5, 7, 8	
							4.50-4.95	D16			
							5.00-5.45	U17	34 blows	100% Recovery	
							5.00	D18			
							5.50	D19			
						6.00 ... with occasional selenite crystals and rare white flecks	6.00		N20	3, 3 / 4, 4, 6, 6	
							6.00-6.45	D20			
							6.00	D21			
					(10.00)		7.00-7.45	U22	40 blows	100% Recovery	
						7.00 ... with frequent selenite crystals (<10mm)	7.00	D23			
							7.50	D24			
							8.00		N23	4, 4 / 5, 5, 6, 7	
							8.00-8.45	D25			
							8.00	D26			
						9.00 ... with rare selenite crystals (<10mm)	9.00-9.45	U27	70 blows	100% Recovery	
							9.00	D28			
							9.50	D29			
						10.00 ... with frequent selenite crystals (<15mm)	10.00		N25	4, 4 / 5, 6, 7, 7	
							10.00	D30			
							10.00-10.45	D31			
							11.00	D32			

Issue: FINAL

Logger: JKH

CHD: AN

APRV: OS

Log Print Date & Time:

30/03/2022 10:50

Project

Haringey Civic Centre

Job No

21/3628

Date Started

16/11/21

Date Completed

17/11/21

Ground Level (mOD)

36.37

Co-Ordinates

E 530866.63 N 190764.15

Final Depth

25.45m

Client

Haringey Council

Method

Cable Percussion

Sheet

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PROGRESS

STRATA

SAMPLES & TESTS

Date	Casing	Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth (m)	Type No	Test Result	Field Records	Instrument/Backfill
16/11/21	3.00	Dry	24.87		11.50	11.00 ... becoming brownish grey mottled brown and orangish brown with frequent white flecks	11.50-11.95	U33	74 blows	100% Recovery	
17/11/21	3.00	Dry			(2.50)	Very stiff, brownish grey slightly micaceous silty CLAY with frequent white flecks, bioturbation and 1No pyritised lignite fragment (<30mm). (THAMES GROUP: LONDON CLAY FORMATION: B)	12.00	D34			
						13.00 ... with rare pockets of light brown fine sand (<10mm) and occasional lenses of white silt (<10mm)	13.00 13.00-13.45	D35 D36	N24	4, 5 / 5, 6, 6, 7	
			22.37		14.00	Very stiff, brownish grey slightly micaceous silty CLAY with frequent pockets of light brown fine sand (<20mm), rare off-white shell fragments (<1mm) and 1No pyrite nodule (<5mm). (THAMES GROUP: LONDON CLAY FORMATION: A3ii)	14.00	D37			
						15.00 ... with rare pockets of light brown fine sand (<30mm)	14.50-14.95	U38	80 blows	100% Recovery	
							15.00	D39			
							16.00 16.00 16.00-16.45	D40 D41	N28	5, 6 / 6, 7, 7, 8	
						17.00 ... with occasional partings of light brown silty fine sand, rare lenses of white silt (<10mm), occasional white flecks and bioturbation	17.00	D42			
							17.50-17.95	U43	75 blows	100% Recovery	
						18.00 ... with frequent bioturbation	18.00	D44			
							19.00 19.00 19.00-19.45	D45 D46	N30	6, 6 / 7, 7, 8, 8	
					(11.45)	19.00 ... with rare pockets of light brown fine sand (<10mm) and frequent pyrite nodules (<10mm)					
						20.00 ... with frequent extremely weak to weak light brown fine to coarse gravel size claystone fragments	20.00	D47			
							20.50-20.95	U48	80 blows	100% Recovery	
						21.00 ... with occasional partings of light brown fine sand	21.00	D49			
							22.00		N31	3, 5 / 6, 8, 8, 9	

Issue: FINAL

Logger: JKH

CHD: AN

APRV: OS

Log Print Date & Time:

30/03/2022 10:50

Project

Haringey Civic Centre

Job No

21/3628

Date Started

16/11/21

Date Completed

17/11/21

Ground Level (mOD)

36.37

Co-Ordinates

E 530866.63 N 190764.15

Final Depth

25.45m

Client

Haringey Council

Method

Cable Percussion

Sheet

3 of 3

PROGRESS

STRATA

SAMPLES & TESTS

Date	Casing	Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth (m)	Type No	Test Result	Field Records	Instrument/ Backfill
17/11/21	3.00	Dry	10.92		25.45	23.00 ... with rare pockets of light grey fine sand (<5mm)	22.00 22.00-22.45	D50 D51			
						24.00 ... with frequent white flecks	23.00 23.50-23.95	D52 U53	93 blows	100% Recovery	
						25.00 ... with occasional bioturbation, rare white flecks and 1No pyrite nodule (<10mm)	24.00 25.00 25.00-25.45	D54 D55 D56	N34	5, 8 / 8, 8, 9, 9	
						End of Borehole					

Issue: FINAL

Logger: JKH

CHD: AN

APRV: OS

Log Print Date & Time:

30/03/2022 10:50

Project

Haringey Civic Centre

Job No

21/3628

Date Started

16/11/21

Date Completed

18/11/21

Ground Level (mOD)

37.05

Co-Ordinates

E 530870.68 N 190679.86

Final Depth

25.50m

Client

Haringey Council

BOREHOLE SUMMARY

Top (m)	Base (m)	Type	Date Started	Date Ended	Crew	Logged By	Barrel Type	Core Bit	Plant Used/ Method	SPT Hammer Reference
0.00	1.20	IP	16/11/2021	16/11/2021	DE	JKH			Hand Excavated	
1.20	25.50	CP	17/11/2021	18/11/2021	DE	JKH			Dando 2000	AR3698

WATER STRIKES

WATER ADDED

CHISELLING / SLOW DRILLING

Strike at (m)	Rise to (m)	Time to Rise (min)	Casing Depth (m)	Sealed (m)	From (m)	To (m)	From (m)	To (m)	Duration (hr)	Remarks

HOLE

CASING

Depth (m)	Diameter (mm)	Depth (m)	Diameter (mm)
0.00	150	0.00	150
25.50	150	3.00	150

DYNAMIC SAMPLING /ROTARY RECOVERY

From (m)	To (m)	Duration (hr)	Recovery (%)

ROTARY FLUSH DETAIL

From (m)	To (m)	Flush Type	Flush Return (%)	Flush Colour

INSTALLATION DETAILS

Type	Diameter (mm)	Depth of Installation (m)	Top of Response Zone (m)	Bottom of Response Zone (m)	Date of Installation
VWP		20.00			18/11/2021

BACKFILL DETAILS

Top (m)	Bottom (m)	Material	Backfill Date	Remarks
0.00	0.20	Concrete	18/11/2021	Flush Cover
0.20	25.50	Cement/ Bentonite Grout		

Project

Haringey Civic Centre

Job No

21/3628

Date Started

16/11/21

Date Completed

18/11/21

Ground Level (mOD)

37.05

Co-Ordinates

E 530870.68 N 190679.86

Final Depth

25.50m

Client

Haringey Council

PROGRESS

Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)	Remarks
16/11/21	0.00		Dry	
16/11/21	1.20		Dry	
17/11/21	1.20		Dry	
17/11/21	17.00	3.00	Dry	
18/11/21	17.00	3.00	Dry	
18/11/21	25.50	3.00	Dry	

SPT DETAILS

Type	Depth (m)	N Value	Blow Count / 75mm	Casing Depth (m)	Water Depth (m)
S	1.20	N7	1, 1 / 2, 1, 2, 2		Dry
S	3.00	N16	1, 2 / 3, 5, 4, 4		Dry
S	5.00	N19	3, 3 / 4, 4, 5, 6	3.00	Dry
S	7.00	N20	3, 3 / 4, 4, 6, 6	3.00	Dry
S	9.00	N26	4, 4 / 6, 7, 6, 7	3.00	Dry
S	11.50	N27	4, 4 / 6, 6, 7, 8	3.00	Dry
S	14.50	N30	5, 6 / 7, 7, 8, 8	3.00	Dry
S	17.50	N29	7, 6 / 7, 6, 8, 8	3.00	Dry
S	20.50	N34	7, 6 / 8, 8, 9, 9	3.00	Dry
S	23.50	N35	6, 6 / 8, 8, 9, 10	3.00	Dry

GENERAL REMARKS

KEY

SAMPLES

ES - Environmental Sample (Tub, Vial, Jar) AZCL: Assumed Zone of Core Loss
U - 100mm Diameter Undisturbed Sample
UT - 100mm Diameter Thin Wall Undisturbed Sample
U38 - 38mm Diameter Undisturbed Sample
D - Disturbed Sample, B-Bulk Sample, LB- Large Bulk Sample, BLK-Block Sample
C - Core Sample, W-Water Sample, R-Root Sample

INSTALLATION DETAILS

GMP - Gas monitoring point
GWMP - Groundwater monitoring point
SPIE - Standpipe piezometer
EPIE - Electronic Piezometer
SP - Standpipe
HOLE TYPES
IP - Inspection Pit, TP-Trial Pit TT - Trial Trench
CP - Cable Percussion, RC-Rotary Coring, R/S-Rotary/Sonic
DS - Dynamic Sampling, DS/R-Dynamic Sampling /Rotary
DC - Diamond Coring, CP/R-Cable Percussion Rotary follow on

TESTS S/C-SPT / CPT, V-Shear Vane, PP-Pocket Penetrometer, MP-Mackintosh Probe, VOC-Volatile Organic Compounds

Note: All depths are in metres, all diameters in millimetres, water strike rise time in minutes. For details of abbreviations see Key

Issue: FINAL

CHD: AN

APRV: OS

Log Print Date & Time:

30/03/2022 10:50

Project

Haringey Civic Centre

Job No

21/3628

Date Started

16/11/21

Date Completed

18/11/21

Ground Level (mOD)

37.05

Co-Ordinates

E 530870.68 N 190679.86

Final Depth

25.50m

Client

Haringey Council

Method

Cable Percussion

Sheet

1 of 3

PROGRESS

STRATA

SAMPLES & TESTS

Date	Casing	Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth (m)	Type No	Test Result	Field Records	Instrument/Backfill
16/11/21		Dry	36.95		0.10	Asphalt.	0.30			VOC 0.1ppm	
			36.75		0.30	(MADE GROUND)	0.30	ES1			
			36.55		0.50	Reinforced CONCRETE.	0.30	D1A			
							0.30	B2			
						Orangish, reddish brown and grey gravelly slightly clayey fine to coarse SAND with high brick cobble content. Gravel comprises angular to subangular fine to coarse brick and concrete fragments.	0.50	ES3		VOC 0.1ppm	
16/11/21		Dry	35.85		1.20	(MADE GROUND)	0.50	D3A			
17/11/21		Dry				Firm, greenish and brownish grey mottled dark bluish grey slightly gravelly silty CLAY with occasional roots and rootlets. Gravel comprises angular to subrounded fine to coarse flint and brick fragments.	0.50	B4			
						(MADE GROUND)	1.00			VOC 0.4ppm	
						Firm, brown mottled bluish grey slightly gravelly slightly micaceous silty CLAY. Gravel is angular to subangular fine flint. (THAMES GROUP: WEATHERED CLAY FORMATION)	1.00	ES5			
						2.00 ... with occasional pockets of dark grey silt (<10mm). Gravel becoming angular to rounded fine to coarse	1.00	D5A			
						2.50 ... becoming brown mottled bluish grey and orangish brown with occasional white flecks	1.20	B6			
						3.00 ... becoming stiff with frequent off-white flecks	1.20-1.65	D7	N7	1, 1 / 2, 1, 2, 2	
						4.00 ... with frequent lenses of white silt (<10mm)	2.00-2.45	U8	22 blows	100% Recovery	
						4.50 ... with rare lenses of off-white silt (<10mm), frequent decomposed roots and rootlets and occasional white flecks	2.00	D9			
						5.00 ... becoming very stiff with frequent white flecks	2.50	D10			
						6.00 ... with frequent selenite crystals (<10mm)	3.00		N16	1, 2 / 3, 5, 4, 4	
							3.00	D11			
							3.00-3.45	D12			
						8.00 ... with frequent lenses of white silt (<10mm)	4.00-4.45	U13	31 blows	100% Recovery	
						8.50 ... with rare lenses of white silt (<10mm)	4.00	D14			
							5.00		N19	3, 3 / 4, 4, 5, 6	
							5.00	D15			
							5.00-5.45	D16			
							6.00-6.45	U17	35 blows	100% Recovery	
							6.00	D18			
							6.50	D19			
							7.00		N20	3, 3 / 4, 4, 6, 6	
							7.00	D20			
							7.00-7.45	D21			
							8.00-8.45	U22	40 blows	100% Recovery	
							8.00	D23			
							8.50	D24			
							9.00		N26	4, 4 / 6, 7, 6, 7	
							9.00	D25			
							9.00-9.45	D26			
							10.00-10.45	U27	50 blows	100% Recovery	
							10.00	D28			
							10.50	D29			
							11.00	D30			
			26.05		11.00						

Issue: FINAL

Logger: JKH

CHD: AN

APRV: OS

Log Print Date & Time:

30/03/2022 10:50

Project

Haringey Civic Centre

Job No

21/3628

Date Started

16/11/21

Date Completed

18/11/21

Ground Level (mOD)

37.05

Co-Ordinates

E 530870.68 N 190679.86

Final Depth

25.50m

Client

Haringey Council

Method

Cable Percussion

Sheet

2 of 3

PROGRESS

STRATA

SAMPLES & TESTS

Date	Casing	Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth (m)	Type No	Test Result	Field Records	Instrument/Backfill
17/11/21	3.00	Dry	25.05		(1.00)	Very stiff, brownish grey slightly micaceous silty CLAY with frequent bioturbation, occasional white flecks and rare off-white shell fragments (<5mm). (THAMES GROUP: LONDON CLAY FORMATION: B)	11.50 11.50-11.95	D31	N27	4, 4 / 6, 6, 7, 8	
					12.00		12.00	D32			
18/11/21	3.00	Dry			(13.50)	Very stiff, brownish grey slightly sandy slightly micaceous silty CLAY with frequent partings and pockets of light brown fine sand (<25mm). (THAMES GROUP: LONDON CLAY FORMATION: LC-A3ii)	13.00-13.45 13.00	U33 D34	55 blows	100% Recovery	
						13.00 ... with frequent white flecks	13.50	D35			
						13.50 ... with frequent off-white shell fragments (<5mm)	14.00	D36			
						14.00 ... with occasional pockets of light brown fine sand (<25mm), rare pockets of light brown silt (<20mm) and 1No pyrite nodule (<11mm)	14.50 14.50-14.95	D37	N30	5, 6 / 7, 7, 8, 8	
						15.00 ... with rare partings of light brown and drak grey fine sand	15.00	D38			
							16.00-16.45 16.00	U39 D40	65 blows	100% Recovery	
							17.00	D41			
							17.50 17.50-17.95	D42	N29	7, 6 / 7, 6, 8, 8	
							18.00	D43			
						18.00 ... with rare partings of light brown silt and off-white shell fragments (<15mm)	19.00-19.45 19.00	U44 D45	75 blows	100% Recovery	
							20.00	D46			
						20.00 ... with frequent pockets of light brown fine sand (<15mm)	20.50 20.50-20.95	D47	N34	7, 6 / 8, 8, 9, 9	
							21.00	D48			
							22.00-22.45	U49	84 blows	100% Recovery	

Issue: FINAL

Logger: JKH

CHD: AN

APRV: OS

Log Print Date & Time:

30/03/2022 10:50

Project

Haringey Civic Centre

Job No

21/3628

Date Started

16/11/21

Date Completed

18/11/21

Ground Level (mOD)

37.05

Co-Ordinates

E 530870.68 N 190679.86

Final Depth

25.50m

Client

Haringey Council

Method

Cable Percussion

Sheet

3 of 3

PROGRESS

STRATA

SAMPLES & TESTS

SAMPLES & TESTS														
Date	Casing	Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth (m)	Type No	Test Result	Field Records	Instrument/ Backfill			
18/11/21	3.00	Dry	11.55		25.50	22.00 ... with rare partings of light brown fine sand and pyrite nodules (<10mm)	22.00	D50	N35	6, 6 / 8, 8, 9, 10				
							22.50	D51						
							23.00	D52						
							23.50	D53						
							23.50-23.95							
							24.00	D54						
							25.00-25.45	U55	92 blows	100% Recovery				
							25.00	D56						
							25.50	D57						
							25.50 ... with rare bioturbation and 1No lignitic fragment (<50mm) End of Borehole							

Issue: FINAL

Logger: JKH

CHD: AN

APRV: OS

Log Print Date & Time:

30/03/2022 10:50

Project

Haringey Civic Centre

Job No

21/3628

Date Started

19/11/21

Date Completed

19/11/21

Ground Level (mOD)

37.17

Co-Ordinates

E 530838.11 N 190716.06

Final Depth

10.50m

Client

Haringey Council

BOREHOLE SUMMARY

Top (m)	Base (m)	Type	Date Started	Date Ended	Crew	Logged By	Barrel Type	Core Bit	Plant Used/ Method	SPT Hammer Reference
0.00	1.20	IP	19/11/2021	19/11/2021	DE	JKH			Hand Excavated	
1.20	25.50	CP	19/11/2021	19/11/2021	DE	JKH			Dando 2000	AR3698

WATER STRIKES

WATER ADDED

CHISELLING / SLOW DRILLING

Strike at (m)	Rise to (m)	Time to Rise (min)	Casing Depth (m)	Sealed (m)	From (m)	To (m)	From (m)	To (m)	Duration (hr)	Remarks

HOLE

CASING

Depth (m)	Diameter (mm)	Depth (m)	Diameter (mm)
0.00	150	0.00	150
10.50	150	3.00	150

DYNAMIC SAMPLING /ROTARY RECOVERY

From (m)	To (m)	Duration (hr)	Recovery (%)

ROTARY FLUSH DETAIL

From (m)	To (m)	Flush Type	Flush Return (%)	Flush Colour

INSTALLATION DETAILS

Type	Diameter (mm)	Depth of Installation (m)	Top of Response Zone (m)	Bottom of Response Zone (m)	Date of Installation

BACKFILL DETAILS

Top (m)	Bottom (m)	Material	Backfill Date	Remarks
0.00	10.50	Bentonite Pellets	19/11/2021	



Project

Haringey Civic Centre

Job No

21/3628

Date Started

19/11/21

Ground Level (mOD)

37.17

Co-Ordinates

E 530838.11 N 190716.06

Final Depth

10.50m

Date Completed

19/11/21

Client

Haringey Council

PROGRESS					SPT DETAILS					
Date	Hole Depth (m)	Casing Depth (m)	Water Depth (m)	Remarks	Type	Depth (m)	N Value	Blow Count / 75mm	Casing Depth (m)	Water Depth (m)
19/11/21	0.00	3.00	Dry		S	1.20	N11	1, 2 / 2, 3, 3, 3	3.00	Dry
19/11/21	1.20		Dry		S	3.00	N13	1, 2 / 3, 3, 3, 4		Dry
19/11/21	10.50		Dry		S	5.00	N16	2, 3 / 4, 4, 4, 4		Dry
			S		7.00	N21	3, 4 / 5, 5, 5, 6	Dry		
					S	9.00	N27	4, 4 / 5, 7, 7, 8		Dry
GENERAL REMARKS										

Project

Haringey Civic Centre

Job No

21/3628

Date Started

19/11/21

Ground Level (mOD)

37.17

Co-Ordinates

E 530838.11 N 190716.06

Final Depth

10.50m

Client

Haringey Council

Method

Cable Percussion

Sheet

1 of 1

PROGRESS

STRATA

SAMPLES & TESTS

Date	Casing	Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth (m)	Type No	Test Result	Field Records	Instrument/Backfill
19/11/21		Dry	36.57		(0.60)	Grass over soft to firm, brownish grey slightly gravelly slightly sandy silty CLAY with frequent roots and rootlets. Gravel comprises angular to subangular fine to coarse flint, brick, concrete and asphalt fragments. Sand is fine to medium.	0.00 0.00-0.50 0.50 0.50 0.60	ES1 D1A B2		VOC 0ppm	
19/11/21		Dry	35.97		(0.60)	(MADE GROUND)	0.60-1.00 1.00 1.00 1.20	ES3 D3A B4		VOC 0ppm	
					(9.30)	Firm, grey mottled bluish grey and orangish brown slightly gravelly slightly sandy silty CLAY. Gravel comprises angular to subangular fine to medium flint and brick fragments. Sand is fine to medium.	1.20-1.65 2.00-2.45 2.00 2.50	D5 U6 D7 D8	N11	1, 2 / 2, 3, 3, 3	
						(MADE GROUND)	2.00-2.45 2.00	U6 D7	32 blows	100% Recovery	
						Stiff, brown mottled orangish brown, dark grey and brownish grey slightly gravelly silty CLAY. Gravel is angular to subangular fine to coarse flint.	2.50	D8			
						(THAMES GROUP: WEATHERED CLAY FORMATION)	3.00 3.00-3.45 3.00	D10 D9	N13	1, 2 / 3, 3, 3, 4	
						2.00 ... becoming brown mottled orangish brown and bluish grey and gravelly with frequent silt nodules (<15mm)	3.00				
						2.50 ... with rare weak brown claystone fragments (<40mm)					
						3.00 ... becoming slightly micaceous					
						4.00 ... becoming slightly gravelly. Gravel is angular to subangular fine to medium flint	4.00-4.45 4.00	U11 D12	35 blows	100% Recovery	
						4.50 ... with rare lenses of white silt (<3mm) and occasional white flecks	4.50	D13			
						5.00 ... becoming very stiff	5.00 5.00-5.45	D14 D15	N16	2, 3 / 4, 4, 4, 4	
						6.00 ... becoming brownish grey mottled orangish brown and bluish grey	6.00-6.45 6.00	U16 D17	42 blows	100% Recovery	
						6.50 ... with frequent selenite crystals (<10mm) and rare off-white shell fragments (<5mm)	6.50 7.00 7.00-7.45	D18 D19 D20	N21	3, 4 / 5, 5, 5, 6	
						8.00 ... with frequent pockets of drak grey silt (<10mm)	8.00-8.45 8.00	U21 D22	50 blows	100% Recovery	
							8.50	D23			
							9.00 9.00 9.00-9.45	D24 D25	N27	4, 4 / 5, 7, 7, 8	
						10.00 ... with occasional selenite crystals (<10mm)	10.00-10.45 10.50	U26 D27	55 blows	100% Recovery	
19/11/21	3.00	Dry	26.67		10.50	End of Borehole					

Issue: FINAL

Logger: JKH

CHD: AN

APRV: OS

Log Print Date & Time:

30/03/2022 10:50

SPT Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

ARCHWAY ENGINEERING (UK) LTD
AINLEYS INDUSTRIAL ESTATE
ELLAND
WEST YORKSHIRE
HX5 9JP

SPT Hammer Ref: AR3698
Test Date: 15/07/2021
Report Date: 15/07/2021
File Name: AR3698.spt
Test Operator: JL

Instrumented Rod Data

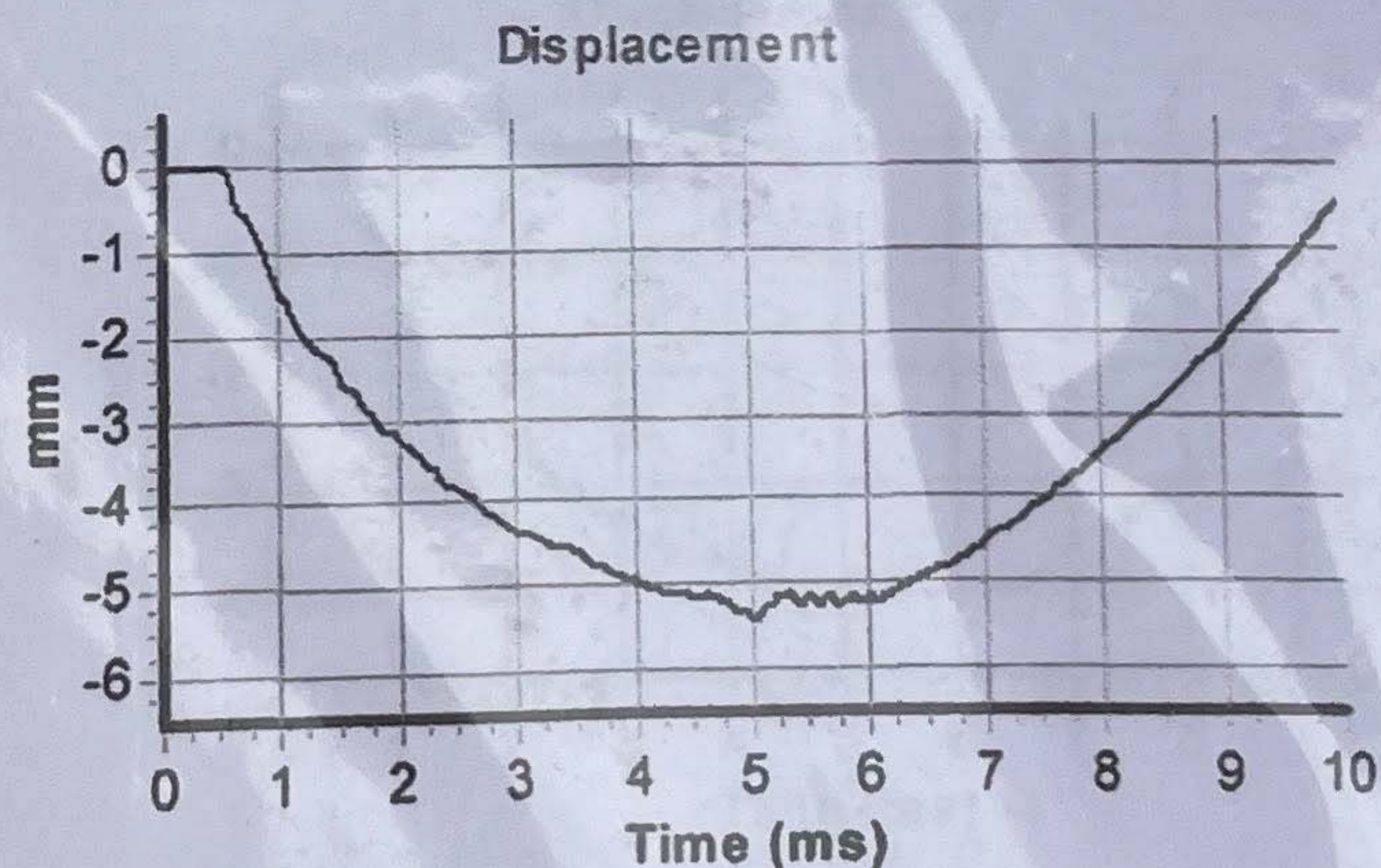
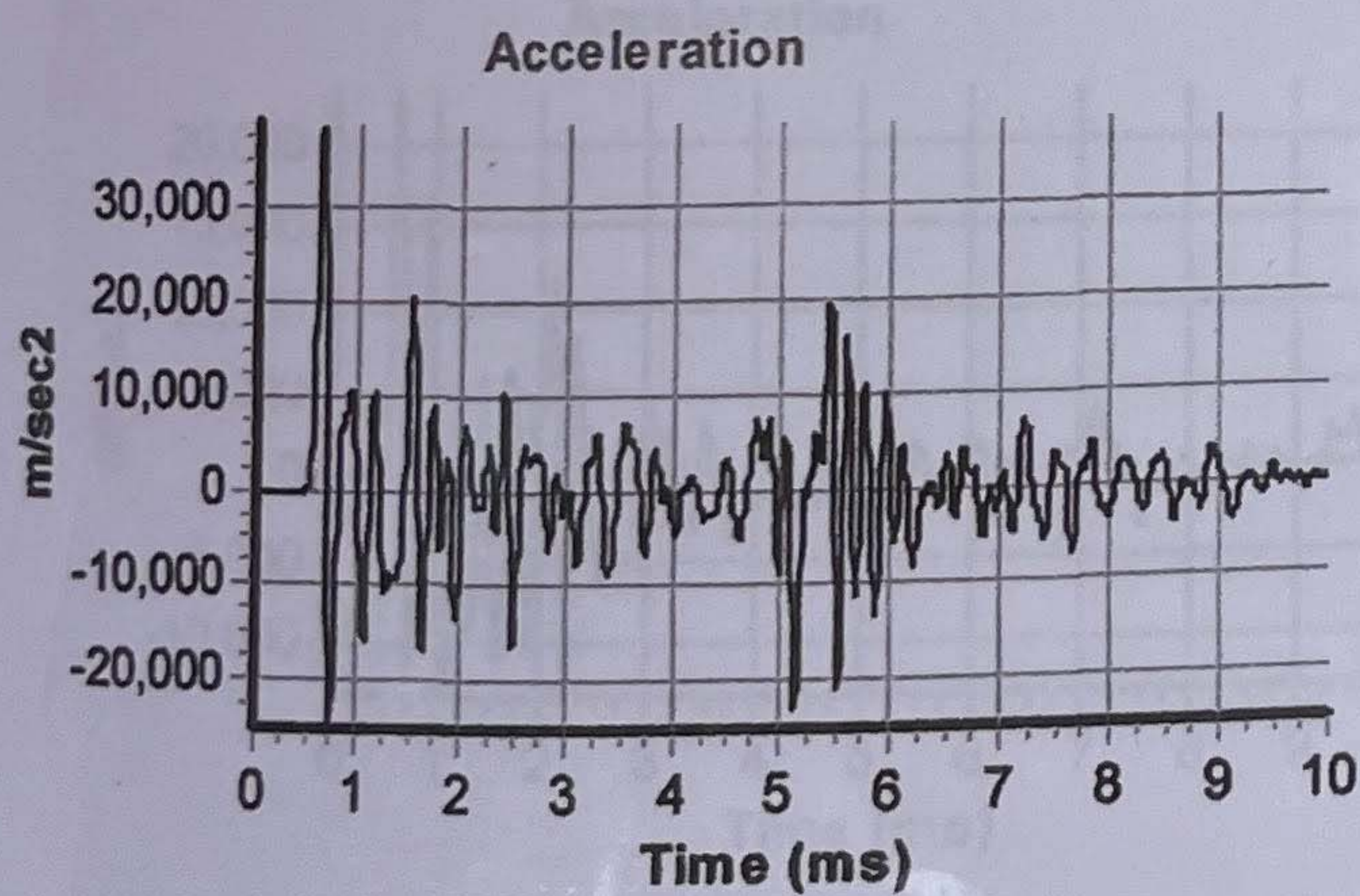
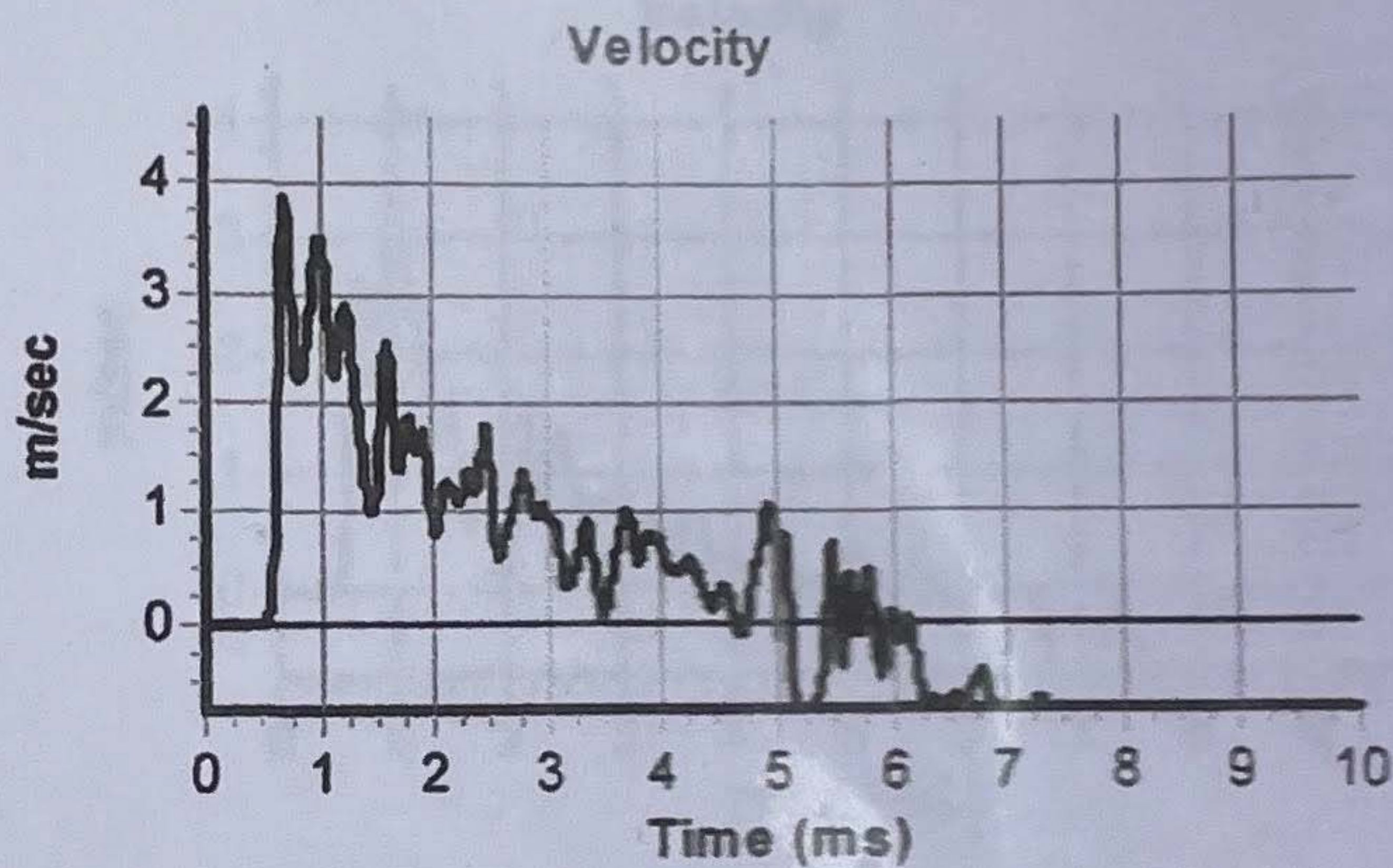
Diameter d_r (mm): 54
Wall Thickness t_r (mm): 6.0
Assumed Modulus E_a (GPa): 200
Accelerometer No.1: 7080
Accelerometer No.2: 11609

SPT Hammer Information

Hammer Mass m (kg): 63.5
Falling Height h (mm): 760
SPT String Length L (m): 10.0

Comments / Location

B H DRILLING SERVICES LTD - 76384



Calculations

Area of Rod A (mm^2): 905
Theoretical Energy E_{theor} (J): 473
Measured Energy E_{meas} (J): 354

Energy Ratio E_r (%): **75**

Signed: J. LOCK
Title: FITTER

The recommended calibration interval is 12 months

9. DYNAMIC SAMPLING BOREHOLE LOGS

Project

Haringey Civic Centre

Job No

21/3628

Date Started

18/11/21

Ground Level (mOD)

35.56

Co-Ordinates

E 530783.85 N 190779.71

Final Depth

4.00m

Client

Haringey Council

Plant Used

Dynamic Sampling

Sheet

1 of 1

PROGRESS			STRATA				SAMPLES & TESTS			Field Records	Instrument/Backfill
Date	Casing	Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth (m)	Type No	Test Result		
18/11/21		Dry	35.36		0.20	TOPSOIL.					
					(0.40)	Dark brown slightly gravelly sandy CLAY with occasional roots (<10mm). Gravel comprises subangular to subrounded fine to coarse brick, concrete, ceramic and glass fragments. (MADE GROUND)	0.30 0.30 0.30 0.30	ES1 D1A B2		VOC 0ppm	
			34.96		0.60		0.70 0.70 0.70 0.70	ES3 D3A B4		VOC 0ppm	
18/11/21		Dry				Firm, orangish brown mottled dark grey and orange slightly gravelly CLAY with occasional pockets of selenite crystals and roots (<5mm). Gravel is well rounded fine to medium flint. (THAMES GROUP: WEATHERED CLAY FORMATION)	1.20 1.20-1.40 1.20 1.20 1.40-1.55 1.55-2.00	ES5 D5A B6 D7 B8		VOC 0.1ppm	
					(3.40)	1.20 ... becoming stiff mottled bluish grey with occasional pockets of light brown fine to medium sand (<50mm), pockets of selenite crystals (<20mm), silt nodules (<10mm) and rootlets	2.00 2.00-2.20 2.20-2.35 2.35-2.85	ES9 D10 B11		VOC 0.1ppm	
						1.25 - 1.60 ... with 1No root (350mmx10mm)					
						2.40 ... with occasional pockets of orange fine sand (<40mm)	2.85-3.00 3.00-3.40	D12 B13			
						3.40 - 3.55 ... with a band of extremely weak, red, light yellowish brown angular to subangular fine to coarse gravel size claystone fragments	3.60-3.60	D14			
18/11/21	2.00	Dry	31.56		4.00	End of Borehole					

DYNAMIC SAMPLING RECOVERY

From	To	Diameter (mm)	Recovery (%)
1.20	2.00	87	100
2.00	3.00	87	100
3.00	4.00	77	100

GENERAL REMARKS

1. An inspection pit was hand excavated to 1.20m depth prior to boring commencing.
2. Ø110mm casing used from ground level to 2.00m depth.
3. Borehole backfilled with bentonite pellets between 4.00m and 1.20m and soil arisings between 1.20m and ground level.

KEY: Drilled By: ES-Environmental Sample (Tub, Vial, Jar), U38-38mm Diameter Undisturbed Sample, U36-36mm Diameter Undisturbed Sample D-Disturbed Sample, B-Bulk Sample, C-Core Sample, W-Water Sample, R-Root Sample AZCL: Assumed Zone of Core Loss
V-Shear Vane, PP-Pocket Penetrometer, MP-Mackintosh Probe, VOC-Volatile Organic Compounds
All depths are in metres, all diameters in millimetres, water strike rise time in minutes. For details of abbreviations see Key

Issue: FINAL

Driller: DE

Logger: JS

CHD: AN

APRV: OS

Log Print Date & Time: 30/03/2022 13:14

AGS

Log Scale: 5 m per page

Project

Haringey Civic Centre

Job No

21/3628

Date Started

18/11/21

Ground Level (mOD)

35.88

Co-Ordinates

E 530810.71 N 190782.58

Final Depth

1.10m

Client

Haringey Council

Plant Used

Hand Excavated

Sheet

1 of 1

STRATA

SAMPLES & TESTS

Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth	Type No	Test Result	Field Records
	35.68		0.20	TOPSOIL.				
	35.28		0.60	Dark brown gravelly sandy CLAY with occasional roots (<100mm). Gravel comprises angular to subangular fine to coarse brick, concrete and glass fragments. (MADE GROUND)	0.30 0.30 0.30 0.30	ES1 D1A B2		VOC 0ppm
	34.78		1.10	Dark brown mottled dark grey and orange slightly gravelly sandy CLAY with occasional roots (<5mm). Gravel comprises rounded fine to medium brick and concrete fragments. (MADE GROUND)	0.70 0.70 0.70 0.70	ES3 D3A B4		VOC 0ppm
				End of Trial Pit	1.10			... Pit aborted at 1.10m depth (see Remarks)

GENERAL REMARKS

1. An inspection pit was hand excavated prior to borehole boring commencing.
2. Inspection pit was dry and stable.
3. Inspection pit was aborted at 1.10m depth due presence of clay pipe. Pit location moved to position WS02A.
4. Inspection pit backfilled with soil arisings and made good upon completion.

Issue: FINAL

Driller: DE

Logger: IP

CHD: AN

APRV: OS

Log Print Date & Time:

30/03/2022 13:15

Project

Haringey Civic Centre

Job No

21/3628

Date Started

18/11/21

Ground Level (mOD)

35.90

Co-Ordinates

E 530808.56 N 190782.86

Final Depth

1.10m

Client

Haringey Council

Plant Used

Hand Excavated

Sheet

1 of 1

STRATA

SAMPLES & TESTS

Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth	Type No	Test Result	Field Records
	35.70		(0.20) 0.20	TOPSOIL.				
	35.30		(0.40) 0.60	Dark brown gravelly sandy CLAY with occasional roots (<100mm). Gravel comprises angular to subangular fine to coarse brick, concrete and glass fragments. (MADE GROUND)				
	34.80		(0.50) 1.10	Dark brown mottled dark grey and orange slightly gravelly sandy CLAY with occasional roots (<5mm). Gravel comprises rounded fine to medium brick and concrete fragments. (MADE GROUND)				
				End of Trial Pit	1.10			... Pit aborted at 1.10m depth (see Remarks)

GENERAL REMARKS

1. An inspection pit was hand excavated prior to borehole boring commencing.
2. Inspection pit was dry and stable.
3. Inspection pit was aborted at 1.10m depth due presence of clay pipe. Pit location moved to position WS02B.
4. Inspection pit backfilled with soil arisings and made good upon completion.

Issue: FINAL

Driller: DE

Logger: IP

CHD: AN

APRV: OS

Log Print Date & Time:

30/03/2022 13:15

Project

Haringey Civic Centre

Job No

21/3628

Date Started

18/11/21

Date Completed

18/11/21

Ground Level (mOD)

35.79

Co-Ordinates

E 530803.90 N 190780.58

Final Depth

6.00m

Client

Haringey Council

Plant Used

Dynamic Sampling

Sheet

1 of 2

PROGRESS			STRATA				SAMPLES & TESTS			Field Records	Instrument/Backfill
Date	Casing	Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth (m)	Type No	Test Result		
18/11/21		Dry	35.59		0.20	TOPSOIL.					
					(0.40)	Dark brown clayey fine to coarse SAND and GRAVEL with occasional roots (<10mm). Gravel comprises angular to subangular fine to coarse brick, concrete and slate fragments.	0.30 0.30 0.30 0.30	ES1 D1A B2		VOC 0ppm	
			35.19		0.60	(MADE GROUND)	0.70 0.70 0.70 0.70	ES3 D3A B4		VOC 0ppm	
			34.89		0.90	Dark brown mottled grey and orange slightly gravelly slightly sandy CLAY with roots (<10mm). Gravel is subangular to subrounded fine to medium brick fragments.	1.00 1.00 1.00 1.00	ES5 D5A B6		VOC 0ppm	
18/11/21		Damp				(MADE GROUND)	1.20 1.20-1.60 1.60-1.75 1.75-2.00	ES7 D8 B9		VOC 0.3ppm	
						Soft to firm, brown mottled grey, orange and grey slightly gravelly slightly sandy CLAY with occasional roots (<5mm). Gravel is angular to subangular fine to medium flint.	2.00 2.00-2.20 2.25-2.45 2.50-3.00	ES10 D11 B12		VOC 0.1ppm	
						(THAMES GROUP: WEATHERED CLAY FORMATION)	3.15-3.50 3.50-4.00 4.00-4.25 4.50-5.00	D13 B14 D15 B16			
						1.20 ... becoming firm, orangish brown mottled bluish grey with occasional silt nodules (<15mm), rootlets and white flecks					
						1.25 - 1.55 ... with 1No root (300mmx25mm)					
						1.60 ... becoming firm to stiff					
						2.10 ... with occasional pockets of orange fine sand (<40mm) and lenses of selenite crystals (<10mm)					
						3.00 ... becoming slightly micaceous					
						3.20 ... with occasional pockets of selenite crystals (<20mm)					
						3.70 - 3.82 ... becoming extremely closely fissured. Fissures are randomly orientated, planar, smooth, polished					
						4.65 - 4.90 ... becoming extremely closely fissured. Fissures are randomly orientated, planar, smooth, polished					

DYNAMIC SAMPLING RECOVERY

From	To	Diameter (mm)	Recovery (%)
1.20	2.00	87	100
2.00	3.00	87	100
3.00	4.00	77	100
4.00	5.00	67	100
5.00	6.00	67	100

GENERAL REMARKS

- An inspection pit was hand excavated to 1.20m depth prior to boring commencing.
- Ø110mm casing used from ground level to 2.00m depth.
- Borehole backfilled with bentonite pellets between 6.00m and 1.20m and soil arisings between 1.20m and ground level.

KEY: Drilled By: ES-Environmental Sample (Tub, Vial, Jar), U38-38mm Diameter Undisturbed Sample, U36-36mm Diameter Undisturbed Sample D-Disturbed Sample, B-Bulk Sample, C-Core Sample, W-Water Sample, R-Root Sample AZCL: Assumed Zone of Core Loss
V-Shear Vane, PP-Pocket Penetrometer, MP-Mackintosh Probe, VOC-Volatile Organic Compounds
All depths are in metres, all diameters in millimetres, water strike rise time in minutes. For details of abbreviations see Key

Issue: FINAL

Driller: DE

Logger: IP

CHD: AN

APRV: OS

Log Print Date & Time: 30/03/2022 13:14



Log Scale: 5 m per page

Project

Haringey Civic Centre

Job No
21/3628

Date Started 18/11/21
Date Completed 18/11/21

Ground Level (mOD)
35.79

Co-Ordinates
E 530803.90 N 190780.58

Final Depth
6.00m

Client
Haringey Council

Plant Used
Dynamic Sampling

Sheet
2 of 2

PROGRESS			STRATA				SAMPLES & TESTS			Field Records	Instrument/Backfill
Date	Casing	Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth (m)	Type No	Test Result		
18/11/21	2.00	Dry	29.79		6.00	5.00 ... becoming brown mottled orangish brown	5.25-5.75	B18			
						5.20 - 5.50 ... becoming extremely closely to very closely fissured. Fissures are randomly orientated, planar, smooth, polished	5.75-6.00	D19			
						End of Borehole					

DYNAMIC SAMPLING RECOVERY				GENERAL REMARKS
From	To	Diameter (mm)	Recovery (%)	

KEY: Drilled By: ES-Environmental Sample (Tub, Vial, Jar), U38-38mm Diameter Undisturbed Sample, U36-36mm Diameter Undisturbed Sample D-Disturbed Sample, B-Bulk Sample, C-Core Sample, W-Water Sample, R-Root Sample AZCL: Assumed Zone of Core Loss
V-Shear Vane, PP-Pocket Penetrometer, MP-Mackintosh Probe, VOC-Volatile Organic Compounds
All depths are in metres, all diameters in millimetres, water strike rise time in minutes. For details of abbreviations see Key

Issue: FINAL	Driller: DE	Logger: IP	CHD: AN	APRV: OS	Log Print Date & Time: 30/03/2022 13:14	
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Project

Haringey Civic Centre

Job No

21/3628

Date Started

19/11/21

Date Completed

19/11/21

Ground Level (mOD)

36.87

Co-Ordinates

E 530820.93 N 190725.66

Final Depth

6.00m

Client

Haringey Council

Plant Used

Dynamic Sampling

Sheet

1 of 2

PROGRESS			STRATA				SAMPLES & TESTS			Field Records	Instrument/Backfill
Date	Casing	Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth (m)	Type No	Test Result		
19/11/21		Dry				Grass over soft to firm, dark brownish grey mottled orangish brown gravelly slightly sandy silty CLAY with occasional roots and rootlets. Gravel comprises angular to rounded fine to coarse flint, brick, concrete, asphalt, coal and clinker fragments. Sand is fine to medium. (MADE GROUND)	0.00 0.00-0.50 0.00-0.50 0.00-0.50	ES1 D2 B3		VOC 0ppm	
			36.27		0.60		0.50 0.50-1.20 0.50-1.20 0.50-1.20	ES4 D5 B6		VOC 0ppm	
19/11/21		Dry				Soft to firm, orangish brown mottled grey slightly gravelly slightly sandy CLAY with frequent roots and rootlets. Gravel is angular to subrounded fine to coarse flint. Sand is fine to medium. (THAMES GROUP: WEATHERED LONDON CLAY)	1.30 1.30-1.50 1.50-1.60 1.60-2.00	ES7 D8 B9		VOC 0.4ppm	
						1.20 ... becoming firm to stiff, orangish brown mottled bluish grey with occasional silt nodules (<10mm), rootlets and brown flecks. Gravel becoming fine to medium	2.00 2.00-2.20 2.20-2.30 2.30-2.80	ES10 D11 B12		VOC 1.3ppm	
						1.25 ... with 1No wood fragment (<60mm)					
						1.64 - 1.87 ... with frequent pockets of light brown fine to medium sandy silt (<80mm)					
						1.87 - 2.05 ... becoming very gravelly. Gravel is angular to subrounded fine to coarse flint	2.85-3.00 3.00-3.60	D13 B14			
						3.00 ... becoming extremely closely fissured with rare to occasional white flecks. Fissures are subhorizontal, planar, smooth, polished					
						3.33 ... becoming slightly micaceous	3.60-3.80	D15			
							4.00-4.30	D16			
							4.30-5.00	B17			
						4.28 ... with occasional pockets of selenite crystals (<20mm)	5.00-5.30	D18			

DYNAMIC SAMPLING RECOVERY

From	To	Diameter (mm)	Recovery (%)
1.20	2.00	87	100
2.00	3.00	87	100
3.00	4.00	77	100
4.00	5.00	67	100
5.00	6.00	67	100

GENERAL REMARKS

1. An inspection pit was hand excavated to 1.20m depth prior to boring commencing.
2. Ø110mm casing used from ground level to 2.00m depth.
3. Ø50mm groundwater monitoring pipe installed at 1.50m, slotted between 1.00m and 1.50m depth.
4. Borehole backfilled with bentonite pellets between 6.00m and 1.60m, pea shingle between 1.60m and 1.00m and bentonite pellets between 1.00m and 0.20m depth. Concrete with a stopcock cover installed from 0.20m to ground level.

KEY: Drilled By: ES-Environmental Sample (Tub, Vial, Jar), U38-38mm Diameter Undisturbed Sample, U36-36mm Diameter Undisturbed Sample D-Disturbed Sample, B-Bulk Sample, C-Core Sample, W-Water Sample, R-Root Sample AZCL: Assumed Zone of Core Loss
V-Shear Vane, PP-Pocket Penetrometer, MP-Mackintosh Probe, VOC-Volatile Organic Compounds
All depths are in metres, all diameters in millimetres, water strike rise time in minutes. For details of abbreviations see Key

Issue: FINAL

Driller: JU

Logger: JKH/ JS

CHD: AN

APRV: OS

Log Print Date & Time: 30/03/2022 13:14

AGS

Log Scale: 5 m per page

Project

Haringey Civic Centre

Job No
21/3628

Date Started 19/11/21
Date Completed 19/11/21

Ground Level (mOD)
36.87

Co-Ordinates
E 530820.93 N 190725.66

Final Depth
6.00m

Client
Haringey Council

Plant Used
Dynamic Sampling

Sheet
2 of 2

PROGRESS			STRATA				SAMPLES & TESTS			Field Records	Instrument/ Backfill
Date	Casing	Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth (m)	Type No	Test Result		
19/11/21	2.00	Dry	30.87		6.00	5.68 - 5.73 ... with a band of yellow and brown fine sandy silt and occasional selenite crystals (<5mm) End of Borehole	5.30-6.00	B19			

DYNAMIC SAMPLING RECOVERY				GENERAL REMARKS
From	To	Diameter (mm)	Recovery (%)	

KEY: Drilled By: ES-Environmental Sample (Tub, Vial, Jar), U38-38mm Diameter Undisturbed Sample, U36-36mm Diameter Undisturbed Sample D-Disturbed Sample, B-Bulk Sample, C-Core Sample, W-Water Sample, R-Root Sample AZCL: Assumed Zone of Core Loss
V-Shear Vane, PP-Pocket Penetrometer, MP-Mackintosh Probe, VOC-Volatile Organic Compounds
All depths are in metres, all diameters in millimetres, water strike rise time in minutes. For details of abbreviations see Key

Issue: FINAL	Driller: JU	Logger: JKH/ JS	CHD: AN	APRV: OS	Log Print Date & Time: 30/03/2022 13:14	
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Project

Haringey Civic Centre

Job No

21/3628

Date Started

19/11/21

Date Completed

19/11/21

Ground Level (mOD)

37.25

Co-Ordinates

E 530835.43 N 190682.24

Final Depth

4.00m

Client

Haringey Council

Plant Used

Dynamic Sampling

Sheet

1 of 1

PROGRESS			STRATA				SAMPLES & TESTS			Field Records	Instrument/Backfill
Date	Casing	Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth (m)	Type No	Test Result		
19/11/21		Dry				Grass over soft, dark brownish grey slightly gravelly sandy silty CLAY with frequent roots and rootlets. Gravel comprises angular to rounded fine to coarse flint and brick fragments. Sand is fine to coarse.	0.00 0.00-0.50 0.00-0.50 0.00-0.50	ES1 D2 B3		VOC 4.3ppm	
			36.65		(0.60)	(MADE GROUND)	0.60 0.60-1.00 0.60-1.00 0.60-1.00	ES4 D5 B6		VOC 0ppm	
19/11/21		Dry				Firm, orangish brown mottled grey slightly gravelly silty CLAY with frequent roots and rootlets. Gravel is angular to subrounded fine to coarse flint. (THAMES GROUP: WEATHERED LONDON CLAY)	1.20 1.20-1.45 1.45-1.90	ES7 B8		VOC 0.1ppm	
						1.20 ... becoming firm to stiff, orangish brown mottled bluish grey with occasional pockets of orange fine sand (<20mm), silt nodules (<15mm) and white flecks with no gravel	1.90-2.00 2.00 2.00-2.25	D9 ES10		VOC 0.2ppm	
						2.15 ... with a parting of orange fine sand (<5mm)	2.25-2.50	D11			
						2.25 - 2.40 ... becoming slightly gravelly. Gravel is subangular to subrounded fine to coarse flint	2.50-3.00	B12			
							3.00-3.25	D13			
							3.40-4.00	B14			
19/11/21	2.00	Dry	33.25		4.00	End of Borehole					

DYNAMIC SAMPLING RECOVERY

From	To	Diameter (mm)	Recovery (%)
1.20	2.00	87	100
2.00	3.00	87	100
3.00	4.00	77	100

GENERAL REMARKS

1. An inspection pit was hand excavated to 1.20m depth prior to boring commencing.
2. Ø110mm casing used from ground level to 2.00m depth.
3. Borehole backfilled with bentonite pellets between 4.00m and 1.20m and soil arisings between 1.20m and ground level.

KEY: Drilled By: ES-Environmental Sample (Tub, Vial, Jar), U38-38mm Diameter Undisturbed Sample, U36-36mm Diameter Undisturbed Sample D-Disturbed Sample, B-Bulk Sample, C-Core Sample, W-Water Sample, R-Root Sample AZCL: Assumed Zone of Core Loss
V-Shear Vane, PP-Pocket Penetrometer, MP-Mackintosh Probe, VOC-Volatile Organic Compounds
All depths are in metres, all diameters in millimetres, water strike rise time in minutes. For details of abbreviations see Key

Issue: FINAL

Driller: JU

Logger: JKH/JS

CHD: AN

APRV: OS

Log Print Date & Time: 30/03/2022 13:14

Project

Haringey Civic Centre

Job No

21/3628

Date Started

19/11/21

Ground Level (mOD)

37.29

Co-Ordinates

E 530848.34 N 190669.50

Final Depth

4.00m

Client

Haringey Council

Plant Used

Dynamic Sampling

Sheet

1 of 1

PROGRESS			STRATA				SAMPLES & TESTS			Field Records	Instrument/Backfill
Date	Casing	Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth (m)	Type No	Test Result		
19/11/21		Dry	37.21		0.08	Asphalt. (MADE GROUND)					
			36.99		0.30	Reinforced grey CONCRETE.	0.30			VOC 0ppm	
			36.84		0.45	Grey gravelly silty fine to medium SAND with high brick cobble content. Gravel comprises angular to subangular fine to coarse flint and concrete fragments (MADE GROUND)	0.30-0.45 0.30-0.45 0.30-0.45 0.60 0.60-1.00 0.60-1.00 0.60-1.00	ES1 D2 B3		VOC 0ppm	
19/11/21		Dry				Firm, grey mottled yellowish brown and dark grey silty CLAY with frequent roots and rootlets. (THAMES GROUP: WEATHERED LONDON CLAY)	1.20 1.20-1.40 1.40-1.60			VOC 0.4ppm	
						1.20 ... becoming firm to stiff, orangish brown slightly sandy and gravelly with occasional pockets of light brown fine to medium sand (<50mm), silt nodules (<10mm) and rare rootlets. Gravel is angular to rounded fine to coarse flint. Sand is fine to medium	1.60 1.60-1.80 1.80-2.00	ES7 D8		VOC 0.4ppm	
						1.60 ... with occasional pockets of orange fine sand (<50mm) and rootlets	2.00 2.00-2.20 2.20-2.40	ES9 B10		VOC 0.3ppm	
						2.00 ... becoming slightly micaceous	2.40-2.90	B13			
						2.25 ... with 1No silt nodule (<25mm)					
						2.70 ... with a pocket of dark brown fine sand (<35mm) and occasional white flecks	2.90-3.00	D14			
							3.30-3.80	B15			
							3.80-4.00	D16			
19/11/21	2.00	Dry	33.29		4.00	End of Borehole					

DYNAMIC SAMPLING RECOVERY

From	To	Diameter (mm)	Recovery (%)
1.20	2.00	87	100
2.00	3.00	87	100
3.00	4.00	77	100

GENERAL REMARKS

1. An inspection pit was hand excavated to 1.20m depth prior to boring commencing.
2. Ø110mm casing used from ground level to 2.00m depth.
3. Borehole backfilled with bentonite pellets between 4.00m and 1.20m, soil arising between 1.20m and 0.30m and concrete between from 0.30m to ground level.

KEY: Drilled By: ES-Environmental Sample (Tub, Vial, Jar), U38-38mm Diameter Undisturbed Sample, U36-36mm Diameter Undisturbed Sample D-Disturbed Sample, B-Bulk Sample, C-Core Sample, W-Water Sample, R-Root Sample AZCL: Assumed Zone of Core Loss
V-Shear Vane, PP-Pocket Penetrometer, MP-Mackintosh Probe, VOC-Volatile Organic Compounds
All depths are in metres, all diameters in millimetres, water strike rise time in minutes. For details of abbreviations see Key

Issue: FINAL

Driller: JU

Logger: JKH/ JS

CHD: AN

APRV: OS

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AGS

Log Scale: 5 m per page

Project

Haringey Civic Centre

Job No

21/3628

Date Started

18/11/21

Date Completed

18/11/21

Ground Level (mOD)

37.47

Co-Ordinates

E 530826.85 N 190701.49

Final Depth

3.00m

Client

Haringey Council

Plant Used

Dynamic Sampling

Sheet

1 of 1

PROGRESS			STRATA			SAMPLES & TESTS			Field Records	Instrument/Backfill
Date	Casing	Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth (m)	Type No	Test Result	
18/11/21		Dry	37.42		0.05	CONCRETE slab.				
			37.37		0.10	Orangish brown fine to medium SAND. (MADE GROUND)	0.30	ES1	VOC 0ppm	
			37.27		0.20	Reinforced grey CONCRETE.	0.30-0.50	D2		
			36.97		0.50	Dark brownish grey silty fine to medium SAND with medium brick and concrete cobble content and occasional pockets of brownish grey clay (<100mm). Gravel comprises angular to subangular fine to coarse flint, brick, concrete and asphalt fragments. (MADE GROUND)	0.30-0.50	B3		
					(0.30)		0.70	ES4	VOC 0ppm	
					(0.70)		0.70-0.90	D5		
							0.70-0.90	B6		
18/11/21		Dry	36.27		1.20	Soft to firm, dark brownish grey slightly sandy gravelly silty CLAY. Gravel comprises angular to subangular fine to coarse flint, brick, concrete and coal fragments. (MADE GROUND)	1.20	ES7	VOC 0.3ppm	
					(1.80)		1.20			
							1.40-1.50	D8		
							1.50-2.00	B9		
							2.00	ES10	VOC 0.4ppm	
							2.00-2.20			
							2.30-2.40	D11		
							2.40-3.00	B12		
18/11/21	2.00	Dry	34.47		3.00	Firm to stiff, orangish brown mottled bluish grey slightly gravelly CLAY with occasional roots, rootlets and brown flecks. Gravel is angular to subrounded fine to medium flint. (THAMES GROUP: WEATHERED LONDON CLAY) 1.54 ... with occasional silt nodules (<15mm) 1.60 ... becoming orangish brown 1.75 ... with occasional selenite crystals (<20mm) 2.00 ... becoming orangish brown mottled bluish grey 2.22 - 2.27 ... with a band of light brown fine to medium sand and occasional subrounded fine flint gravel End of Borehole				

DYNAMIC SAMPLING RECOVERY

From	To	Diameter (mm)	Recovery (%)
1.20	2.00	87	100
2.00	3.00	87	100

GENERAL REMARKS

1. An inspection pit was hand excavated to 1.20m depth prior to boring commencing.
2. Ø110mm casing used from ground level to 2.00m depth.
3. Ø50mm groundwater monitoring pipe installed at 1.50m, slotted between 1.00m and 1.50m depth.
4. Borehole backfilled with bentonite pellets between 3.00m and 1.50m, pea shingle between 1.50m and 1.00m and bentonite pellets between 1.00m and 0.20m. Concrete with a stopcock cover installed from 0.20m to ground level.

KEY: Drilled By: ES-Environmental Sample (Tub, Vial, Jar), U38-38mm Diameter Undisturbed Sample, U36-36mm Diameter Undisturbed Sample D-Disturbed Sample, B-Bulk Sample, C-Core Sample, W-Water Sample, R-Root Sample AZCL: Assumed Zone of Core Loss
V-Shear Vane, PP-Pocket Penetrometer, MP-Mackintosh Probe, VOC-Volatile Organic Compounds
All depths are in metres, all diameters in millimetres, water strike rise time in minutes. For details of abbreviations see Key

Issue: FINAL

Driller: JU

Logger: JKH/ JS

CHD: AN

APRV: OS

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Project

Haringey Civic Centre

Job No

21/3628

Date Started

17/11/21

Date Completed

18/11/21

Ground Level (mOD)

37.46

Co-Ordinates

E 530837.39 N 190704.24

Final Depth

3.00m

Client

Haringey Council

Plant Used

Dynamic Sampling

Sheet

1 of 1

PROGRESS			STRATA				SAMPLES & TESTS			Field Records	Instrument/Backfill
Date	Casing	Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth (m)	Type No	Test Result		
17/11/21		Dry	37.41		0.05	CONCRETE slab.					
			37.36		0.10	Orangish brown fine to medium SAND. (MADE GROUND)	0.30	ES1		VOC 0.2ppm	
			37.26		0.20		0.30-0.50	D2			
					(0.30)	Reinforced grey CONCRETE.	0.30-0.50	B3			
			36.96		0.50	Brownish grey slightly clayey fine to medium SAND with low brick cobble content. Gravel comprises angular to subangular fine to coarse flint, brick and concrete fragments. (MADE GROUND)	0.70	ES4		VOC 0ppm	
					(0.70)		0.70-0.90	D5			
							0.70-0.90	B6			
17/11/21 18/11/21		Dry Dry	36.26		1.20	Firm, brown and dark grey slightly gravelly sandy silty CLAY. Gravel comprises angular to subangular fine to coarse flint, brick, concrete and asphalt fragments. Sand is fine to medium. (MADE GROUND)	1.20-1.60	B7			
							1.60-1.70	D8		VOC 0.4ppm	
							1.70	ES9			
							1.70-2.00				
					(1.80)	Firm to stiff, orangish brown mottled bluish grey CLAY with occasional brown flecks and rare rootlets. Gravel is angular to subrounded fine to medium flint. (THAMES GROUP: WEATHERED LONDON CLAY)	2.00-2.10	D10		VOC 0.2ppm	
							2.10	ES11			
							2.10-2.30				
							2.30-3.00	B12			
18/11/21	2.00	Dry	34.46		3.00	1.65 - 1.75 ... becoming orangish brown mottled brown 1.75 ... becoming orangish brown 1.90 ... with occasional white silt nodules (<6mm) 2.00 - 2.10 ... with frequent silt nodules (<10mm) 2.16 ... becoming orangish brown mottled bluish grey End of Borehole					

DYNAMIC SAMPLING RECOVERY

From	To	Diameter (mm)	Recovery (%)
1.20	2.00	87	100
2.00	3.00	87	100

GENERAL REMARKS

1. An inspection pit was hand excavated to 1.20m depth prior to boring commencing.
2. Ø110mm casing used from ground level to 2.00m depth.
3. Ø50mm groundwater monitoring pipe installed at 1.50m, slotted between 1.00m and 1.50m depth.
4. Borehole backfilled with bentonite pellets between 3.00m and 1.50m, pea shingle between 1.50m and 1.00m and bentonite pellets between 1.00m and 0.20m. Concrete with a stopcock cover installed from 0.20m to ground level.

KEY: Drilled By: ES-Environmental Sample (Tub, Vial, Jar), U38-38mm Diameter Undisturbed Sample, U36-36mm Diameter Undisturbed Sample D-Disturbed Sample, B-Bulk Sample, C-Core Sample, W-Water Sample, R-Root Sample AZCL: Assumed Zone of Core Loss
V-Shear Vane, PP-Pocket Penetrometer, MP-Mackintosh Probe, VOC-Volatile Organic Compounds
All depths are in metres, all diameters in millimetres, water strike rise time in minutes. For details of abbreviations see Key

Issue: FINAL

Driller: JU

Logger: JKH/ JS

CHD: AN

APRV: OS

Log Print Date & Time: 30/03/2022 13:14



Log Scale: 5 m per page

Project

Haringey Civic Centre

Job No

21/3628

Date Started

18/11/21

Date Completed

18/11/21

Ground Level (mOD)

37.42

Co-Ordinates

E 530850.13 N 190707.47

Final Depth

3.00m

Client

Haringey Council

Plant Used

Dynamic Sampling

Sheet

1 of 1

PROGRESS			STRATA				SAMPLES & TESTS			Field Records	Instrument/Backfill
Date	Casing	Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth (m)	Type No	Test Result		
18/11/21		Dry	37.36		0.06	CONCRETE slab.					
			37.21		0.21	Reinforced grey CONCRETE.					
					(0.39)	VOID.					
			36.82		0.60						
					(0.60)	Firm, orangish brown mottled grey slightly gravelly CLAY. Gravel is angular to subangular fine to medium brick fragments. (MADE GROUND)	0.80 0.80 0.80 0.80	ES1 D2 B3		VOC 0ppm	
18/11/21		Dry	36.22		1.20		1.20 1.20-1.40 1.40-1.80	ES4 B5		VOC 0.6ppm	
					(1.80)	Firm, orangish brown CLAY with occasional silt nodules (<7mm) and rootlets. Gravel is subangular to subrounded fine to medium flint. (THAMES GROUP: WEATHERED LONDON CLAY) 1.20 - 1.35 ... with occasional pockets of drak brown silt (<40mm) 1.73 ... with 1No silt nodule (<20mm) 1.78 ... with a pocket of white silt (<20mm) 2.30 ... becoming firm to stiff, orangish brown mottled bluish greywith occasional pockets of light orangish brown silt (<50mm), lenses of white silt (<20mm) and silt nodules (<10mm)	1.80-2.00 2.00 2.00-2.30 2.30-3.00	D6 ES7 B8		VOC 1.1ppm	
18/11/21	2.00	Dry	34.42		3.00	End of Borehole					

DYNAMIC SAMPLING RECOVERY

From	To	Diameter (mm)	Recovery (%)
1.20	2.00	87	100
2.00	3.00	87	100

GENERAL REMARKS

1. An inspection pit was hand excavated to 1.20m depth prior to boring commencing.
2. Ø110mm casing used from ground level to 2.00m depth.
3. Ø50mm groundwater monitoring pipe installed at 1.50m, slotted between 1.00m and 1.50m depth.
4. Borehole backfilled with bentonite pellets between 3.00m and 1.50m, pea shingle between 1.50m and 1.00m, bentonite pellets between 1.00m and 0.20m. Concrete with a stopcock cover installed from 0.20m to ground level.

KEY: Drilled By: ES-Environmental Sample (Tub, Vial, Jar), U38-38mm Diameter Undisturbed Sample, U36-36mm Diameter Undisturbed Sample D-Disturbed Sample, B-Bulk Sample, C-Core Sample, W-Water Sample, R-Root Sample AZCL: Assumed Zone of Core Loss
V-Shear Vane, PP-Pocket Penetrometer, MP-Mackintosh Probe, VOC-Volatile Organic Compounds
All depths are in metres, all diameters in millimetres, water strike rise time in minutes. For details of abbreviations see Key

Issue: FINAL

Driller: JU

Logger: IP

CHD: AN

APRV: OS

Log Print Date & Time: 30/03/2022 13:14

Project

Haringey Civic Centre

Job No

21/3628

Date Started

19/11/21

Ground Level (mOD)

37.21

Co-Ordinates

E 530869.98 N 190722.75

Final Depth

4.00m

Client

Haringey Council

Plant Used

Dynamic Sampling

Sheet

1 of 1

PROGRESS			STRATA				SAMPLES & TESTS			Field Records	Instrument/Backfill
Date	Casing	Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth (m)	Type No	Test Result		
19/11/21		Dry			(1.20)	Soft, brownish grey slightly gravelly sandy CLAY with low brick cobble content and frequent roots and rootlets. Gravel comprises angular to subangular fine to coarse flint, brick and concrete. Sand is fine to medium. (MADE GROUND)	0.00 0.00-0.50 0.00-0.50 0.00-0.50	ES1 D2 B3		VOC 0ppm	
19/11/21		Dry	36.01		1.20		0.60 0.60-1.00 0.60-1.00 0.60-1.00	ES4 D5 B6		VOC 0ppm	
19/11/21		Dry	35.66		(0.35)	Soft to firm, brown slightly sandy gravelly CLAY with occasional roots and rootlets. Gravel comprises angular to rounded fine to coarse flint, brick, clinker and concrete fragments. Sand is fine to medium. (MADE GROUND)	1.25 1.25-1.45 1.45-1.57 1.55 1.55-1.90	ES7 D8 ES9		VOC 1.5ppm VOC 1.3ppm	
19/11/21		Dry	34.01		(1.65)	Dark brown sandy GRAVEL with occasional roots and slight hydrocarbon odour. Gravel comprises angular to rounded fine to coarse flint, brick, clinker and concrete fragments. Sand is fine to coarse. (MADE GROUND)					
19/11/21	2.00	Dry	33.21		(0.80)	Firm to stiff, orangish brown mottled bluish grey CLAY with rare silt nodules (<5mm), occasional rootlets and white flecks. (THAMES GROUP: WEATHERED CLAY FORMATION) 3.50 ... with a pocket of orange fine to medium sand (<20mm)	3.30 3.30-3.50 3.50-3.65 3.65-4.00	ES10 D11 B12		VOC 2.1ppm	
						End of Borehole					

DYNAMIC SAMPLING RECOVERY

From	To	Diameter (mm)	Recovery (%)
1.20	2.00	87	88
2.00	3.00	87	10
3.00	4.00	77	100

GENERAL REMARKS

- Dynamic sampling carried out from the base of TP05.
- Ø110mm casing used from ground level to 2.00m depth.
- Borehole backfilled with bentonite pellets between 4.00m and 1.20m and soil arisings between 1.20m and ground level.

KEY: Drilled By: ES-Environmental Sample (Tub, Vial, Jar), U38-38mm Diameter Undisturbed Sample, U36-36mm Diameter Undisturbed Sample D-Disturbed Sample, B-Bulk Sample, C-Core Sample, W-Water Sample, R-Root Sample AZCL: Assumed Zone of Core Loss
V-Shear Vane, PP-Pocket Penetrometer, MP-Mackintosh Probe, VOC-Volatile Organic Compounds
All depths are in metres, all diameters in millimetres, water strike rise time in minutes. For details of abbreviations see Key

Issue: FINAL

Driller: JU

Logger: JKH/ JS

CHD: AN

APRV: OS

Log Print Date & Time: 30/03/2022 13:14

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Project

Haringey Civic Centre

Job No
21/3628

Date Started 17/11/21
Date Completed 18/11/21

Ground Level (mOD)
37.56

Co-Ordinates
E 530842.00 N 190758.61

Final Depth
4.00m

Client
Haringey Council

Plant Used
Dynamic Sampling

Sheet
1 of 1

PROGRESS			STRATA				SAMPLES & TESTS			Field Records	Instrument/Backfill
Date	Casing	Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth (m)	Type No	Test Result		
18/11/21		Dry	37.46		0.10	Asphalt.					
			37.33		0.23	(MADE GROUND)	0.23			VOC 0ppm	
						Reinforced grey CONCRETE.	0.23-0.45	ES1			
							0.23-0.45	D2			
			37.11		0.45	Dark grey gravelly silty fine to coarse SAND with low brick cobble content. Gravel comprises angular to subangular fine to coarse brick, asphalt and concrete fragments	0.23-0.45	B3			
						(MADE GROUND)	0.70			VOC 0ppm	
							0.70-0.90	ES4			
							0.70-0.90	D5			
							0.70-0.90	B6			
18/11/21		Dry	36.36		1.20	Firm, brown mottled dark grey slightly gravelly slightly sandy silty CLAY. Gravel comprises angular to subangular fine to coarse flint, brick and concrete fragments.	1.20-1.40	D7			
						(MADE GROUND)	1.40			VOC 0.6ppm	
							1.40-1.60	ES8			
							1.60-1.80	B9			
			35.56		2.00	Firm, orangish brown gravelly sandy CLAY with occasional silt nodules (<6mm), rare roots and rootlets and bands of organic matter (<60mm). Gravel comprises angular to subrounded fine to coarse flint, brick, clinker and concrete fragments. Sand is fine to coarse.	2.00-2.20	D10			
						(MADE GROUND)	2.20			VOC 0.2ppm	
						1.60 ... with 1No brick cobble	2.20-2.50	ES11			
						Firm, brown CLAY with occasional silt nodules (<10mm) and rootlets. (THAMES GROUP: WEATHERED LONDON CLAY)	2.50-3.00	B12			
						2.00 - 2.25 ... with occasional band of organic matter (<30mm)	3.00-3.20	D13			
						2.40 ... becoming firm to stiff	3.20-3.80	B14			
						2.40 - 2.90 ... becoming sandy and gravelly. Gravel is angular to rounded fine to coarse flint					
						2.50 - 2.90 ... becoming brown mottled bluish grey					
						2.90 - 3.57 ... becoming very gravelly. Gravel is angular to rounded fine to coarse flint	3.80-4.00	D15			
18/11/21	2.00	Dry	33.56		4.00	3.57 ... becoming orangish brown mottled bluish grey with a parting of light brown fine sand					
						3.90 ... with a pocket of orange fine sand (<50mm)					
						End of Borehole					

DYNAMIC SAMPLING RECOVERY

From	To	Diameter (mm)	Recovery (%)
1.20	2.00	87	100
2.00	3.00	87	100
3.00	4.00	77	100

GENERAL REMARKS

- Dynamic sampling carried out from the base of TP06.
- Ø110mm casing used from ground level to 2.00m depth.
- Borehole backfilled with bentonite pellets between 4.00m and 1.20m, soil arisings between 1.20m and 0.20m and concrete between from 0.20m to ground level.

KEY: Drilled By: ES-Environmental Sample (Tub, Vial, Jar), U38-38mm Diameter Undisturbed Sample, U36-36mm Diameter Undisturbed Sample D-Disturbed Sample, B-Bulk Sample, C-Core Sample, W-Water Sample, R-Root Sample AZCL: Assumed Zone of Core Loss
V-Shear Vane, PP-Pocket Penetrometer, MP-Mackintosh Probe, VOC-Volatile Organic Compounds
All depths are in metres, all diameters in millimetres, water strike rise time in minutes. For details of abbreviations see Key

Issue: FINAL

Driller: JU

Logger: JKH/ JS

CHD: AN

APRV: OS

Log Print Date & Time: 30/03/2022 13:14



10. TRIAL PIT LOGS & SKETCHES

Project

Haringey Civic Centre

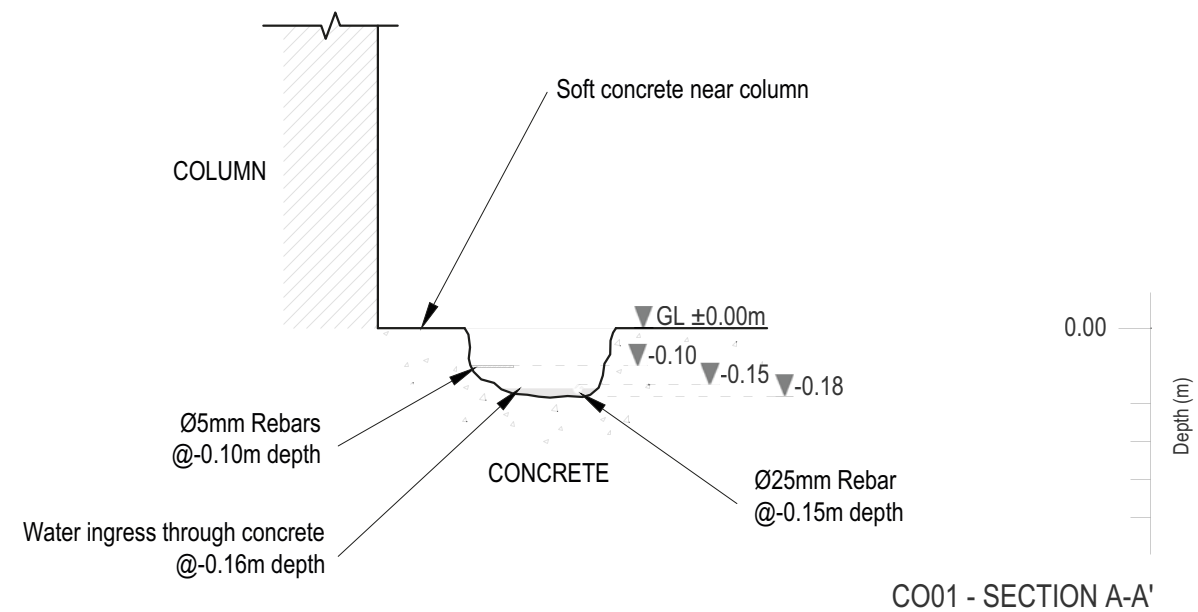
Job No 21/3628	Date Started 01/12/21 Date Completed 01/12/21	Ground Level (mOD) 34.07	Co-Ordinates E 530857.29 N 190740.44	Final Depth 0.18m
Client Haringey Council	Plant Used Hand Excavated	Sheet 1 of 1		

STRATA					SAMPLES & TESTS			Field Records
Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth	Type No	Test Result	
	33.89		(0.18)	Light grey reinforced CONCRETE, clasts are subangular to subrounded fine to coarse flint gravel (max. spacing between aggregates <5mm).				
			0.10	0.10 ... with Ø5mm rebars				
			0.18	0.15 ... with Ø25mm rebars				
				End of Trial Pit				

GENERAL REMARKS

- Pit was stable.
- Water encountered at 0.16m depth.
- Pit dimensions: 0.40m x 0.40m x 0.18m deep.
- Pit reinstated and made good upon completion.
- Also refer to C001 sketch.

Issue: FINAL	Driller: JU	Logger: CS	CHD: AN	APRV: OS	Log Print Date & Time: 30/03/2022 10:56	
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CO01 - SECTION A-A'



Birth (indicative)



KEY

NOTES

1. This drawing should not be scaled, only use annotated dimensions.
2. All levels referred to Ground Level (GL).
3. Also refer to CO01 log.

ISSUES

[illegible]

ent Haringey Council

Project Haringey Civic Centre

Address High Road, Haringey N22 8LE

an title C001
Plan and Section

Project no	21/3628	Drawing no	08	Revision	00
Scale	1:20	Sheet size	A3 (297.00x420.00mm)		
Date	January 2022	Status	Issue		

Upped by CS	Drawn by AC	Checked by CS	Passed by OS
-----------------------	-----------------------	-------------------------	------------------------

Project

Haringey Civic Centre

Job No

21/3628

Date Started

19/11/21

Date Completed

01/12/21

Ground Level (mOD)

37.36

Co-Ordinates

E 530819.69 N 190703.26

Final Depth

1.00m

Client

Haringey Council

Plant Used

Hand Excavated

Sheet

1 of 1

STRATA

SAMPLES & TESTS

Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth	Type No	Test Result	Field Records
	37.26		0.10	Paving slab (0.05m) over orangish brown fine to medium SAND. (MADE GROUND)				
	37.06		0.30	Grey reinforced CONCRETE.				
			(0.70)	Reddish brown gravelly slightly sandy COBBLES. Cobbles are angular brick and concrete. Gravel comprises angular to subangular fine to coarse flint, brick and concrete fragments. (MADE GROUND)	0.70			... Pit aborted at 0.70m depth (see Remarks)
	36.36		1.00	End of Trial Pit				

GENERAL REMARKS

1. Weather was overcast.
2. Trial pit was dry and stable.
3. Trial pit dimensions: 0.75m x 0.30m x 1.00m deep.
4. Trial pit aborted at 0.70m depth due to presence of concrete footing.
5. Trial pit backfilled with soil arisings and made good upon completion.
6. Also refer to TP01 sketch.

Issue: FINAL

Driller: JU

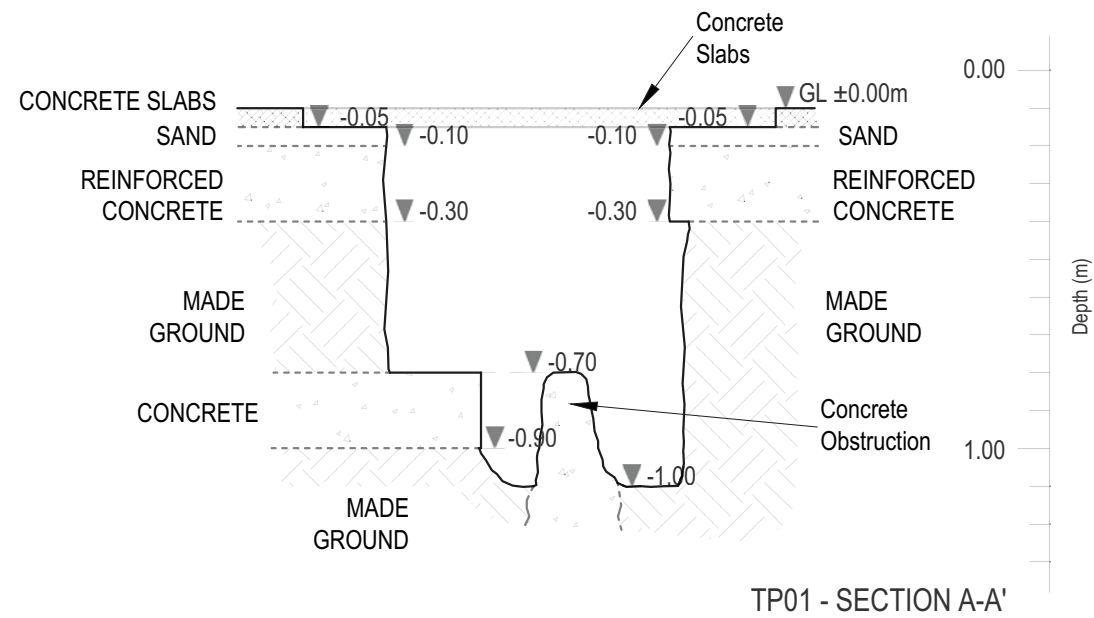
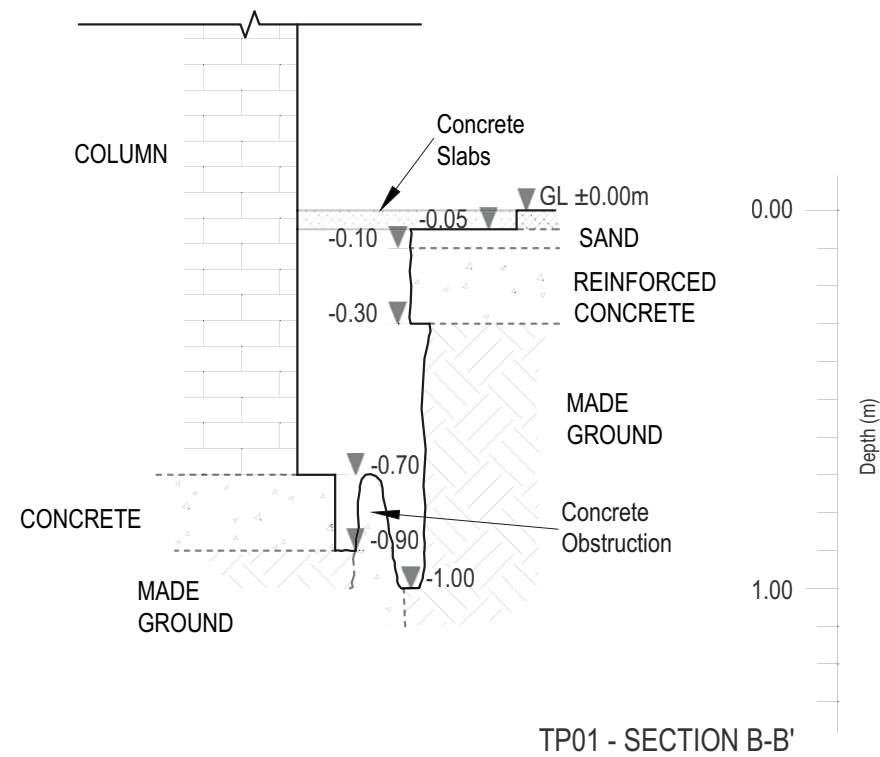
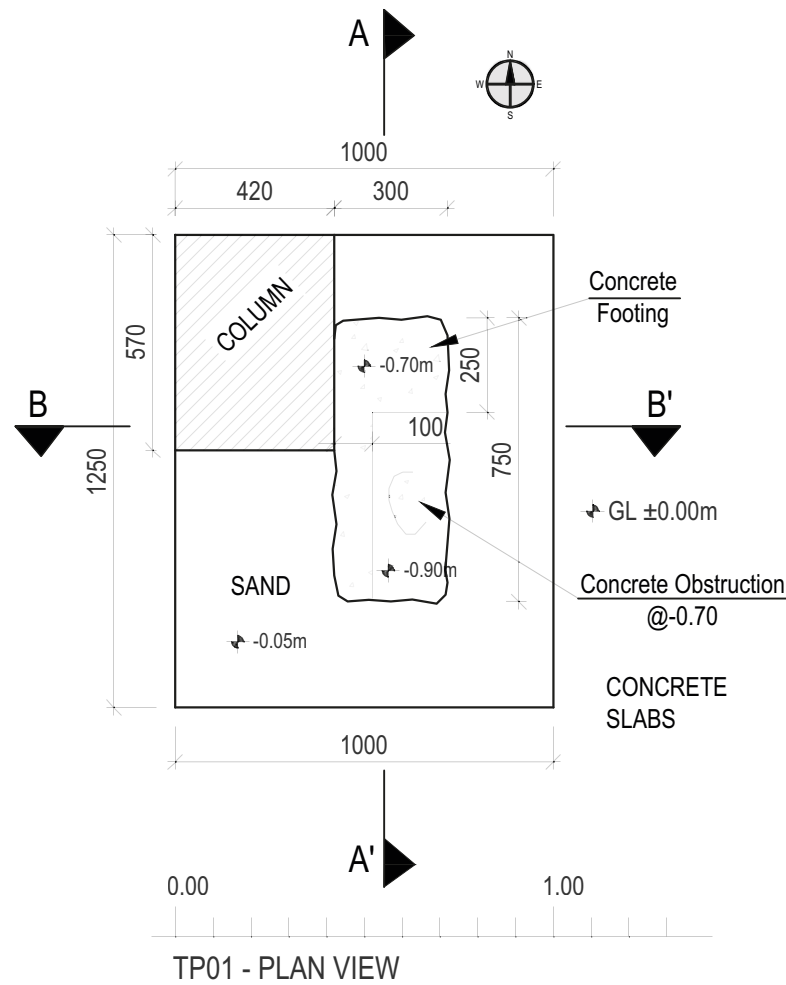
Logger: JKH

CHD: AN

APRV: OS

Log Print Date & Time:

30/03/2022 10:56



NOTES

1. This drawing should not be scaled, only use annotated dimensions.
2. All levels referred to Ground Level (GL).
3. Also refer to TP01 log.

ISSUES

Revision	Details	By	Date
00	Drawing completed and corrected	ST	14/01/22

Client Haringey Council

Project Haringey Civic Centre

Address High Road, Haringey N22 8LE

Plan title TP01
Plan and Section

Project no	21/3628	Drawing no	02	Revision	00
Scale	1:20	Sheet size	A3 (297.00x420.00mm)		
Date	January'22	Status	Issue		

Logged by	Drawn by	Checked by	Passed by
JKH	ST	OS	OS

Project

Haringey Civic Centre

Job No

21/3628

Date Started

19/11/21

Date Completed

01/12/21

Ground Level (mOD)

37.38

Co-Ordinates

E 530829.37 N 190705.63

Final Depth

1.10m

Client

Haringey Council

Plant Used

Hand Excavated

Sheet

1 of 1

STRATA

SAMPLES & TESTS

Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth	Type No	Test Result	Field Records
	37.28		0.10	Paving slab (0.05m) over orangish brown fine to medium SAND. (MADE GROUND)				
	37.08		0.30	Grey reinforced CONCRETE.				
	36.78		0.60	Reddish brown gravelly slightly sandy COBBLES. Cobbles are angular brick and concrete. Gravel comprises angular to subrounded fine to coarse flint, brick and concrete fragments. Sand is fine to coarse. (MADE GROUND)	0.60	ES1		VOC 0ppm
			(0.30)		0.60-0.80	D2		
			(0.50)	Firm, grey mottled brown slightly gravelly sandy silty CLAY. Gravel comprises angular to subangular fine to coarse flint, brick, concrete and asphalt fragments. (MADE GROUND)	0.60-0.80	B3		
	36.28		1.10	End of Trial Pit				

GENERAL REMARKS

1. Weather was overcast.
2. Trial pit was dry and stable.
3. Trial pit dimensions: 0.50m x 0.35m x 1.10m deep..
4. Trial pit backfilled with soil arisings and made good upon completion.
5. Also refer to TP02 sketch.

Issue: FINAL

Driller: JU

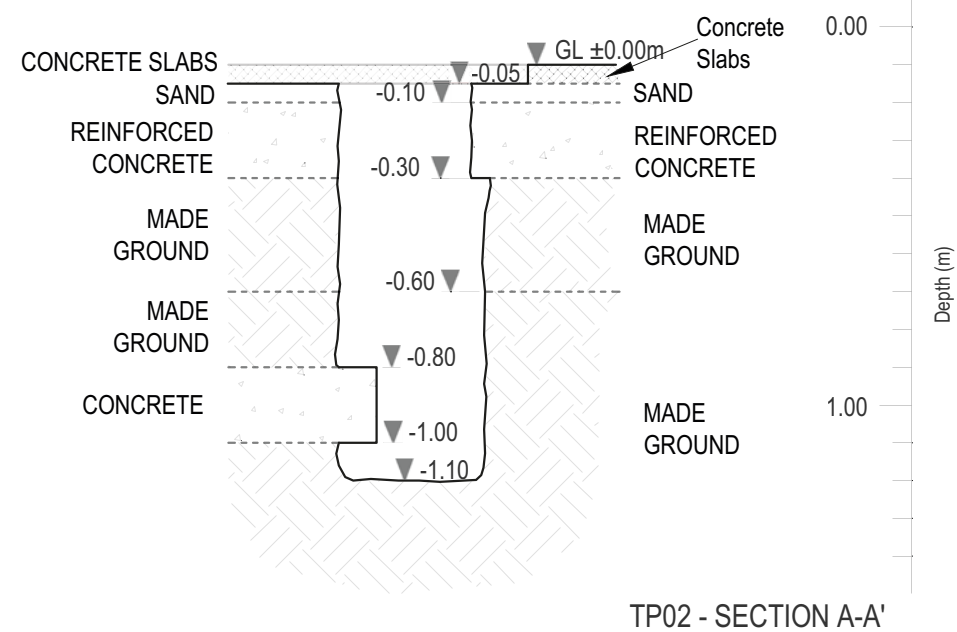
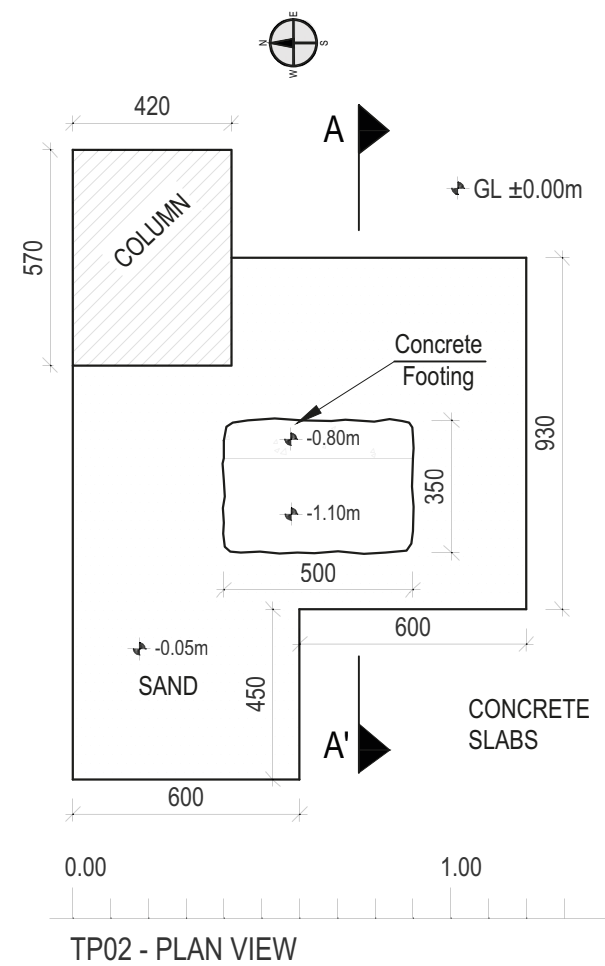
Logger: JKH

CHD: AN

APRV: OS

Log Print Date & Time:

30/03/2022 10:56



NOTES

1. This drawing should not be scaled, only use annotated dimensions.
2. All levels referred to Ground Level (GL).
3. Also refer to TP02 log.

ISSUES

Revision	Details	By	Date
00	Drawing completed and corrected	ST	14/01/22

Client **Haringey Council**

Project **Haringey Civic Centre**

Address **High Road, Haringey N22 8LE**

Plan title **TP02
Plan and Section**

Project no	21/3628	Drawing no	03	Revision	00
Scale	1:20	Sheet size	A3 (297.00x420.00mm)		
Date	January'22	Status	Issue		

Logged by	Drawn by	Checked by	Passed by
JKH	ST	OS	OS

Project

Haringey Civic Centre

Job No

21/3628

Date Started

22/11/21

Date Completed

24/11/21

Ground Level (mOD)

37.39

Co-Ordinates

E 530841.92 N 190701.01

Final Depth

1.45m

Client

Haringey Council

Plant Used

Hand Excavated

Sheet

1 of 1

STRATA

SAMPLES & TESTS

Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth	Type No	Test Result	Field Records
	37.29		0.10	Paving slab (0.05m) over orangish brown fine to medium SAND. (MADE GROUND)				
	37.04		0.35	Grey reinforced CONCRETE.				
	36.64		0.75	Reddish brown and grey gravelly slightly sandy COBBLES. Cobbles are angular brick and concrete. Gravel comprises angular to subangular fine to coarse flint, brick and concrete fragments. Sand is fine to coarse. (MADE GROUND)	0.75			
				Brown very gravelly fine to medium SAND. Gravel comprises angular to subangular fine to coarse flint, brick, concrete and asphalt fragments. (MADE GROUND)	0.75-1.10	ES1		
					0.75-1.10	D2		
					0.75-1.10	B3		
	35.94		1.45	End of Trial Pit				

VOC 0ppm

GENERAL REMARKS

1. Weather was overcast.
2. Trial pit was dry and stable.
3. Trial pit dimensions: 0.60m x 0.50m x 1.45m deep.
4. Trial pit backfilled with soil arisings and made good upon completion.
5. Also refer to TP03 sketch.

Issue: FINAL

Driller: JU

Logger: JKH

CHD: AN

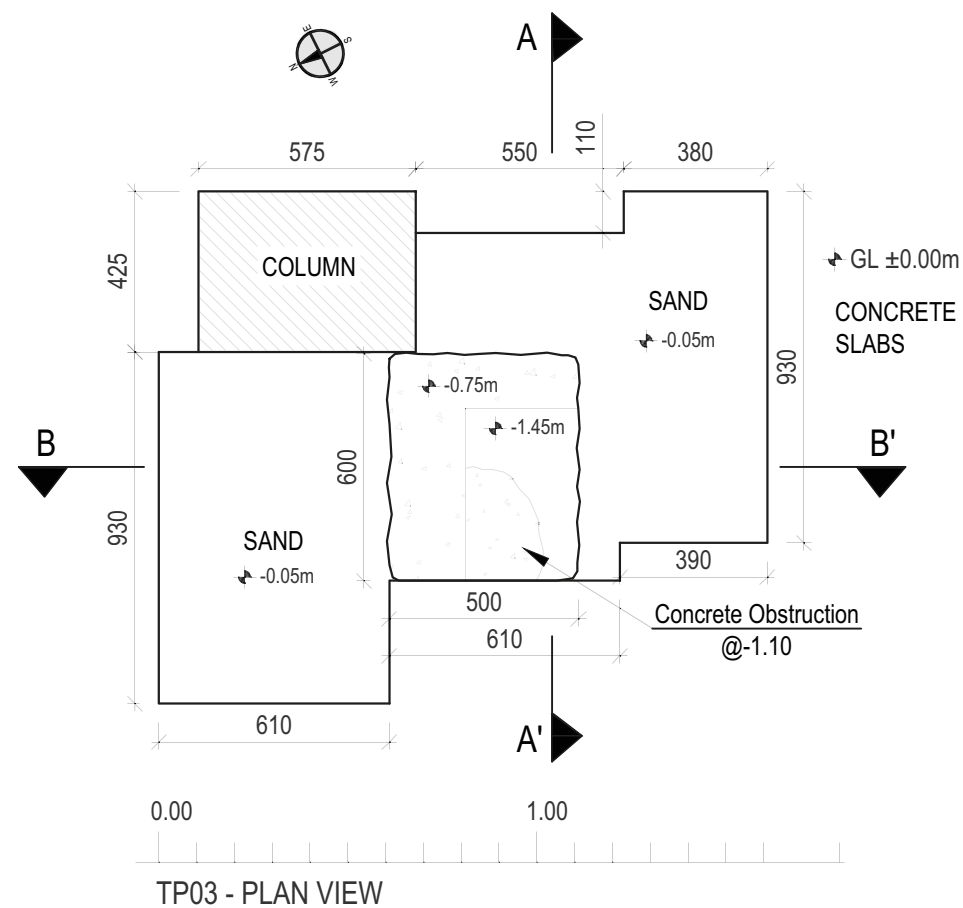
APRV: OS

Log Print Date & Time:

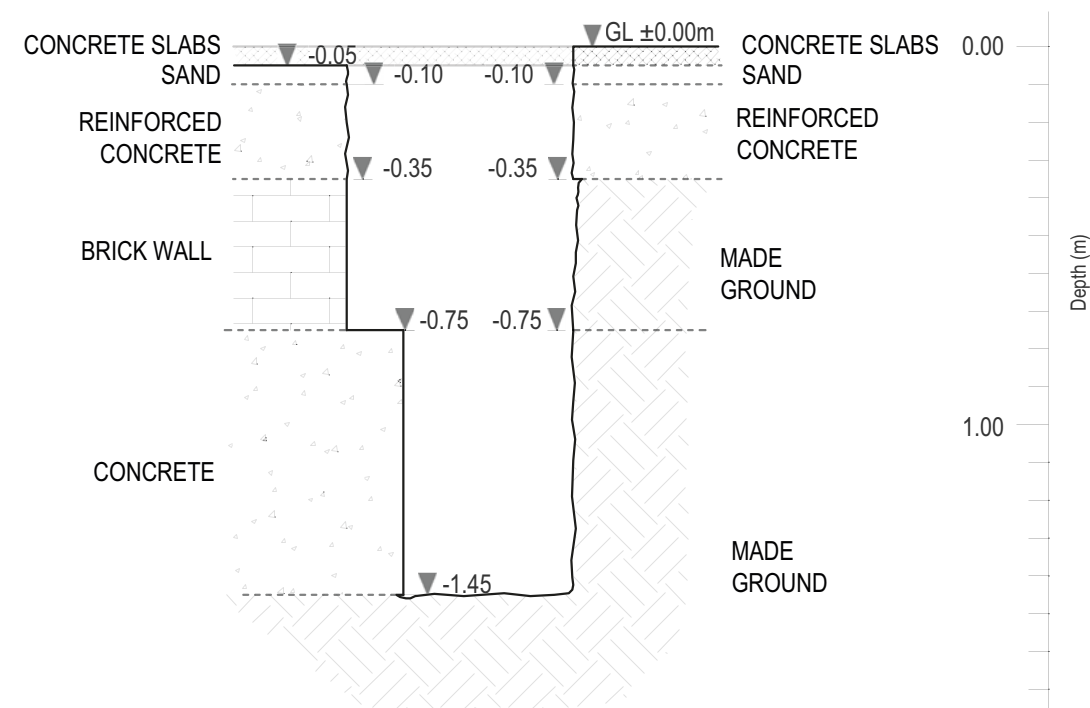
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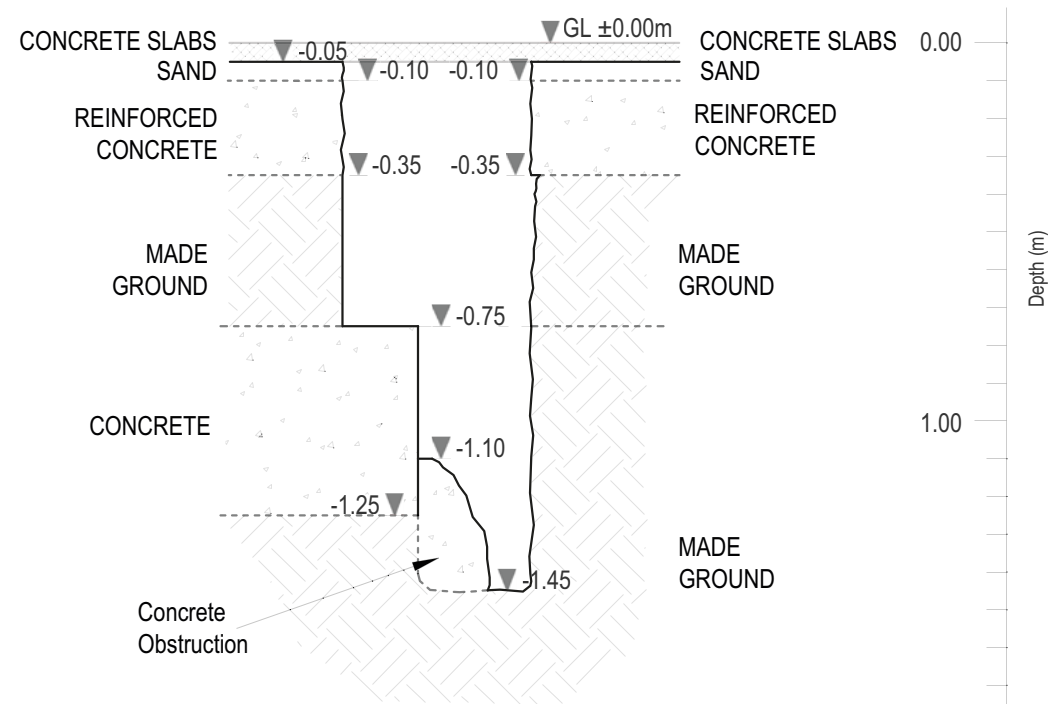
Log Scale: 5 m per page



TP03 - PLAN VIEW



TP03 - SECTION A-A'



TP03 - SECTION B-B'

NOTES

1. This drawing should not be scaled, only use annotated dimensions.
2. All levels referred to Ground Level (GL).
3. Also refer to TP03 log.

ISSUES

Revision	Details	By	Date
00	Drawing completed and corrected	ST	14/01/22

Client **Haringey Council**

Project **Haringey Civic Centre**

Address **High Road, Haringey N22 8LE**

Plan title **TP03
Plan and Section**

Project no	21/3628	Drawing no	04	Revision	00
Scale	1:20	Sheet size	A3 (297.00x420.00mm)		
Date	January'22	Status	Issue		

Logged by	Drawn by	Checked by	Passed by
JKH	ST	OS	OS

Project

Haringey Civic Centre

Job No

21/3628

Date Started

22/11/21

Date Completed

01/12/21

Ground Level (mOD)

37.35

Co-Ordinates

E 530852.86 N 190703.70

Final Depth

1.35m

Client

Haringey Council

Plant Used

Hand Excavated

Sheet

1 of 1

STRATA

SAMPLES & TESTS

Water	Level (mOD)	Legend	Depth (Thickness)	Strata Description	Depth	Type No	Test Result	Field Records
	37.25		0.10	Paving slab (0.05m) over orangish brown fine to medium SAND.				
	37.10		0.25	(MADE GROUND)				
				Grey reinforced CONCRETE.				
				VOID. (No backfill material)				
			(0.65)					
	36.45		0.90					
			(0.45)	Loose, orangish brown gravelly silty fine to medium SAND with low brick cobble content. Gravel comprises angular to rounded fine to coarse flint, brick and concrete fragments.	0.90 0.90-1.35 0.90 0.90-1.35	ES1 D2 B3		VOC 0.6ppm
	36.00		1.35	(MADE GROUND)				
				End of Trial Pit				

GENERAL REMARKS

1. Weather was overcast.
2. Trial pit was dry and stable.
3. Trial pit dimensions: 0.50m x 0.42m x 1.35m deep.
4. Trial pit backfilled with soil arisings and made good upon completion.
5. Also refer to TP04 sketch.

Issue: FINAL

Driller: JU

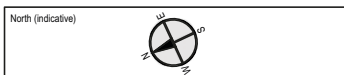
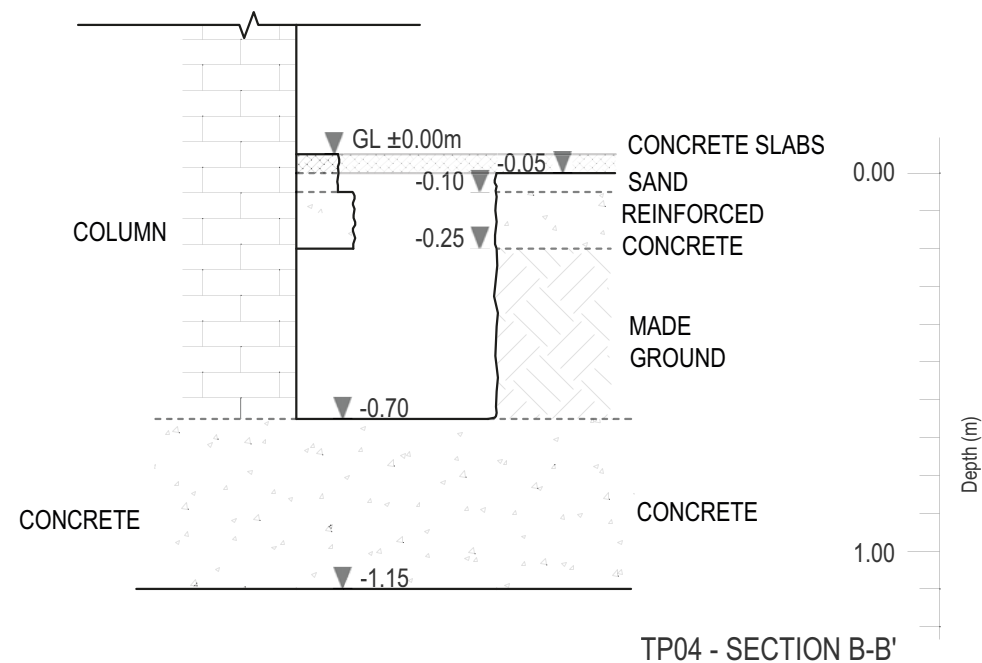
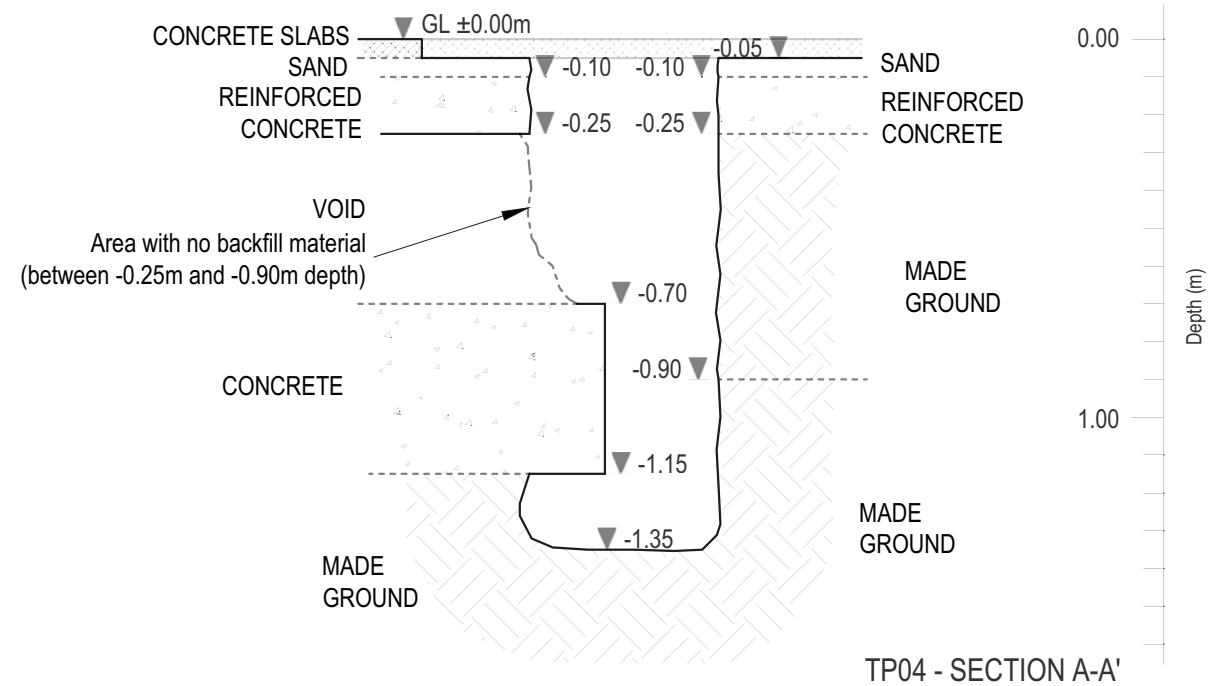
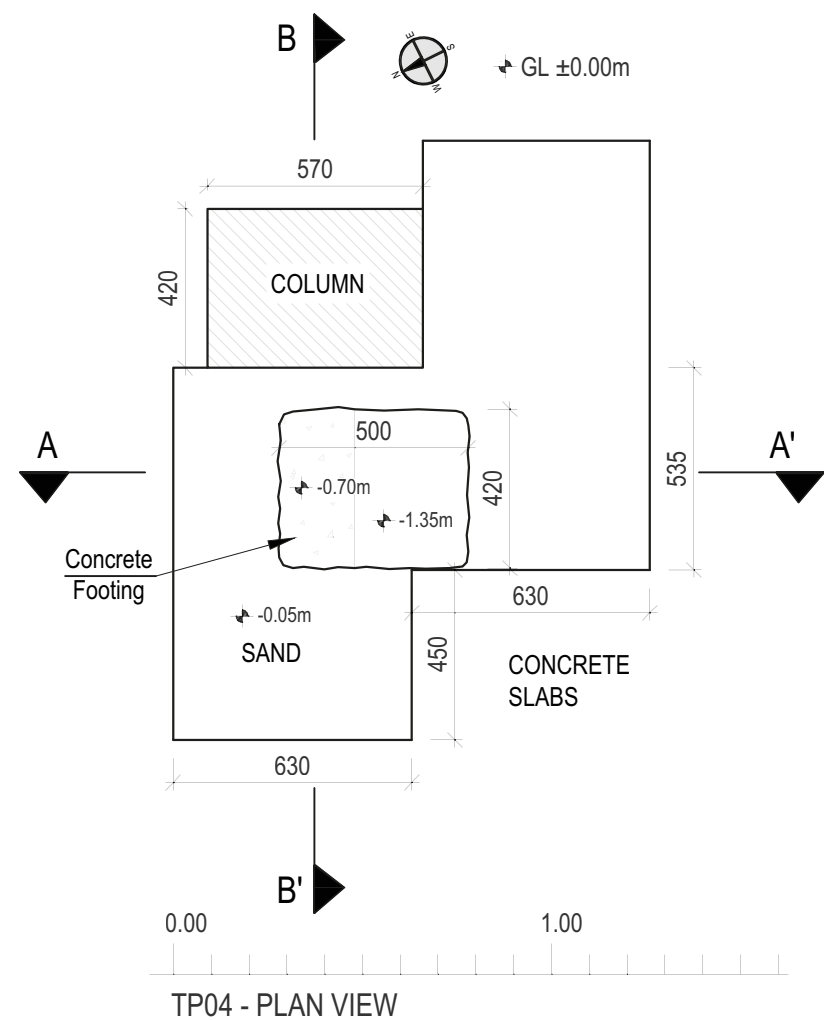
Logger: JKH

CHD: AN

APRV: OS

Log Print Date & Time:

30/03/2022 10:56



KEY



NOTES

1. This drawing should not be scaled, only use annotated dimensions.
2. All levels referred to Ground Level (GL).
3. Also refer to TP04 log.

ISSUES

Revision	Details	By	Date
00	Drawing completed and corrected	ST	14/01/22

Client Haringey Council

Project Haringey Civic Centre

Address High Road, Haringey N22 8LE

Plan title TP04
Plan and Section

Project no 21/3628 Drawing no 05 Revision 00

Scale 1:20 Sheet size A3 (297.00x420.00mm)

Date January'22 Status Issue

Logged by JKH Drawn by ST Checked by OS Passed by OS

11. DIAMOND COREHOLE LOGS & SKETCHES

Project

Haringey Civic Centre

Job No

21/3628

Date Started

01/12/21

Ground Level (mOD)

34.07

Co-Ordinates

E 530853.36 N 190752.12

Final Length

3.30m

Client

Haringey Council

Plant Used

Coring/Hand Auger

Sheet

1 of 1

STRATA

SAMPLES & TESTS

Water	Level (mOD)	Legend	Length (Thickness)	Strata Description	Depth	Type No	Test Result	Field Records
			(0.80)	Concrete screed (0.05m) over light grey reinforced CONCRETE, clasts are angular to rounded fine to coarse flint (max. spacing between aggregates <5mm). Frequent air voids (<10mm). 0.12 ... with Ø10mm rebar	0.00-0.85	C1A		
	33.28		0.80					
	33.27		0.85	Light grey CONCRETE, clasts are angular to subrounded fine to coarse flint (max. spacing between aggregates <5mm).	0.85	D1		... Hand auger below 0.85m depth
			(2.45)	Soft, brown mottled bluish grey slightly micaceous silty CLAY. (THAMES GROUP: WEATHERED CLAY FORMATION) 1.30 ... with pockets of orangish brown silt (<5mm)	1.30	D2		
				1.80 ... becoming firm	1.80	D3		
					2.30	D4		
					2.80	D5		
	30.77		3.30	3.20 ... with pockets of selenite crystals	3.30	D6		
				End of Core				

GENERAL REMARKS

1. Location was diamond cored to 0.85m depth, hand augered thereafter to 3.30m depth.
2. Location was backfilled with soil arisings and concrete and made good upon completion.

Issue: FINAL

Driller: JU

Logger: CS

CHD: AN

APRV: OS

Log Print Date & Time: 30/03/2022 10:55

Project

Haringey Civic Centre

Job No

21/3628

Date Started

24/11/21

Date Completed

24/11/21

Ground Level (mOD)

34.07

Co-Ordinates

E 530860.39 N 190723.43

Final Length

2.90m

Client

Haringey Council

Plant Used

Coring/Hand Auger

Sheet

1 of 1

STRATA

SAMPLES & TESTS

Water	Level (mOD)	Legend	Length (Thickness)	Strata Description	Depth	Type No	Test Result	Field Records
	33.22		(0.85)	Concrete screed (0.05m) over light grey reinforced CONCRETE, clasts are angular to rounded fine to coarse flint (max. spacing between aggregates <5mm). Frequent air voids (<10mm). 0.13 ... with 1No Ø12mm rebar	0.00-0.85	C1A		
			(2.05)	Soft, brown mottled bluish grey slightly micaceous silty CLAY. (THAMES GROUP: WEATHERED CLAY FORMATION)	1.00	D1		... Hand auger below 0.85m depth
					1.50	D2		
					2.00	D3		
				2.00 ... becoming firm, brown mottled bluish grey and orangish brown with occasional selenite crystals (<10mm) and white flecks	2.50	D4		
	31.17		2.90	End of Core	2.90	D5		... Location aborted at 2.90 (see Remarks)

GENERAL REMARKS

1. Location was diamond cored to 0.85m depth, hand augered thereafter to 2.90m depth.
2. Location aborted at 2.90m depth due to hard ground.
3. Location was backfilled with soil arisings and concrete and made good upon completion.

Issue: FINAL

Driller: JU

Logger: JKH

CHD: AN

APRV: OS

Log Print Date & Time: 30/03/2022 10:55

Project

Haringey Civic Centre

Job No

21/3628

Date Started

24/11/21

Ground Level (mOD)

34.07

Co-Ordinates

E 530862.74 N 190718.22

Final Length

3.50m

Client

Haringey Council

Plant Used

Coring/Hand Auger

Sheet

1 of 1

STRATA

SAMPLES & TESTS

Water	Level (mOD)	Legend	Length (Thickness)	Strata Description	Depth	Type No	Test Result	Field Records
	33.23		0.84	Concrete screed (0.05m) over light grey reinforced CONCRETE, clasts are angular to well rounded fine to coarse flint (max. spacing between aggregates <10mm). Frequent air voids (<20mm). 0.11 ... with 2No Ø10mm rebar 0.15 - 0.55 ... becoming honey combed	0.00-0.84	C1A		
	30.57		2.66	Firm brown mottled bluish grey slightly gravelly slightly micaceous silty CLAY. Gravel is angular to subangular fine to medium flint. (THAMES GROUP: WEATHERED CLAY FORMATION) 1.30 ... with rare decomposed roots and rootlets 2.50 ... becoming stiff 3.00 ... becoming brown with occasional selenite crystals (<10mm)	1.00 1.50 2.00 2.50 3.00	D1 D2 D3 D4 D5		... Hand auger below 0.84m depth
			3.50	End of Core	3.50	D6		... Location aborted at 3.50 (see Remarks)

GENERAL REMARKS

1. Location was diamond cored to 0.84m depth, hand augered thereafter to 3.50m depth.
2. Location aborted at 3.50m depth due to hard ground.
3. Location was backfilled with soil arisings and concrete and made good upon completion.

Issue: FINAL

Driller: JU

Logger: JKH

CHD: AN

APRV: OS

Log Print Date & Time: 30/03/2022 10:55

Project

Haringey Civic Centre

Job No

21/3628

Date Started

01/12/21

Ground Level (mOD)

Co-Ordinates

E 530864.01 N 190740.37

Final Length

0.63m

Client

Haringey Council

Plant Used

Diamond Core

Sheet

1 of 1

STRATA

SAMPLES & TESTS

Water	Level (mOD)	Legend	Length (Thickness)	Strata Description	Depth	Type No	Test Result	Field Records
			(0.63)	Light grey CONCRETE, clasts are angular to subrounded fine to coarse flint gravel (max. spacing between aggregates <5mm). Rare air voids.				
			0.63 0.63	Brown subangular to subrounded medium to coarse flint GRAVEL. (MADE GROUND) End of Core	0.63	D1		

GENERAL REMARKS

- Ø100mm horizontal core through wall 0.58m from floor level (34.65 mOD).
- Also refer to TP05-CC sketch.

Issue: FINAL

Driller: JU

Logger: CS

CHD: AN

APRV: OS

Log Print Date & Time: 30/03/2022 10:55

Project

Haringey Civic Centre

Job No

21/3628

Date Started

01/12/21

Date Completed

01/12/21

Ground Level (mOD)

Co-Ordinates

E 530864.01 N 190740.37

Final Length

0.63m

Client

Haringey Council

Plant Used

Diamond Core

Sheet

1 of 1

STRATA

SAMPLES & TESTS

Water	Level (mOD)	Legend	Length (Thickness)	Strata Description	Depth	Type No	Test Result	Field Records
			0.01/	Grey CONCRETE creed.				
			(0.62)	Light grey reinforced CONCRETE, clasts are angular to subrounded fine to coarse flint gravel (max. spacing between aggregates <5mm). Rare air voids. 0.07 .. with 1No Ø10mm rebar				
			0.63	0.55 .. with 1No Ø10mm rebar				
			0.63/	Brown subangular to subrounded medium to coarse flint GRAVEL. (MADE GROUND)	0.63	D1		
				End of Core				

GENERAL REMARKS

- Ø100mm horizontal core through wall 1.32m from floor level (35.39 mOD).
- Also refer to TP05-CC sketch.

Issue: FINAL

Driller: JU

Logger: CS

CHD: AN

APRV: OS

Log Print Date & Time: 30/03/2022 10:55

Project

Haringey Civic Centre

Job No

21/3628

Date Started

01/12/21

Ground Level (mOD)

Co-Ordinates

E 530864.01 N 190740.37

Final Length

0.64m

Client

Haringey Council

Plant Used

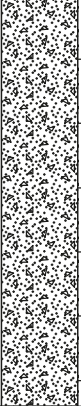
Diamond Core

Sheet

1 of 1

STRATA

SAMPLES & TESTS

Water	Level (mOD)	Legend	Length (Thickness)	Strata Description	Depth	Type No	Test Result	Field Records
			(0.64)	Light grey CONCRETE, clasts are angular to subrounded fine to coarse flint gravel (max. spacing between aggregates <5mm). Rare air voids.				
			0.64					
			0.64	Brown subangular to subrounded medium to coarse flint GRAVEL. (MADE GROUND) End of Core	0.64	D1		

GENERAL REMARKS

- Ø100mm horizontal core through wall 1.88m from floor level (35.95 mOD).
- Also refer to TP05-CC sketch.

Issue: FINAL

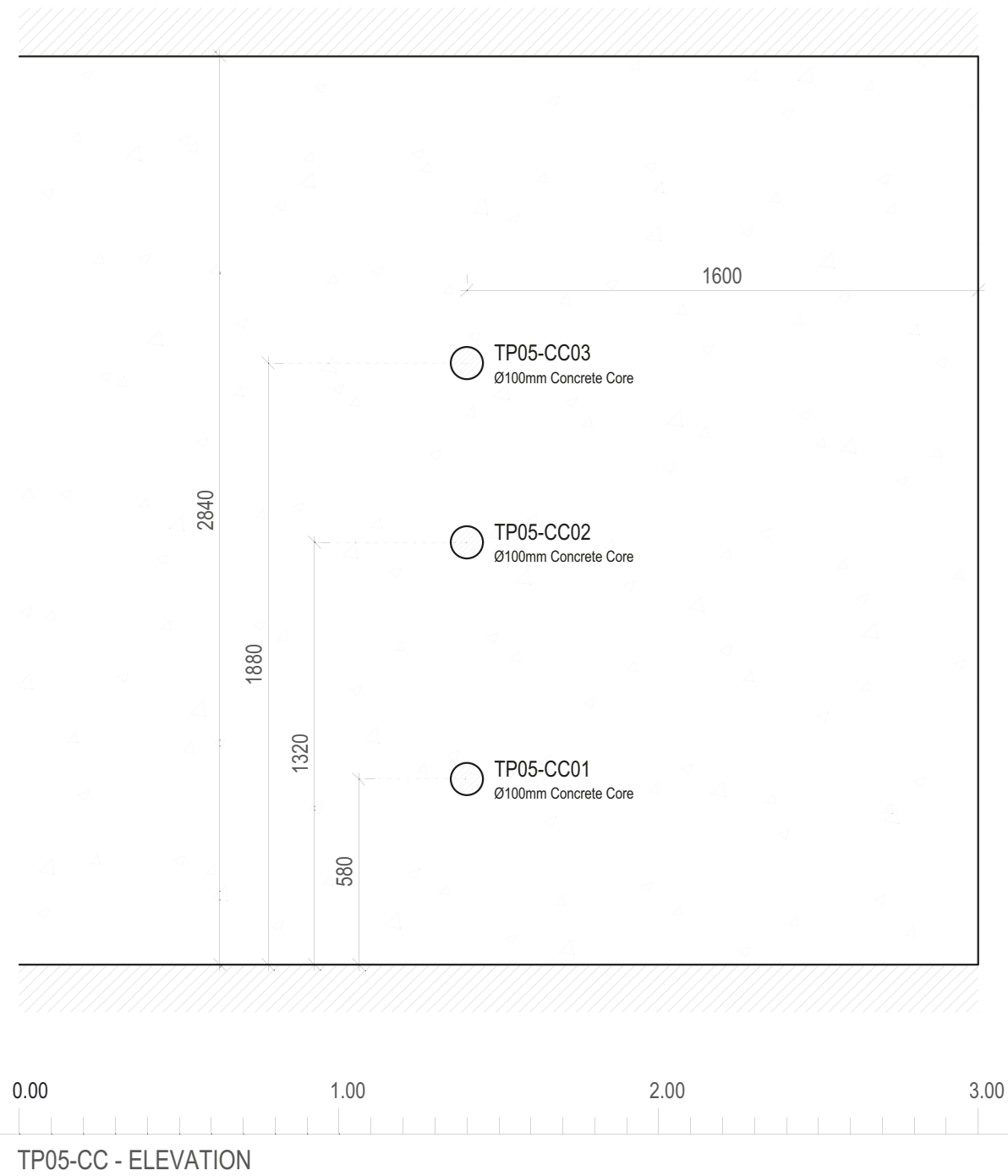
Driller: JU

Logger: CS

CHD: AN

APRV: OS

Log Print Date & Time: 30/03/2022 10:55



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North (indicative)

KEY

NOTES

1. This drawing should not be scaled, only use annotated dimensions.

2. All levels referred to Ground Level (GL).

3. Also refer to TP05-CC log.

ISSUES			
Revision	Details	By	Date
00	Drawing completed and corrected	AC	31/01/22

Client Haringey Council

Project Haringey Civic Centre

Address High Road, Haringey N22 8LE

Plan title TP05-CC
Plan and Section

Project no	21/3628	Drawing no	06	Revision	00
Scale	1:20	Sheet size	A3 (297.00x420.00mm)		
Date	January 2022	Status	Issue		

Logged by	Drawn by	Checked by	Passed by
CS	AC	CS	OS

Project

Haringey Civic Centre

Job No

21/3628

Date Started

01/12/21

Date Completed

01/12/21

Ground Level (mOD)

Co-Ordinates

E 530847.26 N 190743.77

Final Length

0.64m

Client

Haringey Council

Plant Used

Diamond Core

Sheet

1 of 1

STRATA

SAMPLES & TESTS

Water	Level (mOD)	Legend	Length (Thickness)	Strata Description	Depth	Type No	Test Result	Field Records
			(0.64)	Light grey reinforced CONCRETE, clasts are angular to subrounded fine to coarse flint gravel (max. spacing between aggregates <5mm). Rare air voids. 0.07 ... with 1No Ø10mm rebar 0.09 ... with 1No Ø10mm rebar	0.00-0.64	C1		
			0.64	0.52 ... with 1No Ø10mm rebar				
			0.64	Dark brownish grey slightly sandy slightly clayey GRAVEL. Gravel comprises angular to subrounded fine to coarse flint, brick and granite fragments. (MADE GROUND) End of Core	0.64	D2		

GENERAL REMARKS

- Ø100mm horizontal core through wall 0.75m from floor level (34.82 mOD).
- Also refer to TP06-CC sketch.

Issue: FINAL

Driller: JU

Logger: CS

CHD: AN

APRV: OS

Log Print Date & Time: 30/03/2022 10:55

Project

Haringey Civic Centre

Job No

21/3628

Date Started

01/12/21

Date Completed

01/12/21

Ground Level (mOD)

Co-Ordinates

E 530847.26 N 190743.77

Final Length

0.65m

Client

Haringey Council

Plant Used

Diamond Core

Sheet

1 of 1

STRATA

SAMPLES & TESTS

Water	Level (mOD)	Legend	Length (Thickness)	Strata Description	Depth	Type No	Test Result	Field Records
			(0.14) 0.14	Grey reinforced CONCRETE, clasts are angular to subrounded fine to coarse flint gravel (max. spacing between aggregates <5mm). 0.06 ... with 1No Ø10mm rebar 0.14 ... with metal plate <1mm				
			(0.51) 0.45 0.56 0.65 0.65	Light grey reinforced CONCRETE, clasts are angular to subrounded fine to coarse flint gravel (max. spacing between aggregates <5mm). 0.45 ... with a colt joint 0.56 ... with 1No Ø10mm rebar Dark brownish grey slightly sandy slightly clayey GRAVEL with medium brick and concrete cobble content. Gravel comprises angular to subrounded fine to coarse flint, brick and concrete fragments. (MADE GROUND) End of Core	0.65	D1		

GENERAL REMARKS

- Ø100mm horizontal core through wall 1.52m from floor level (35.59 mOD).
- Also refer to TP06-CC sketch.

Issue: FINAL

Driller: JU

Logger: CS

CHD: AN

APRV: OS

Log Print Date & Time: 30/03/2022 10:55

Project

Haringey Civic Centre

Job No

21/3628

Date Started

01/12/21

Ground Level (mOD)

Co-Ordinates

E 530847.26 N 190743.77

Final Length

0.64m

Client

Haringey Council

Plant Used

Diamond Core

Sheet

1 of 1

STRATA

SAMPLES & TESTS

Water	Level (mOD)	Legend	Length (Thickness)	Strata Description	Depth	Type No	Test Result	Field Records
			(0.64)	Light grey CONCRETE, clasts are subangular to rounded fine to coarse flint gravel (max. spacing between aggregates <5mm). Occasional air voids.				
			0.64					
			0.64	Dark greyish brown slightly sandy very gravelly CLAY. Gravel comprises angular to subrounded fine to coarse flint, brick, granite and chalk fragments. Sand is fine to mediu. (MADE GROUND) End of Core	0.64	D1		

GENERAL REMARKS

- Ø100mm horizontal core through wall 2.26m from floor level (36.14 mOD).
- Also refer to TP06-CC sketch.

Issue: FINAL

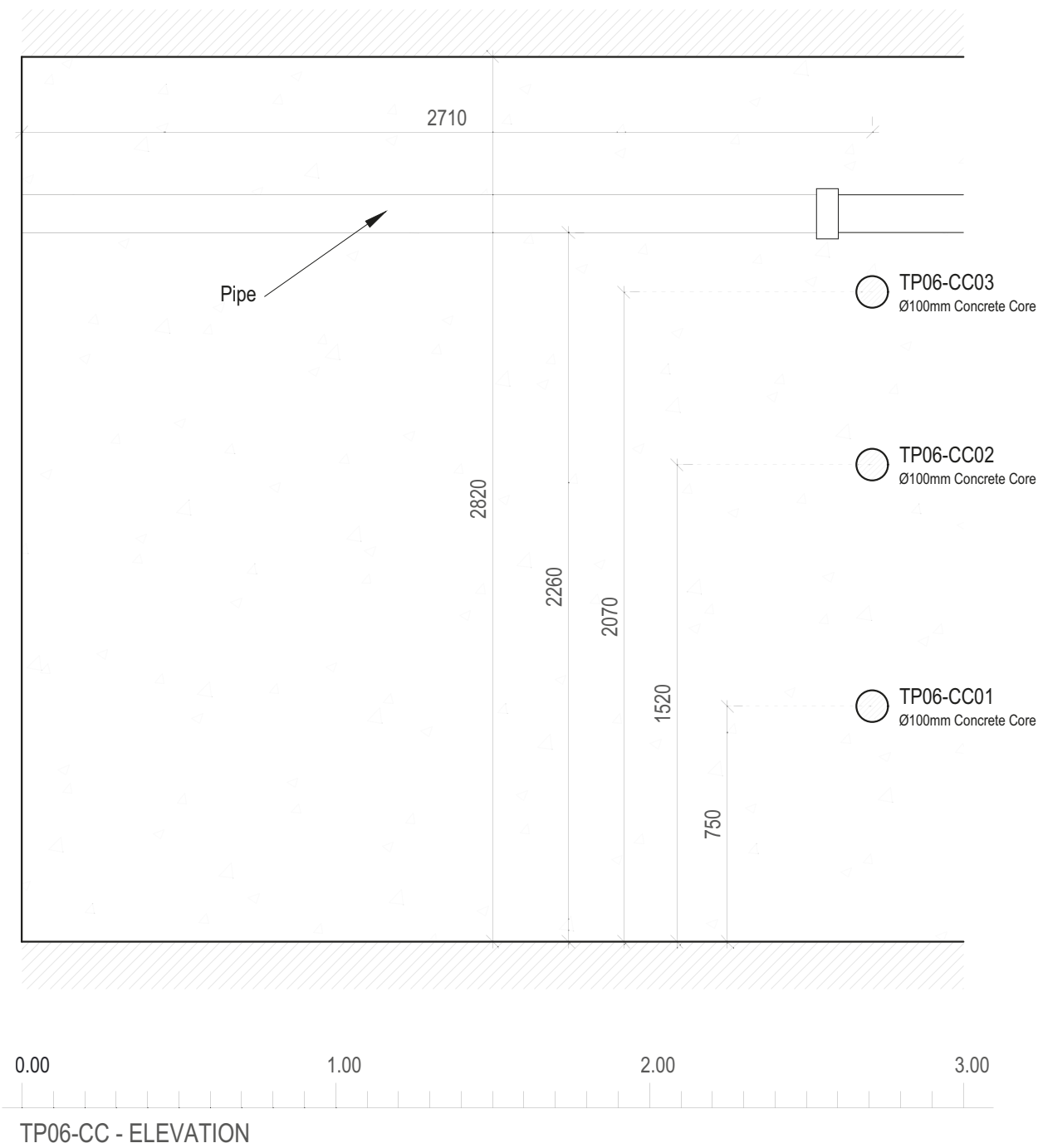
Driller: JU

Logger: CS

CHD: AN

APRV: OS

Log Print Date & Time: 30/03/2022 10:55



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North (indicative)

KEY

NOTES

1. This drawing should not be scaled, only use annotated dimensions.
2. All levels referred to Ground Level (GL).
3. Also refer to TP06-CC log.

ISSUES			
Revision	Details	By	Date
00	Drawing completed and corrected	AC	31/01/22

Client Haringey Council

Project Haringey Civic Centre

Address High Road, Haringey N22 8LE

Plan title TP06-CC
Plan and Section

Project no	21/3628	Drawing no	07	Revision	00
Scale	1:20	Sheet size	A3 (297.00x420.00mm)		
Date	January 2022	Status	Issue		
Designed by	CS	Drawn by	AC	Checked by	CS
				Passed by	OS

12. INSTRUMENTATION MONITORING RESULTS

BH ID	Depth of Installation (mbgl)	Date of Installation	Type	Top (mbgl)	Bottom (mbgl)	Base Level (mbgl)	Date & Time	Water Level (mbgl)	Water Level (mOD)	Remarks
BH01	30.00	23/11/2021	GWMP	25.00	30.00		12/01/2022 12:00:00	No access		Cover cemented
	30.00	23/11/2021	GWMP	25.00	30.00		20/01/2022 13:18:00	10.21	26.07	
	30.00	23/11/2021	GWMP	25.00	30.00		27/01/2022 12:45:00	12.72	23.56	
	30.00	23/11/2021	GWMP	25.00	30.00		02/02/2022 11:27:00	11.91	24.37	
	30.00	23/11/2021	GWMP	25.00	30.00		10/02/2022 10:40:00	10.82	25.46	
	30.00	23/11/2021	GWMP	25.00	30.00		16/02/2022 12:46:00	9.48	26.80	
	30.00	23/11/2021	GWMP	25.00	30.00		24/02/2022 10:38:00	9.41	26.87	
	30.00	23/11/2021	GWMP	25.00	30.00		04/03/2022 12:06:00	9.10	27.18	
	30.00	23/11/2021	GWMP	25.00	30.00		11/03/2022 15:16:00	9.05	27.23	
BH02	1.50	24/11/2021	GMP	0.50	1.50		02/02/2022 11:09:00	Dry		
	1.50	24/11/2021	GMP	0.50	1.50		10/02/2022 10:56:00	0.60	35.25	
	1.50	24/11/2021	GMP	0.50	1.50		16/02/2022 13:10:00	0.03	35.82	
	1.50	24/11/2021	GMP	0.50	1.50		24/02/2022 11:01:00	0.07	35.78	
	1.50	24/11/2021	GMP	0.50	1.50		04/03/2022 12:37:00	0.75	35.10	
	1.50	24/11/2021	GMP	0.50	1.50		11/03/2022 15:13:00	1.00	34.85	
	20.00	24/11/2021	GWMP	5.00	20.00		12/01/2022 12:00:00	No access		Cover cemented
	20.00	24/11/2021	GWMP	5.00	20.00		20/01/2022 13:10:00	0.60	35.25	
	20.00	24/11/2021	GWMP	5.00	20.00		27/01/2022 12:05:00	2.80	33.05	
	20.00	24/11/2021	GWMP	5.00	20.00		02/02/2022 11:12:00	5.58	30.27	
	20.00	24/11/2021	GWMP	5.00	20.00		10/02/2022 10:49:00	2.23	33.62	
	20.00	24/11/2021	GWMP	5.00	20.00		16/02/2022 13:11:00	0.35	35.50	
	20.00	24/11/2021	GWMP	5.00	20.00		24/02/2022 11:06:00	0.03	35.82	
	20.00	24/11/2021	GWMP	5.00	20.00		04/03/2022 12:30:00	1.63	34.22	
	20.00	24/11/2021	GWMP	5.00	20.00		11/03/2022 15:12:00	2.15	33.70	
BH03	2.00	22/11/2021	GMP	0.50	2.00		12/01/2022 12:00:00	No access		Cover cemented
	2.00	22/11/2021	GMP	0.50	2.00		20/01/2022 12:39:00	1.81	34.34	
	2.00	22/11/2021	GMP	0.50	2.00		27/01/2022 11:29:00	Dry		
	2.00	22/11/2021	GMP	0.50	2.00		02/02/2022 11:27:00	Dry		
	2.00	22/11/2021	GMP	0.50	2.00		10/02/2022 10:20:00	Dry		
	2.00	22/11/2021	GMP	0.50	2.00		16/02/2022 12:37:00	Dry		
	2.00	22/11/2021	GMP	0.50	2.00		24/02/2022 10:24:00	Dry		
	2.00	22/11/2021	GMP	0.50	2.00		04/03/2022 11:35:00	Dry		
	2.00	22/11/2021	GMP	0.50	2.00		11/03/2022 15:23:00	Dry		
BH04	11.00	17/11/2021	GWMP	1.00	11.00		12/01/2022 13:51:00	9.68	26.69	
	11.00	17/11/2021	GWMP	1.00	11.00		20/01/2022 11:48:00	10.02	26.35	
	11.00	17/11/2021	GWMP	1.00	11.00		27/01/2022 13:20:00	9.83	26.54	
	11.00	17/11/2021	GWMP	1.00	11.00		02/02/2022 11:39:00	10.33	26.04	
	11.00	17/11/2021	GWMP	1.00	11.00		10/02/2022 12:59:00	10.15	26.22	

KEY

SPIE - Standpipe Piezometer
 SPGW - Groundwater Monitor Standpipe
 SPG/GW - Gas / Groundwater Monitor Standpipe
 VWP - Vibrating Wire Piezometer

CONCEPT

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 E-mail: si@conceptconsultants.co.uk

AGS**GROUNDWATER MONITORING****Job No: 21/3628****Project: Haringey Civic Centre****Client: Haringey Council**

BH ID	Depth of Installation (mbgl)	Date of Installation	Type	Top (mbgl)	Bottom (mbgl)	Base Level (mbgl)	Date & Time	Water Level (mbgl)	Water Level (mOD)	Remarks
BH04	11.00	17/11/2021	GWMP	1.00	11.00		16/02/2022 12:30:00	10.42	25.95	
	11.00	17/11/2021	GWMP	1.00	11.00		24/02/2022 11:19:00	10.33	26.04	
	11.00	17/11/2021	GWMP	1.00	11.00		04/03/2022 12:41:00	10.15	26.22	
	11.00	17/11/2021	GWMP	1.00	11.00		11/03/2022 11:30:00	9.97	26.40	
BH05	20.00	18/11/2021	VWP				12/01/2022 12:00:00	No access		Cover cemented
	20.00	18/11/2021	VWP				20/01/2022 14:30:00	11.71	25.34	
	20.00	18/11/2021	VWP				27/01/2022 13:35:00	11.83	25.22	
	20.00	18/11/2021	VWP				02/02/2022 11:47:00	11.89	25.16	
	20.00	18/11/2021	VWP				10/02/2022 13:04:00	11.91	25.14	
	20.00	18/11/2021	VWP				16/02/2022 12:20:00	No access		Public road works taking place over borehole
	20.00	18/11/2021	VWP				24/02/2022 11:24:00	11.94	25.11	
	20.00	18/11/2021	VWP				04/03/2022 12:50:00	11.96	25.09	
	20.00	18/11/2021	VWP				11/03/2022 15:08:00	12.07	24.98	
WS03	1.50	19/11/2021	GMP	1.00	1.60		12/01/2022 13:00:00	1.05	35.82	
	1.50	19/11/2021	GMP	1.00	1.60		20/01/2022 12:59:00	1.28	35.59	
	1.50	19/11/2021	GMP	1.00	1.60		27/01/2022 10:48:00	1.27	35.60	
	1.50	19/11/2021	GMP	1.00	1.60		02/02/2022 11:21:00	1.54	35.33	
	1.50	19/11/2021	GMP	1.00	1.60		10/02/2022 10:33:00	1.52	35.35	
	1.50	19/11/2021	GMP	1.00	1.60		16/02/2022 12:52:00	1.48	35.39	
	1.50	19/11/2021	GMP	1.00	1.60		24/02/2022 10:32:00	1.41	35.46	
	1.50	19/11/2021	GMP	1.00	1.60		04/03/2022 12:03:00	1.27	35.60	
	1.50	19/11/2021	GMP	1.00	1.60		11/03/2022 15:19:00	1.22	35.65	
WS06	1.50	18/11/2021	GMP	1.00	1.50		12/01/2022 12:12:00	Dry		
	1.50	18/11/2021	GMP	1.00	1.50		20/01/2022 11:21:00	Dry		
	1.50	18/11/2021	GMP	1.00	1.50		27/01/2022 10:21:00	Dry		
	1.50	18/11/2021	GMP	1.00	1.50		02/02/2022 10:31:00	Dry		
	1.50	18/11/2021	GMP	1.00	1.50		10/02/2022 11:30:00	Dry		
	1.50	18/11/2021	GMP	1.00	1.50		16/02/2022 13:30:00	Dry		
	1.50	18/11/2021	GMP	1.00	1.50		24/02/2022 11:31:00	Dry		
	1.50	18/11/2021	GMP	1.00	1.50		04/03/2022 13:02:00	Dry		
	1.50	18/11/2021	GMP	1.00	1.50		11/03/2022 15:25:00	No access		no site access
WS07	1.50	18/11/2021	GMP	1.00	1.50		12/01/2022 12:28:00	Dry		
	1.50	18/11/2021	GMP	1.00	1.50		20/01/2022 11:27:00	Dry		
	1.50	18/11/2021	GMP	1.00	1.50		27/01/2022 10:26:00	Dry		
	1.50	18/11/2021	GMP	1.00	1.50		02/02/2022 10:39:00	Dry		
	1.50	18/11/2021	GMP	1.00	1.50		10/02/2022 11:42:00	Dry		
	1.50	18/11/2021	GMP	1.00	1.50		16/02/2022 13:41:00	Dry		

KEY

SPIE - Standpipe Piezometer
 SPGW - Groundwater Monitor Standpipe
 SPG/GW - Gas / Groundwater Monitor Standpipe
 VWP - Vibrating Wire Piezometer

CONCEPT

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AGS**GROUNDWATER MONITORING****Job No:** 21/3628**Project:** Haringey Civic Centre**Client:** Haringey Council

BH ID	Depth of Installation (mbgl)	Date of Installation	Type	Top (mbgl)	Bottom (mbgl)	Base Level (mbgl)	Date & Time	Water Level (mbgl)	Water Level (mOD)	Remarks
WS07	1.50	18/11/2021	GMP	1.00	1.50		24/02/2022 11:33:00	Dry		
	1.50	18/11/2021	GMP	1.00	1.50		04/03/2022 13:04:00	Dry		
	1.50	18/11/2021	GMP	1.00	1.50		11/03/2022 15:25:00	No access		no site access
WS08	1.50	18/11/2021	GMP	1.00	1.50		12/01/2022 12:34:00	Dry		
	1.50	18/11/2021	GMP	1.00	1.50		20/01/2022 11:34:00	Dry		
	1.50	18/11/2021	GMP	1.00	1.50		27/01/2022 10:31:00	Dry		
	1.50	18/11/2021	GMP	1.00	1.50		02/02/2022 10:48:00	Dry		
	1.50	18/11/2021	GMP	1.00	1.50		10/02/2022 11:54:00	Dry		
	1.50	18/11/2021	GMP	1.00	1.50		16/02/2022 13:52:00	Dry		
	1.50	18/11/2021	GMP	1.00	1.50		24/02/2022 11:35:00	Dry		
	1.50	18/11/2021	GMP	1.00	1.50		04/03/2022 13:05:00	Dry		
	1.50	18/11/2021	GMP	1.00	1.50		11/03/2022 15:25:00	No access		no site access

KEY

SPIE - Standpipe Piezometer
 SPGW - Groundwater Monitor Standpipe
 SPG/GW - Gas / Groundwater Monitor Standpipe
 VWP - Vibrating Wire Piezometer

CONCEPT

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GROUNDWATER MONITORING

Job No: 21/3628

Project: Haringey Civic Centre

Client: Haringey Council

Vibrating Wire Piezometer: BH05

Installed depth(mbgl):	20.00
Instrument Number	358882
k factor kPa	-0.100243693 per digit

Ground Level	(mOD)	37.05
Range	kPa	
Date Installed:	18/11/2021	

[illegible]

JOB DETAILS									
Location:	Haringey Civic Centre - Ground Investigation				Engineer:	CC + AA			
Date:	12/01/2022	Job Number:	21/3628	Time:	12:00				
METEOROLOGICAL AND SITE INFORMATION									
State of ground:	☐	Dry	☐	Moist	☐	Wet	Delete As Required		
Wind:	☐	Calm	☐	Light	☐	Moderate	☐	Strong	Ground Level
Cloud cover:	☐	None	☐	Slight	☐	Cloudy	☐	Overcast	
Precipitation	☐	None	☐	Slight	☐	Moderate	☐	Heavy	
Barometric pressure (mb) Before:						Temperature (°C)			

INSTRUMENTATION USED									
Gas concentration:	#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;					☐			
	#2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;					☐			
						Tick Instrument used			

BH (No.)	BH03	aP After (mb)	dp (Pa)	Flow rate (l/h)	Time (s)	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
					0							
Depth to GW: (m)					30							No access - cover in need of repair
					60							
					90							
					120							
					150							
					180							
					210							
					240							
					270							
					300							
					PID(ppm)							
					5							
					15							
					30							
					45							
					60							
					75							
					90							
					105							
					120							

KEY

aP: Atmospheric Pressure
dP: Differential Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.



Gas Monitoring Results

JOB DETAILS													
Location:	Haringey Civic Centre - Ground Investigation						Engineer:	CC + AA					
Date:	12/01/2022		Job Number:	21/3628		Time:	12:52						
METEOROLOGICAL AND SITE INFORMATION													
State of ground:	☐	Dry	☐	Moist	☒	Wet				Delete As Required			
Wind:	☐	Calm	☒	Light	☐	Moderate	☐	Strong	Ground Level				
Cloud cover:	☒	None	☐	Slight	☐	Cloudy	☐	Overcast					
Precipitation	☒	None	☐	Slight	☐	Moderate	☐	Heavy					
Barometric pressure (mb) Before:	1032		Temperature (°C)				6						
INSTRUMENTATION USED													
Gas concentration:	#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%; #2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;												
												X	Tick Instrument used
BH (No.)	WS03	aP After (mb)	dp (Pa)	Flow rate (l/h)	Time (s)	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments	
		1032	0	0.0	0	0.0	0.0	0.3	19.8	0	0		
Depth to GW: (m)	1.05				30	0.0	0.0	0.5	20.0	0	0		
					60	0.0	0.0	0.5	20.0	0	0		
					90	0.0	0.0	0.5	20.0	0	0	Constant readings	
					120								
					150								
					180								
					210								
					240								
					270								
					300								
					PID(ppm)								
					5	0.0							
					15	0.0							
					30	0.0							
					45	0.0							
					60	0.0							
					75								
					90								
					105								
					120								

KEY

aP: Atmospheric Pressure
dP: Differential Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.



INSTRUMENTATION USED				
Gas concentration:	#1 Gas Data GFM 436, Accuracy: CH ₄ ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO ₂ ±0.3% (0 to 5%), ±3.0% (at 40%); O ₂ ±0.2%;			Tick Instrument used
	#2 Gas Data GFM 436, Accuracy: CH ₄ ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO ₂ ±0.3% (0 to 5%), ±3.0% (at 40%); O ₂ ±0.2%;		X	

KEY
aP: Atmospheric Pressure NR: Not Recorded Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.
dP: Differential Pressure



Gas Monitoring Results

JOB DETAILS												
Location:	Haringey Civic Centre - Ground Investigation					Engineer:	CC + AA					
Date:	12/01/2022		Job Number:	21/3628		Time:	12:20					
METEOROLOGICAL AND SITE INFORMATION												
State of ground:	☒	Dry	☐	Moist	☐	Wet				Delete As Required		
Wind:	☒	Calm	☐	Light	☐	Moderate	☐	Strong	Ground Level			
Cloud cover:	☒	None	☐	Slight	☐	Cloudy	☐	Overcast				
Precipitation	☒	None	☐	Slight	☐	Moderate	☐	Heavy				
Barometric pressure (mb) Before:	1032		Temperature (°C)			6						
INSTRUMENTATION USED												
Gas concentration:	#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;											
	#2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;										X	Tick Instrument used
BH (No.)	WS07	aP After (mb)	dp (Pa)	Flow rate (l/h)	Time (s)	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
		1033	0	0.0	0	0.0	0.0	0.8	19.5	0	0	
Depth to GW: (m)	DRY				30	0.0	0.0	0.3	20.2	0	0	
					60	0.0	0.0	0.3	20.1	0	0	
					90	0.0	0.0	0.3	20.0	0	0	
					120	0.0	0.0	0.3	20.0	0	0	
					150	0.0	0.0	0.3	20.0	0	0	Constant readings
					180							
					210							
					240							
					270							
					300							
					PID(ppm)							
					5	0.0						
					15	0.0						
					30	0.0						
					45	0.0						
					60	0.0						
					75							
					90							
					105							
					120							

KEY

aP: Atmospheric Pressure
dP: Differential Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.



INSTRUMENTATION USED				
Gas concentration:	#1 Gas Data GFM 436, Accuracy: CH ₄ ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO ₂ ±0.3% (0 to 5%), ±3.0% (at 40%); O ₂ ±0.2%;			Tick Instrument used
	#2 Gas Data GFM 436, Accuracy: CH ₄ ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO ₂ ±0.3% (0 to 5%), ±3.0% (at 40%); O ₂ ±0.2%;		X	

KEY

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

JOB DETAILS													
Location:	Haringey Civic Centre - Ground Investigation					Engineer:	FS + GG						
Date:	20/01/2022		Job Number:	21/3628		Time:	12:21						
METEOROLOGICAL AND SITE INFORMATION													
State of ground:	☐	Dry	☒	Moist	☐	Wet				Delete As Required			
Wind:	☐	Calm	☒	Light	☐	Moderate	☐	Strong	Ground Level				
Cloud cover:	☒	None	☐	Slight	☐	Cloudy	☐	Overcast					
Precipitation	☒	None	☐	Slight	☐	Moderate	☐	Heavy					
Barometric pressure (mb) Before:	1028		Temperature (°C)				5						
INSTRUMENTATION USED													
Gas concentration:	#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%; #2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;												
												X	Tick Instrument used

BH (No.)	BH03	aP After (mb)	dp (Pa)	Flow rate (l/h)	Time (s)	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
		1028	0	0.4	0	0.0	0.0	0.2	19.4	0	0	
Depth to GW: (m)	1.81		0	0.0	30	0.0	0.0	2.0	15.1	0	0	
					60	0.0	0.0	2.0	15.0	0	0	
					90	0.0	0.0	1.9	15.1	0	0	
					120	0.0	0.0	1.9	15.2	0	0	
					150	0.0	0.0	1.8	15.3	0	0	
					180	0.0	0.0	1.7	15.5	0	0	
					210	0.0	0.0	1.7	15.6	0	0	
					240	0.0	0.0	1.7	15.6	0	0	Constant readings
					270							
					300							
					PID(ppm)							
					5	0.9						
					15	10.2						
					30	14.6						
					45	15.8						
					60	16.8						
					75	12.2						
					90	17.9						
					105	18.8						
					120	19.5						

KEY

aP: Atmospheric Pressure
dP: Differential Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

JOB DETAILS												
Location:		Haringey Civic Centre - Ground Investigation				Engineer:		FS + GG				
Date:		20/01/2022		Job Number:		21/3628		Time:		12:48		
METEOROLOGICAL AND SITE INFORMATION												
State of ground:		☐	Dry	☒	Moist	☐	Wet			Delete As Required		
Wind:		☐	Calm	☒	Light	☐	Moderate	☐	Strong	Ground Level		
Cloud cover:		☐	None	☒	Slight	☐	Cloudy	☐	Overcast			
Precipitation		☒	None	☐	Slight	☐	Moderate	☐	Heavy			
Barometric pressure (mb) Before:		1027		Temperature (°C)		5						
INSTRUMENTATION USED												
Gas concentration:		#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;										
		#2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;								☒ Tick Instrument used		

BH (No.)	WS03	aP After (mb)	dp (Pa)	Flow rate (l/h)	Time (s)	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
		1027	800	119.7	0	0.0	0.0	1.5	18.1	0	0	
Depth to GW: (m)	1.28		0	0.0	30	0.0	0.0	2.9	13.5	0	0	
					60	0.0	0.0	2.9	13.2	0	0	
					90	0.0	0.0	2.9	13.1	0	0	
					120	0.0	0.0	2.9	13.1	0	0	
					150	0.0	0.0	2.9	13.1	0	0	Constant readings
					180							
					210							
					240							
					270							
					300							
					PID(ppm)							
					5	0.7						
					15	2.1						
					30	2.3						
					45	3.7						
					60	3.6						
					75	3.4						
					90	3.2						
					105	3.0						
					120	2.9						

KEY

aP: Atmospheric Pressure
dP: Differential Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.



INSTRUMENTATION USED				
Gas concentration:	#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;			Tick Instrument used
	#2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;		X	

[illegible]

aP: Atmospheric Pressure
dP: Differential Pressure

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

JOB DETAILS														
Location:	Haringey Civic Centre - Ground Investigation					Engineer:	FS + GG							
Date:	20/01/2022		Job Number:	21/3628		Time:	11:20							
METEOROLOGICAL AND SITE INFORMATION														
State of ground:	☒	Dry	☐	Moist	☐	Wet	Delete As Required Ground Level							
Wind:	☐	Calm	☐	Light	☒	Moderate							☐	Strong
Cloud cover:	☒	None	☐	Slight	☐	Cloudy							☐	Overcast
Precipitation	☒	None	☐	Slight	☐	Moderate							☐	Heavy
Barometric pressure (mb) Before:	1029		Temperature (°C)				5							
INSTRUMENTATION USED														
Gas concentration:	#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%; #2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%; ☒ Tick Instrument used													
BH (No.)	WS07	aP After (mb)	dp (Pa)	Flow rate (l/h)	Time (s)	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments		
		1028	0	0.0	0	0.0	0.0	0.8	19.1	0	0			
Depth to GW: (m)	DRY				30	0.0	0.0	0.2	20.4	0	0			
					60	0.0	0.0	0.3	20.2	0	0			
					90	0.0	0.0	0.3	20.0	0	0			
					120	0.0	0.0	0.3	20.0	0	0			
					150	0.0	0.0	0.3	20.0	0	0	Constant readings		
					180									
					210									
					240									
					270									
					300									
					PID(ppm)									
					5	0.0								
					15	0.0								
					30	0.0								
					45	0.0								
					60	0.0								
					75									
					90									
					105									
					120									

KEY

aP: Atmospheric Pressure
dP: Differential Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

JOB DETAILS												
Location:		Haringey Civic Centre - Ground Investigation				Engineer:		FS + GG				
Date:		20/01/2022		Job Number:		21/3628		Time:		11:30		
METEOROLOGICAL AND SITE INFORMATION												
State of ground:		☒	Dry	☐	Moist	☐	Wet				Delete As Required	
Wind:		☐	Calm	☐	Light	☒	Moderate	☐	Strong	Ground Level		
Cloud cover:		☒	None	☐	Slight	☐	Cloudy	☐	Overcast			
Precipitation		☒	None	☐	Slight	☐	Moderate	☐	Heavy			
Barometric pressure (mb) Before:		1028		Temperature (°C)		5						
INSTRUMENTATION USED												
Gas concentration:		#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;										
		#2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;								X		
										Tick Instrument used		

BH (No.)	WS08	aP After (mb)	dp (Pa)	Flow rate (l/h)	Time (s)	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
		1028	0	0.0	0	0.0	0.0	0.1	20.1	0	0	
Depth to GW: (m)	DRY				30	0.0	0.0	0.1	20.2	0	0	
					60	0.0	0.0	0.1	20.2	0	0	
					90	0.0	0.0	0.1	20.2	0	0	Constant readings
					120							
					150							
					180							
					210							
					240							
					270							
					300							
					PID(ppm)							
					5	0.0						
					15	0.0						
					30	0.0						
					45	0.0						
					60	0.0						
					75							
					90							
					105							
					120							

KEY

aP: Atmospheric Pressure
dP: Differential Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

JOB DETAILS													
Location:	Haringey Civic Centre - Ground Investigation					Engineer:	GG + AA + IJ						
Date:	27/01/2022		Job Number:	21/3628		Time:	11:23						
METEOROLOGICAL AND SITE INFORMATION													
State of ground:	☒	Dry	☐	Moist	☐	Wet				Delete As Required			
Wind:	☐	Calm	☒	Light	☐	Moderate	☐	Strong	Ground Level				
Cloud cover:	☐	None	☐	Slight	☒	Cloudy	☐	Overcast					
Precipitation	☒	None	☐	Slight	☐	Moderate	☐	Heavy					
Barometric pressure (mb) Before:	1018		Temperature (°C)				9						
INSTRUMENTATION USED													
Gas concentration:	#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%; #2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;												
												X	Tick Instrument used

BH (No.)	BH03	aP After (mb)	dp (Pa)	Flow rate (l/h)	Time (s)	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
		1018	0	0.0	0	0.0	0.0	2.3	18.3	0	0	
Depth to GW: (m)	2.19				30	0.0	0.0	2.2	14.9	0	0	
					60	0.0	0.0	2.2	14.4	0	0	
					90	0.0	0.0	2.3	14.2	0	0	
					120	0.0	0.0	2.3	14.2	0	0	
					150	0.0	0.0	2.3	14.2	0	0	Constant readings
					180							
					210							
					240							
					270							
					300							
					PID(ppm)							
					5	0.4						
					15	1.2						
					30	1.3						
					45	1.2						
					60	1.2						
					75	1.2						
					90							
					105							
					120							

KEY

aP: Atmospheric Pressure
dP: Differential Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

JOB DETAILS													
Location:	Haringey Civic Centre - Ground Investigation					Engineer:	GG + AA + IJ						
Date:	27/01/2022		Job Number:	21/3628		Time:	10:44						
METEOROLOGICAL AND SITE INFORMATION													
State of ground:	☒	Dry	☐	Moist	☐	Wet				Delete As Required			
Wind:	☐	Calm	☒	Light	☐	Moderate	☐	Strong	Ground Level				
Cloud cover:	☐	None	☐	Slight	☒	Cloudy	☐	Overcast					
Precipitation	☒	None	☐	Slight	☐	Moderate	☐	Heavy					
Barometric pressure (mb) Before:	1018		Temperature (°C)				9						
INSTRUMENTATION USED													
Gas concentration:	#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%; #2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;												
												X	Tick Instrument used
BH (No.)	WS03	aP After (mb)	dp (Pa)	Flow rate (l/h)	Time (s)	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments	
		1018	900	119.7	0	0.0	0.0	0.1	19.8	0	0		
Depth to GW: (m)	1.27		0	0.0	30	0.0	0.0	2.8	14.4	0	0		
					60	0.0	0.0	2.8	14.0	0	0		
					90	0.0	0.0	2.8	13.9	0	0		
					120	0.0	0.0	2.8	13.8	0	0		
					150	0.0	0.0	2.8	13.8	0	0	Constant readings	
					180								
					210								
					240								
					270								
					300								
					PID(ppm)								
					5	0.1							
					15	0.2							
					30	0.2							
					45	0.2							
					60	0.2							
					75								
					90								
					105								
					120								

KEY

aP: Atmospheric Pressure
dP: Differential Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.



Gas Monitoring Results

JOB DETAILS													
Location:	Haringey Civic Centre - Ground Investigation					Engineer:	GG + AA + IJ						
Date:	27/01/2022		Job Number:	21/3628		Time:	10:19						
METEOROLOGICAL AND SITE INFORMATION													
State of ground:	☒	Dry	☐	Moist	☐	Wet				Delete As Required			
Wind:	☐	Calm	☒	Light	☐	Moderate	☐	Strong	Ground Level				
Cloud cover:	☐	None	☐	Slight	☒	Cloudy	☐	Overcast					
Precipitation	☒	None	☐	Slight	☐	Moderate	☐	Heavy					
Barometric pressure (mb) Before:	1019						Temperature (°C)	9					
INSTRUMENTATION USED													
Gas concentration:	#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%; #2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;												
												X	Tick Instrument used
BH (No.)	WS06	aP After (mb)	dp (Pa)	Flow rate (l/h)	Time (s)	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments	
		1018	0	0.0	0	0.0	0.0	0.2	19.2	0	0		
Depth to GW: (m)	DRY				30	0.0	0.0	0.8	20.1	0	0		
					60	0.0	0.0	0.8	19.9	0	0		
					90	0.0	0.0	0.8	19.8	0	0		
					120	0.0	0.0	0.8	19.8	0	0		
					150	0.0	0.0	0.8	19.7	0	0	Constant readings	
					180								
					210								
					240								
					270								
					300								
					PID(ppm)								
					5	0.2							
					15	0.2							
					30	0.2							
					45	0.2							
					60	0.2							
					75								
					90								
					105								
					120								

KEY

aP: Atmospheric Pressure
dP: Differential Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

JOB DETAILS												
Location:	Haringey Civic Centre - Ground Investigation					Engineer:	GG + AA + IJ					
Date:	27/01/2022		Job Number:	21/3628		Time:	10:23					
METEOROLOGICAL AND SITE INFORMATION												
State of ground:	☒	Dry	☐	Moist	☐	Wet				Delete As Required		
Wind:	☐	Calm	☒	Light	☐	Moderate	☐	Strong	Ground Level			
Cloud cover:	☐	None	☐	Slight	☒	Cloudy	☐	Overcast				
Precipitation	☒	None	☐	Slight	☐	Moderate	☐	Heavy				
Barometric pressure (mb) Before:	1018		Temperature (°C)				9					
INSTRUMENTATION USED												
Gas concentration:	#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;										☐	Tick Instrument used
	#2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;										☒	

BH (No.)	WS07	aP After (mb)	dp (Pa)	Flow rate (l/h)	Time (s)	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
		1018	0	0.0	0	0.0	0.0	0.8	19.6	0	0	
Depth to GW: (m)	DRY				30	0.0	0.0	0.0	20.7	0	0	
					60	0.0	0.0	0.0	20.5	0	0	
					90	0.0	0.0	0.0	20.4	0	0	
					120	0.0	0.0	0.0	20.4	0	0	
					150	0.0	0.0	0.0	20.4	0	0	Constant readings
					180							
					210							
					240							
					270							
					300							
					PID(ppm)							
					5	0.2						
					15	0.3						
					30	0.3						
					45	0.3						
					60	0.3						
					75							
					90							
					105							
					120							

KEY

aP: Atmospheric Pressure
dP: Differential Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

JOB DETAILS												
Location:		Haringey Civic Centre - Ground Investigation				Engineer:		GG + AA + IJ				
Date:		27/01/2022		Job Number:		21/3628		Time:		10:28		
METEOROLOGICAL AND SITE INFORMATION												
State of ground:		☒	Dry	☐	Moist	☐	Wet				Delete As Required	
Wind:		☐	Calm	☒	Light	☐	Moderate	☐	Strong	Ground Level		
Cloud cover:		☐	None	☐	Slight	☒	Cloudy	☐	Overcast			
Precipitation		☒	None	☐	Slight	☐	Moderate	☐	Heavy			
Barometric pressure (mb) Before:		1018		Temperature (°C)		9						
INSTRUMENTATION USED												
Gas concentration:		#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;										
		#2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;								☒ Tick Instrument used		

BH (No.)	WS08	aP After (mb)	dp (Pa)	Flow rate (l/h)	Time (s)	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
		1018	0	1.0	0	0.0	0.0	0.0	20.2	0	0	
Depth to GW: (m)	DRY		0	0.0	30	0.0	0.0	0.1	20.5	0	0	
					60	0.0	0.0	0.1	20.4	0	0	
					90	0.0	0.0	0.1	20.3	0	0	
					120	0.0	0.0	0.1	20.3	0	0	
					150	0.0	0.0	0.1	20.3	0	0	Constant readings
					180							
					210							
					240							
					270							
					300							
					PID(ppm)							
					5	0.1						
					15	0.1						
					30	0.1						
					45	0.1						
					60	0.1						
					75							
					90							
					105							
					120							

KEY

aP: Atmospheric Pressure
dP: Differential Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

JOB DETAILS												
Location:		Haringey Civic Centre - Ground Investigation				Engineer:		IJ + AA				
Date:		02/02/2022		Job Number:		21/3628		Time:		11:04		
METEOROLOGICAL AND SITE INFORMATION												
State of ground:		☒	Dry	☐	Moist	☐	Wet			Delete As Required		
Wind:		☐	Calm	☒	Light	☐	Moderate	☐	Strong	Ground Level		
Cloud cover:		☐	None	☒	Slight	☐	Cloudy	☐	Overcast			
Precipitation		☒	None	☐	Slight	☐	Moderate	☐	Heavy			
Barometric pressure (mb) Before:		1015		Temperature (°C)		11						
INSTRUMENTATION USED												
Gas concentration:		#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;										
		#2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;								X Tick Instrument used		

BH (No.)	BH02 (Shallow)	aP After (mb)	dp (Pa)	Flow rate (l/h)	Time (s)	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
		1015	0	0.0	0	0.0	0.0	1.8	17.7	0	0	
Depth to GW: (m)	DRY				30	0.0	0.0	0.4	19.6	0	0	
					60	0.0	0.0	0.4	19.6	0	0	
					90	0.0	0.0	0.4	19.4	0	0	
					120	0.0	0.0	0.4	19.4	0	0	
					150	0.0	0.0	0.4	19.4	0	0	Constant readings
					180							
					210							
					240							
					270							
					300							
					PID(ppm)							
					5	0.1						
					15	0.1						
					30	0.1						
					45	0.1						
					60	0.1						
					75							
					90							
					105							
					120							

KEY

aP: Atmospheric Pressure
dP: Differential Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

JOB DETAILS												
Location:	Haringey Civic Centre - Ground Investigation					Engineer:	IJ + AA					
Date:	02/02/2022		Job Number:	21/3628		Time:	10:53					
METEOROLOGICAL AND SITE INFORMATION												
State of ground:	☒	Dry	☐	Moist	☐	Wet				Delete As Required		
Wind:	☐	Calm	☒	Light	☐	Moderate	☐	Strong	Ground Level			
Cloud cover:	☐	None	☒	Slight	☐	Cloudy	☐	Overcast				
Precipitation	☒	None	☐	Slight	☐	Moderate	☐	Heavy				
Barometric pressure (mb) Before:	1016		Temperature (°C)				11					
INSTRUMENTATION USED												
Gas concentration:	#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;											
	#2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;										X	Tick Instrument used

BH (No.)	BH03	aP After (mb)	dp (Pa)	Flow rate (l/h)	Time (s)	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
		1016	0	0.0	0	0.0	0.0	0.1	20.3	0	0	
Depth to GW: (m)	2.25				30	0.0	0.0	2.3	14.6	0	0	
					60	0.0	0.0	2.2	14.4	0	0	
					90	0.0	0.0	2.2	14.5	0	0	
					120	0.0	0.0	2.1	14.6	0	0	
					150	0.0	0.0	2.1	14.6	0	0	
					180	0.0	0.0	2.1	14.6	0	0	Constant readings
					210							
					240							
					270							
					300							
					PID(ppm)							
					5	0.3						
					15	0.6						
					30	0.7						
					45	0.9						
					60	1.0						
					75	1.0						
					90	1.0						
					105							
					120							

KEY

aP: Atmospheric Pressure
dP: Differential Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

JOB DETAILS												
Location:		Haringey Civic Centre - Ground Investigation				Engineer:		IJ + AA				
Date:		02/02/2022		Job Number:		21/3628		Time:		11:15		
METEOROLOGICAL AND SITE INFORMATION												
State of ground:		☒	Dry	☐	Moist	☐	Wet			Delete As Required		
Wind:		☐	Calm	☒	Light	☐	Moderate	☐	Strong	Ground Level		
Cloud cover:		☐	None	☒	Slight	☐	Cloudy	☐	Overcast			
Precipitation		☒	None	☐	Slight	☐	Moderate	☐	Heavy			
Barometric pressure (mb) Before:		1015		Temperature (°C)		12						
INSTRUMENTATION USED												
Gas concentration:		#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;										
		#2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;								X Tick Instrument used		

BH (No.)	WS03	aP After (mb)	dp (Pa)	Flow rate (l/h)	Time (s)	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
		1015	0	0.0	0	0.0	0.0	0.7	19.7	0	0	
Depth to GW: (m)	1.54				30	0.0	0.0	2.6	17.7	0	0	
					60	0.0	0.0	2.6	17.5	0	0	
					90	0.0	0.0	2.6	17.4	0	0	
					120	0.0	0.0	2.6	17.4	0	0	
					150	0.0	0.0	2.6	17.4	0	0	Constant readings
					180							
					210							
					240							
					270							
					300							
					PID(ppm)							
					5	0.1						
					15	0.3						
					30	0.1						
					45	0.2						
					60	0.1						
					75	0.1						
					90							
					105							
					120							

KEY

aP: Atmospheric Pressure
dP: Differential Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

JOB DETAILS												
Location:		Haringey Civic Centre - Ground Investigation				Engineer:		IJ + AA				
Date:		02/02/2022		Job Number:		21/3628		Time:		10:25		
METEOROLOGICAL AND SITE INFORMATION												
State of ground:		☒	Dry	☐	Moist	☐	Wet			Delete As Required		
Wind:		☐	Calm	☒	Light	☐	Moderate	☐	Strong	Ground Level		
Cloud cover:		☐	None	☒	Slight	☐	Cloudy	☐	Overcast			
Precipitation		☒	None	☐	Slight	☐	Moderate	☐	Heavy			
Barometric pressure (mb) Before:		1015		Temperature (°C)		11						
INSTRUMENTATION USED												
Gas concentration:		#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;										
		#2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;								X Tick Instrument used		

BH (No.)	WS06	aP After (mb)	dp (Pa)	Flow rate (l/h)	Time (s)	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
		1015	0	0.0	0	0.0	0.0	0.7	19.5	0	0	
Depth to GW: (m)	DRY				30	0.0	0.0	0.8	20.1	0	0	
					60	0.0	0.0	0.8	19.9	0	0	
					90	0.0	0.0	0.8	19.9	0	0	
					120	0.0	0.0	0.8	19.9	0	0	Constant readings
					150							
					180							
					210							
					240							
					270							
					300							
					PID(ppm)							
					5	0.1						
					15	0.1						
					30	0.1						
					45	0.1						
					60	0.1						
					75							
					90							
					105							
					120							

KEY

aP: Atmospheric Pressure
dP: Differential Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.



INSTRUMENTATION USED				
Gas concentration:	#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;			Tick Instrument used
	#2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;		X	

KEY
aP: Atmospheric Pressure NR: Not Recorded Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.
dP: Differential Pressure



INSTRUMENTATION USED				
Gas concentration:	#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;			Tick Instrument used
	#2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;		X	

[illegible]

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

JOB DETAILS												
Location:		Haringey Civic Centre - Ground Investigation				Engineer:		FS + IJ + AA				
Date:		10/02/2022		Job Number:		21/3628		Time:		10:38		
METEOROLOGICAL AND SITE INFORMATION												
State of ground:		☒	Dry	☐	Moist	☐	Wet			Delete As Required		
Wind:		☐	Calm	☒	Light	☐	Moderate	☐	Strong	Ground Level		
Cloud cover:		☐	None	☐	Slight	☒	Cloudy	☐	Overcast			
Precipitation		☒	None	☐	Slight	☐	Moderate	☐	Heavy			
Barometric pressure (mb) Before:		1014		Temperature (°C)		7						
INSTRUMENTATION USED												
Gas concentration:		#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;										
		#2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;								X Tick Instrument used		

BH (No.)	BH02 (Shallow)	aP After (mb)	dp (Pa)	Flow rate (l/h)	Time (s)	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
		1014	0	0.0	0	0.0	0.0	2.1	15.9	0	0	
Depth to GW: (m)	0.60				30	0.0	0.0	0.3	20.4	0	0	
					60	0.0	0.0	0.3	19.6	0	0	
					90	0.0	0.0	0.3	19.3	0	0	
					120	0.0	0.0	0.3	19.3	0	0	
					150	0.0	0.0	0.3	19.4	0	0	Constant readings
					180							
					210							
					240							
					270							
					300							
					PID(ppm)							
					5	0.1						
					15	0.1						
					30	0.1						
					45	0.1						
					60	0.1						
					75	0.1						
					90							
					105							
					120							

KEY

aP: Atmospheric Pressure
dP: Differential Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

JOB DETAILS												
Location:		Haringey Civic Centre - Ground Investigation				Engineer:		FS + IJ + AA				
Date:		10/02/2022		Job Number:		21/3628		Time:		10:06		
METEOROLOGICAL AND SITE INFORMATION												
State of ground:		☐	Dry	☒	Moist	☐	Wet				Delete As Required	
Wind:		☐	Calm	☒	Light	☐	Moderate	☐	Strong	Ground Level		
Cloud cover:		☐	None	☐	Slight	☒	Cloudy	☐	Overcast			
Precipitation		☒	None	☐	Slight	☐	Moderate	☐	Heavy			
Barometric pressure (mb) Before:		1016		Temperature (°C)		7						
INSTRUMENTATION USED												
Gas concentration:		#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;										
		#2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;								☒ Tick Instrument used		

BH (No.)	BH03	aP After (mb)	dp (Pa)	Flow rate (l/h)	Time (s)	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
		1016	0	0.0	0	0.0	0.0	1.0	20.3	0	0	
Depth to GW: (m)	DRY				30	0.0	0.0	2.9	14.7	0	0	
					60	0.0	0.0	2.9	13.3	0	0	
					90	0.0	0.0	2.9	12.9	0	0	
					120	0.0	0.0	2.9	12.6	0	0	
					150	0.0	0.0	2.9	12.6	0	0	
					180	0.0	0.0	2.9	12.5	0	0	
					210	0.0	0.0	2.9	12.5	0	0	Constant readings
					240							
					270							
					300							
					PID(ppm)							
					5	0.0						
					15	0.1						
					30	0.1						
					45	0.1						
					60	0.1						
					75							
					90							
					105							
					120							

KEY

aP: Atmospheric Pressure
dP: Differential Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.



INSTRUMENTATION USED				
Gas concentration:	#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;			Tick Instrument used
	#2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;	X		

[illegible]

aP: Atmospheric Pressure
dP: Differential Pressure

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

JOB DETAILS													
Location:	Haringey Civic Centre - Ground Investigation						Engineer:	FS + IJ + AA					
Date:	10/02/2022		Job Number:	21/3628		Time:	11:11						
METEOROLOGICAL AND SITE INFORMATION													
State of ground:	☒	Dry	☐	Moist	☐	Wet				Delete As Required			
Wind:	☐	Calm	☒	Light	☐	Moderate	☐	Strong	Ground Level				
Cloud cover:	☐	None	☒	Slight	☐	Cloudy	☐	Overcast					
Precipitation	☒	None	☐	Slight	☐	Moderate	☐	Heavy					
Barometric pressure (mb) Before:	1014		Temperature (°C)				7						
INSTRUMENTATION USED													
Gas concentration:	#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%; #2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;												
												X	Tick Instrument used
BH (No.)	WS06	aP After (mb)	dp (Pa)	Flow rate (l/h)	Time (s)	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments	
		1014	0	0.0	0	0.0	0.0	0.4	18.2	0	0		
Depth to GW: (m)	DRY				30	0.0	0.0	0.8	22.5	0	0		
					60	0.0	0.0	0.8	20.7	0	0		
					90	0.0	0.0	0.8	20.2	0	0		
					120	0.0	0.0	0.8	20.1	0	0		
					150	0.0	0.0	0.8	20.0	0	0		
					180	0.0	0.0	0.8	20.0	0	0	Constant readings	
					210								
					240								
					270								
					300								
					PID(ppm)								
					5	0.1							
					15	0.1							
					30	0.1							
					45	0.1							
					60	0.1							
					75								
					90								
					105								
					120								

KEY

aP: Atmospheric Pressure
dP: Differential Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

JOB DETAILS												
Location:	Haringey Civic Centre - Ground Investigation					Engineer:	FS + IJ + AA					
Date:	10/02/2022	Job Number:	21/3628		Time:	11:29						
METEOROLOGICAL AND SITE INFORMATION												
State of ground:	☒	Dry	☐	Moist	☐	Wet				Delete As Required		
Wind:	☐	Calm	☒	Light	☐	Moderate	☐	Strong	Ground Level			
Cloud cover:	☐	None	☒	Slight	☐	Cloudy	☐	Overcast				
Precipitation	☒	None	☐	Slight	☐	Moderate	☐	Heavy				
Barometric pressure (mb) Before:	1014					Temperature (°C)	7					
INSTRUMENTATION USED												
Gas concentration:	#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%; #2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;										☒ Tick Instrument used	

BH (No.)	WS07	aP After (mb)	dp (Pa)	Flow rate (l/h)	Time (s)	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
		1014	0	0.0	0	0.0	0.0	0.8	19.8	0	0	
Depth to GW: (m)	DRY				30	0.0	0.0	0.2	22.7	0	0	
					60	0.0	0.0	0.2	21.1	0	0	
					90	0.0	0.0	0.2	20.5	0	0	
					120	0.0	0.0	0.2	20.4	0	0	
					150	0.0	0.0	0.2	20.3	0	0	
					180	0.0	0.0	0.2	20.3	0	0	Constant readings
					210							
					240							
					270							
					300							
					PID(ppm)							
					5	0.1						
					15	0.1						
					30	0.1						
					45	0.1						
					60	0.1						
					75							
					90							
					105							
					120							

KEY

aP: Atmospheric Pressure
dP: Differential Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

JOB DETAILS													
Location:	Haringey Civic Centre - Ground Investigation					Engineer:	FS + IJ + AA						
Date:	10/02/2022	Job Number:	21/3628		Time:	11:40							
METEOROLOGICAL AND SITE INFORMATION													
State of ground:	☒	Dry	☐	Moist	☐	Wet				Delete As Required			
Wind:	☐	Calm	☒	Light	☐	Moderate	☐	Strong	Ground Level				
Cloud cover:	☐	None	☐	Slight	☒	Cloudy	☐	Overcast					
Precipitation	☒	None	☐	Slight	☐	Moderate	☐	Heavy					
Barometric pressure (mb) Before:	1014					Temperature (°C)	7						
INSTRUMENTATION USED													
Gas concentration:	#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%; #2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;												
												X	Tick Instrument used

BH (No.)	WS08	aP After (mb)	dp (Pa)	Flow rate (l/h)	Time (s)	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
		1014	0	0.0	0	0.0	0.0	0.2	19.5	0	0	
Depth to GW: (m)	DRY				30	0.0	0.0	0.1	25.6	0	0	
					60	0.0	0.0	0.1	22.7	0	0	
					90	0.0	0.0	0.1	21.6	0	0	
					120	0.0	0.0	0.1	21.0	0	0	
					150	0.0	0.0	0.1	20.8	0	0	
					180	0.0	0.0	0.1	20.8	0	0	
					210	0.0	0.0	0.1	20.7	0	0	Constant readings
					240							
					270							
					300							
					PID(ppm)							
					5	0.1						
					15	0.1						
					30	0.1						
					45	0.1						
					60	0.1						
					75							
					90							
					105							
					120							

KEY

aP: Atmospheric Pressure
dP: Differential Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

JOB DETAILS														
Location:	Haringey Civic Centre - Ground Investigation					Engineer:	AA + IJ + AA							
Date:	16/02/2022		Job Number:	21/3628		Time:	13:00							
METEOROLOGICAL AND SITE INFORMATION														
State of ground:	☒	Dry	☐	Moist	☐	Wet	Delete As Required Ground Level							
Wind:	☐	Calm	☒	Light	☐	Moderate							☐	Strong
Cloud cover:	☐	None	☐	Slight	☒	Cloudy							☐	Overcast
Precipitation	☒	None	☐	Slight	☐	Moderate							☐	Heavy
Barometric pressure (mb) Before:	987					Temperature (°C)	15							
INSTRUMENTATION USED														
Gas concentration:	#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%; #2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%; ☒													
												Tick Instrument used		

BH (No.)	BH02 (Shallow)	aP After (mb)	dp (Pa)	Flow rate (l/h)	Time (s)	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
		987	0	0.0	0	0.0	0.0	2.7	16.7	0	0	
Depth to GW: (m)	0.03				30	0.0	0.0	0.0	20.7	0	0	
					60	0.0	0.0	0.1	17.9	0	0	
					90	0.0	0.0	0.1	18.6	0	0	
					120	0.0	0.0	0.1	19.0	0	0	
					150	0.0	0.0	1.0	19.1	0	0	
					180	0.0	0.0	0.1	19.1	0	0	Constant readings
					210							
					240							
					270							
					300							
					PID(ppm)							
					5	0.0						
					15	0.0						
					30	0.0						
					45	0.0						
					60	0.0						
					75							
					90							
					105							
					120							

KEY

aP: Atmospheric Pressure
dP: Differential Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

JOB DETAILS												
Location:		Haringey Civic Centre - Ground Investigation				Engineer:		AA + IJ + AA				
Date:		16/02/2022		Job Number:		21/3628		Time:		12:16		
METEOROLOGICAL AND SITE INFORMATION												
State of ground:		☒	Dry	☐	Moist	☐	Wet			Delete As Required		
Wind:		☐	Calm	☒	Light	☐	Moderate	☐	Strong	Ground Level		
Cloud cover:		☐	None	☒	Slight	☐	Cloudy	☐	Overcast			
Precipitation		☒	None	☐	Slight	☐	Moderate	☐	Heavy			
Barometric pressure (mb) Before:		989					Temperature (°C)		13			
INSTRUMENTATION USED												
Gas concentration:		#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;								☐	Tick Instrument used	
		#2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;								☒		
BH (No.)	BH03	aP After (mb)	dp (Pa)	Flow rate (l/h)	Time (s)	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
		989	0	0.0	0	0.0	0.0	2.9	13.0	0	0	
Depth to GW: (m)	2.22				30	0.0	0.0	3.0	12.3	0	0	
					60	0.0	0.0	3.0	11.9	0	0	
					90	0.0	0.0	3.0	11.8	0	0	
					120	0.0	0.0	3.0	11.7	0	0	
					150	0.0	0.0	3.0	11.6	0	0	
					180	0.0	0.0	3.0	11.5	0	0	
					210	0.0	0.0	3.0	11.5	0	0	
					240	0.0	0.0	3.0	11.5	0	0	Constant readings
					270							
					300							
					PID(ppm)							
					5	0.0						
					15	0.0						
					30	0.0						
					45	0.0						
					60	0.0						
					75							
					90							
					105							
					120							

KEY

aP: Atmospheric Pressure
dP: Differential Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

JOB DETAILS												
Location:		Haringey Civic Centre - Ground Investigation				Engineer:		AA + IJ + AA				
Date:		16/02/2022		Job Number:		21/3628		Time:		12:47		
METEOROLOGICAL AND SITE INFORMATION												
State of ground:		☒	Dry	☐	Moist	☐	Wet			Delete As Required		
Wind:		☐	Calm	☒	Light	☐	Moderate	☐	Strong	Ground Level		
Cloud cover:		☐	None	☐	Slight	☒	Cloudy	☐	Overcast			
Precipitation		☒	None	☐	Slight	☐	Moderate	☐	Heavy			
Barometric pressure (mb) Before:		987					Temperature (°C)		13			
INSTRUMENTATION USED												
Gas concentration:		#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;										
		#2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;								☒	Tick Instrument used	

BH (No.)	WS03	aP After (mb)	dp (Pa)	Flow rate (l/h)	Time (s)	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
		987	12	0.9	0	0.0	0.0	2.0	15.8	0	0	
Depth to GW: (m)	1.48		0	0.0	30	0.0	0.0	3.0	16.9	0	0	
					60	0.0	0.0	3.0	15.1	0	0	
					90	0.0	0.0	3.0	15.1	0	0	
					120	0.0	0.0	3.0	15.0	0	0	
					150	0.0	0.0	3.0	15.0	0	0	
					180	0.0	0.0	2.9	15.0	0	0	
					210	0.0	0.0	2.9	15.0	0	0	Constant readings
					240							
					270							
					300							
					PID(ppm)							
					5	0.0						
					15	0.0						
					30	0.0						
					45	0.0						
					60	0.0						
					75							
					90							
					105							
					120							

KEY

aP: Atmospheric Pressure
dP: Differential Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

JOB DETAILS									
Location:	Haringey Civic Centre - Ground Investigation				Engineer:	AA + IJ + AA			
Date:	16/02/2022	Job Number:	21/3628	Time:	13:28				
METEOROLOGICAL AND SITE INFORMATION									
State of ground:	☒ Dry	☐ Moist	☐ Wet				Delete As Required		
Wind:	☐ Calm	☒ Light	☐ Moderate	☐ Strong	Ground Level				
Cloud cover:	☐ None	☐ Slight	☒ Cloudy	☐ Overcast					
Precipitation	☒ None	☐ Slight	☐ Moderate	☐ Heavy					
Barometric pressure (mb) Before:	987	Temperature (°C)		15					

INSTRUMENTATION USED									
Gas concentration:	#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;								
	#2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;					X Tick Instrument used			

BH (No.)	WS06	aP After (mb)	dp (Pa)	Flow rate (l/h)	Time (s)	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
		987	0	0.0	0	0.0	0.0	0.2	19.2	0	0	
Depth to GW: (m)	DRY				30	0.0	0.0	0.8	22.7	0	0	
					60	0.0	0.0	0.8	20.7	0	0	
					90	0.0	0.0	0.8	20.3	0	0	
					120	0.0	0.0	0.8	20.1	0	0	
					150	0.0	0.0	0.8	20.1	0	0	
					180	0.0	0.0	0.8	20.1	0	0	Constant readings
					210							
					240							
					270							
					300							
					PID(ppm)							
					5	0.0						
					15	0.1						
					30	0.1						
					45	0.1						
					60	0.1						
					75							
					90							
					105							
					120							

KEY

aP: Atmospheric Pressure
dP: Differential Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

JOB DETAILS												
Location:		Haringey Civic Centre - Ground Investigation				Engineer:		AA + IJ + AA				
Date:		16/02/2022		Job Number:		21/3628		Time:		13:40		
METEOROLOGICAL AND SITE INFORMATION												
State of ground:		☒	Dry	☐	Moist	☐	Wet			Delete As Required		
Wind:		☐	Calm	☒	Light	☐	Moderate	☐	Strong	Ground Level		
Cloud cover:		☐	None	☐	Slight	☒	Cloudy	☐	Overcast			
Precipitation		☒	None	☐	Slight	☐	Moderate	☐	Heavy			
Barometric pressure (mb) Before:		987					Temperature (°C)		15			
INSTRUMENTATION USED												
Gas concentration:		#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;										
		#2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;							☒	Tick Instrument used		

BH (No.)	WS07	aP After (mb)	dp (Pa)	Flow rate (l/h)	Time (s)	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
		987	0	0.0	0	0.0	0.0	0.8	19.6	0	0	
Depth to GW: (m)	DRY				30	0.0	0.0	0.2	24.2	0	0	
					60	0.0	0.0	0.3	21.8	0	0	
					90	0.0	0.0	0.3	20.8	0	0	
					120	0.0	0.0	0.3	20.6	0	0	
					150	0.0	0.0	0.3	20.4	0	0	Constant readings
				180								
					210							
					240							
					270							
					300							
					PID(ppm)							
					5	0.0						
					15	0.0						
					30	0.0						
					45	0.0						
					60	0.0						
					75							
					90							
					105							
					120							

KEY

aP: Atmospheric Pressure
dP: Differential Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

JOB DETAILS												
Location:		Haringey Civic Centre - Ground Investigation				Engineer:		AA + IJ + AA				
Date:		16/02/2022		Job Number:		21/3628		Time:		13:50		
METEOROLOGICAL AND SITE INFORMATION												
State of ground:		☒	Dry	☐	Moist	☐	Wet				Delete As Required	
Wind:		☐	Calm	☒	Light	☐	Moderate	☐	Strong	Ground Level		
Cloud cover:		☐	None	☐	Slight	☒	Cloudy	☐	Overcast			
Precipitation		☒	None	☐	Slight	☐	Moderate	☐	Heavy			
Barometric pressure (mb) Before:		986		Temperature (°C)		15						
INSTRUMENTATION USED												
Gas concentration:		#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;										
		#2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;								X Tick Instrument used		
BH (No.)	WS08	aP After (mb)	dp (Pa)	Flow rate (l/h)	Time (s)	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
		986	0	0.0	0	0.0	0.0	0.1	20.5	0	0	
Depth to GW: (m)	DRY				30	0.0	0.0	0.1	23.5	0	0	
					60	0.0	0.0	0.1	21.4	0	0	
					90	0.0	0.0	0.1	20.9	0	0	
					120	0.0	0.0	0.1	20.6	0	0	
					150	0.0	0.0	0.1	20.5	0	0	
					180	0.0	0.0	0.1	20.5	0	0	Constant readings
					210							
					240							
					270							
					300							
					PID(ppm)							
					5	0.0						
					15	0.0						
					30	0.0						
					45	0.0						
					60	0.0						
					75							
					90							
					105							
					120							

KEY

aP: Atmospheric Pressure
dP: Differential Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

JOB DETAILS												
Location:		Haringey Civic Centre - Ground Investigation				Engineer:		IJ + AA				
Date:		24/02/2022		Job Number:		21/3628		Time:		10:42		
METEOROLOGICAL AND SITE INFORMATION												
State of ground:		☒	Dry	☐	Moist	☐	Wet				Delete As Required	
Wind:		☐	Calm	☒	Light	☐	Moderate	☐	Strong	Ground Level		
Cloud cover:		☐	None	☐	Slight	☒	Cloudy	☐	Overcast			
Precipitation		☒	None	☐	Slight	☐	Moderate	☐	Heavy			
Barometric pressure (mb) Before:		999					Temperature (°C)		7			
INSTRUMENTATION USED												
Gas concentration:		#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;										
		#2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;								☒	Tick Instrument used	

BH (No.)	BH02 (Shallow)	aP After (mb)	dp (Pa)	Flow rate (l/h)	Time (s)	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
		1000	299	99.7	0	0.0	0.0	0.2	22.8	0	0	
Depth to GW: (m)	0.07		0	0.0	30	0.0	0.0	0.2	22.7	0	0	
					60	0.0	0.0	0.2	19.8	0	0	
					90	0.0	0.0	0.2	19.6	0	0	
					120	0.0	0.0	0.2	19.6	0	0	
					150	0.0	0.0	0.1	19.5	0	0	
					180	0.0	0.0	0.1	19.5	0	0	
					210	0.0	0.0	0.1	19.5	0	0	Constant readings
					240							
					270							
					300							
					PID(ppm)							
					5	0.8						
					15	1.3						
					30	1.0						
					45	0.3						
					60	0.1						
					75	0.0						
					90	0.0						
					105							
					120							

KEY

aP: Atmospheric Pressure
dP: Differential Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

JOB DETAILS												
Location:		Haringey Civic Centre - Ground Investigation				Engineer:		IJ + AA				
Date:		04/03/2022		Job Number:		21/3628		Time:		12:20		
METEOROLOGICAL AND SITE INFORMATION												
State of ground:		☒	Dry	☐	Moist	☐	Wet			Delete As Required		
Wind:		☐	Calm	☒	Light	☐	Moderate	☐	Strong	Ground Level		
Cloud cover:		☐	None	☒	Slight	☐	Cloudy	☐	Overcast			
Precipitation		☒	None	☐	Slight	☐	Moderate	☐	Heavy			
Barometric pressure (mb) Before:		1012		Temperature (°C)		8						
INSTRUMENTATION USED												
Gas concentration:		#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;										
		#2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;								X Tick Instrument used		

BH (No.)	BH02 (Shallow)	aP After (mb)	dp (Pa)	Flow rate (l/h)	Time (s)	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
		1012	1200	90.0	0	0.0	0.0	0.1	19.2	0	0	
Depth to GW: (m)	0.75		20	4.0	30	0.0	0.0	0.2	19.9	0	0	
			3	1.2	60	0.0	0.0	0.0	19.8	0	0	
			0	0.0	90	0.0	0.0	0.2	19.2	0	0	
					120	0.0	0.0	0.2	19.1	0	0	
					150	0.0	0.0	0.2	18.9	0	0	
					180	0.0	0.0	0.2	18.9	0	0	
					210	0.0	0.0	0.2	18.9	0	0	Constant readings
					240							
					270							
					300							
					PID(ppm)							
					5	0.9						
					15	1.0						
					30	1.1						
					45	1.2						
					60	1.2						
					75	1.2						
					90	1.2						
					105	1.2						
					120	1.2						

KEY

aP: Atmospheric Pressure
dP: Differential Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

JOB DETAILS												
Location:		Haringey Civic Centre - Ground Investigation				Engineer:		IJ + AA				
Date:		11/03/2022		Job Number:		21/3628		Time:		15:09		
METEOROLOGICAL AND SITE INFORMATION												
State of ground:		☐	Dry	☐	Moist	☒	Wet			Delete As Required		
Wind:		☐	Calm	☒	Light	☐	Moderate	☐	Strong	Ground Level		
Cloud cover:		☐	None	☐	Slight	☒	Cloudy	☐	Overcast			
Precipitation		☒	None	☐	Slight	☐	Moderate	☐	Heavy			
Barometric pressure (mb) Before:		994		Temperature (°C)		11						
INSTRUMENTATION USED												
Gas concentration:		#1 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;										
		#2 Gas Data GFM 436, Accuracy: CH4 ±0.3% (0 to 5%), ±3.0% (at 30%), ±3.0% (at 100%); CO2 ±0.3% (0 to 5%), ±3.0% (at 40%); O2 ±0.2%;								☒ Tick Instrument used		

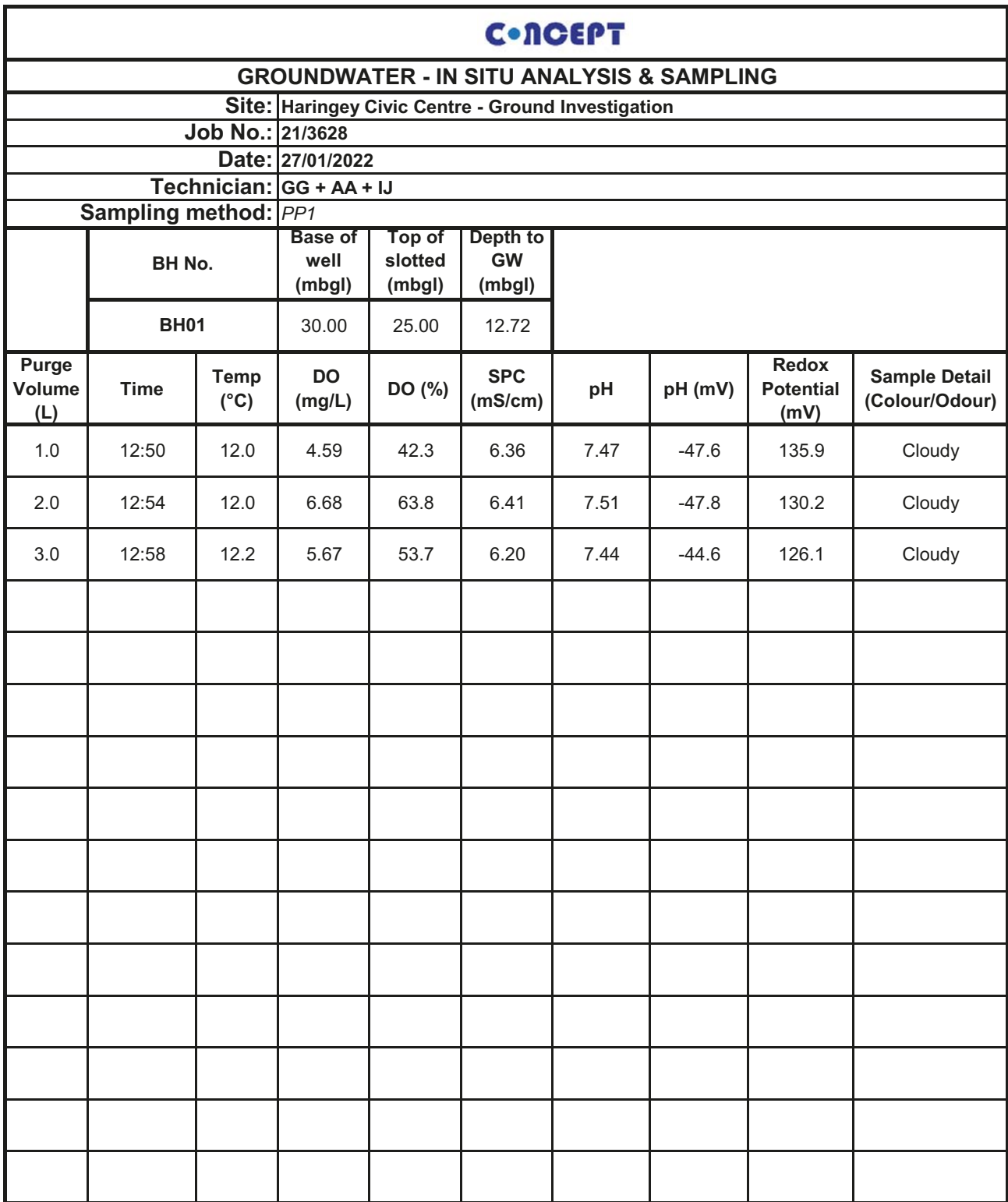
BH (No.)	BH02 (Shallow)	aP After (mb)	dp (Pa)	Flow rate (l/h)	Time (s)	CH ₄ (%)	LEL (%)	CO ₂ (%)	O ₂ (%)	H ₂ S(ppm)	CO (ppm)	Comments
		994	0	0.0	0	0.0	0.0	0.1	19.6	0	0	
Depth to GW: (m)	1.00				30	0.0	0.0	0.0	21.6	0	0	
					60	0.0	0.0	0.0	20.8	0	0	
					90	0.0	0.0	0.0	20.5	0	0	
					120	0.0	0.0	0.0	20.2	0	0	
					150	0.0	0.0	0.0	20.1	0	0	
					180	0.0	0.0	0.0	20.0	0	0	
					210	0.0	0.0	0.0	19.9	0	0	
					240	0.0	0.0	0.0	19.9	0	0	Constant readings
					270							
					300							
					PID(ppm)							
					5	0.0						
					15	0.0						
					30	0.0						
					45	0.0						
					60	0.0						
					75							
					90							
					105							
					120							

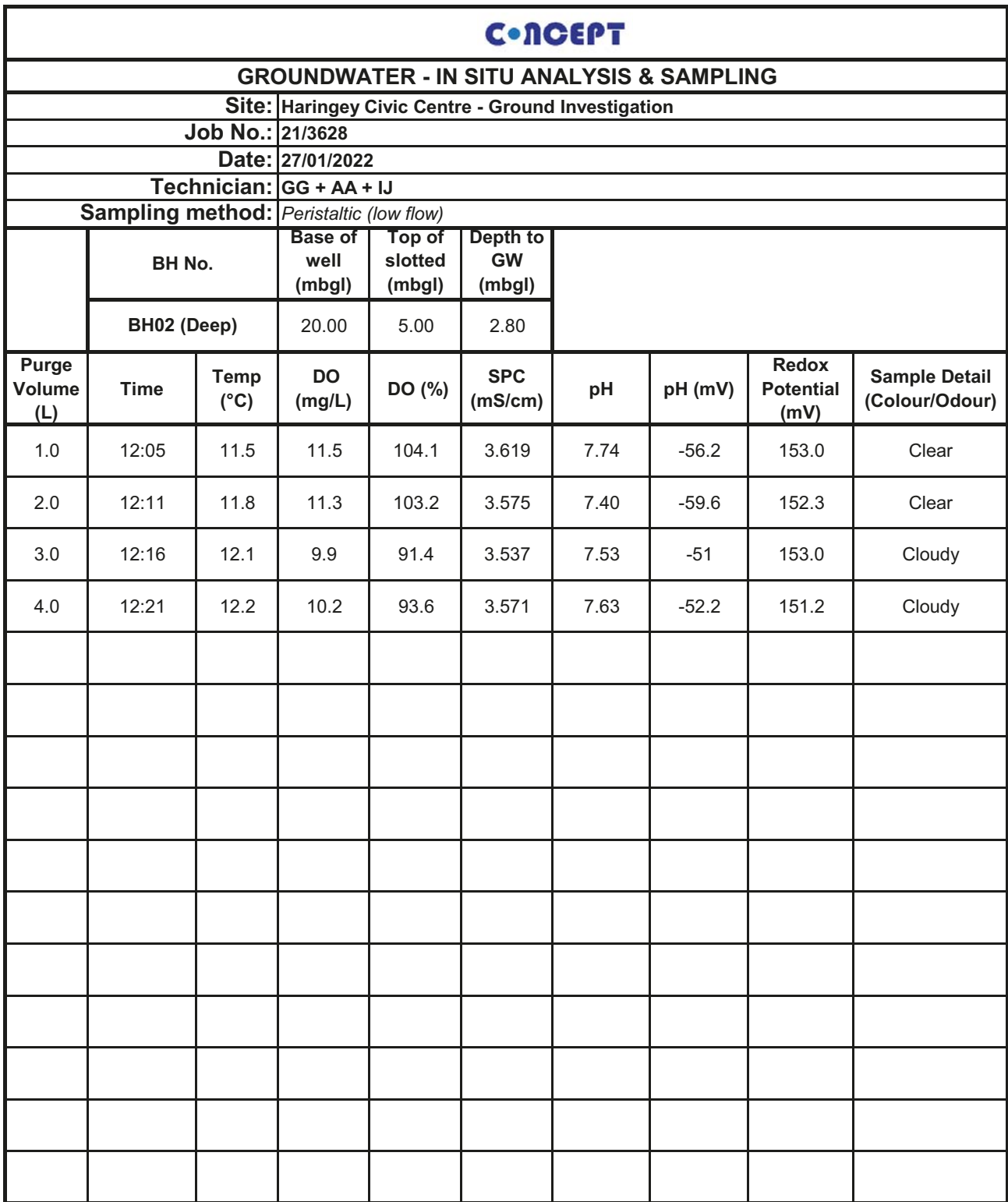
KEY

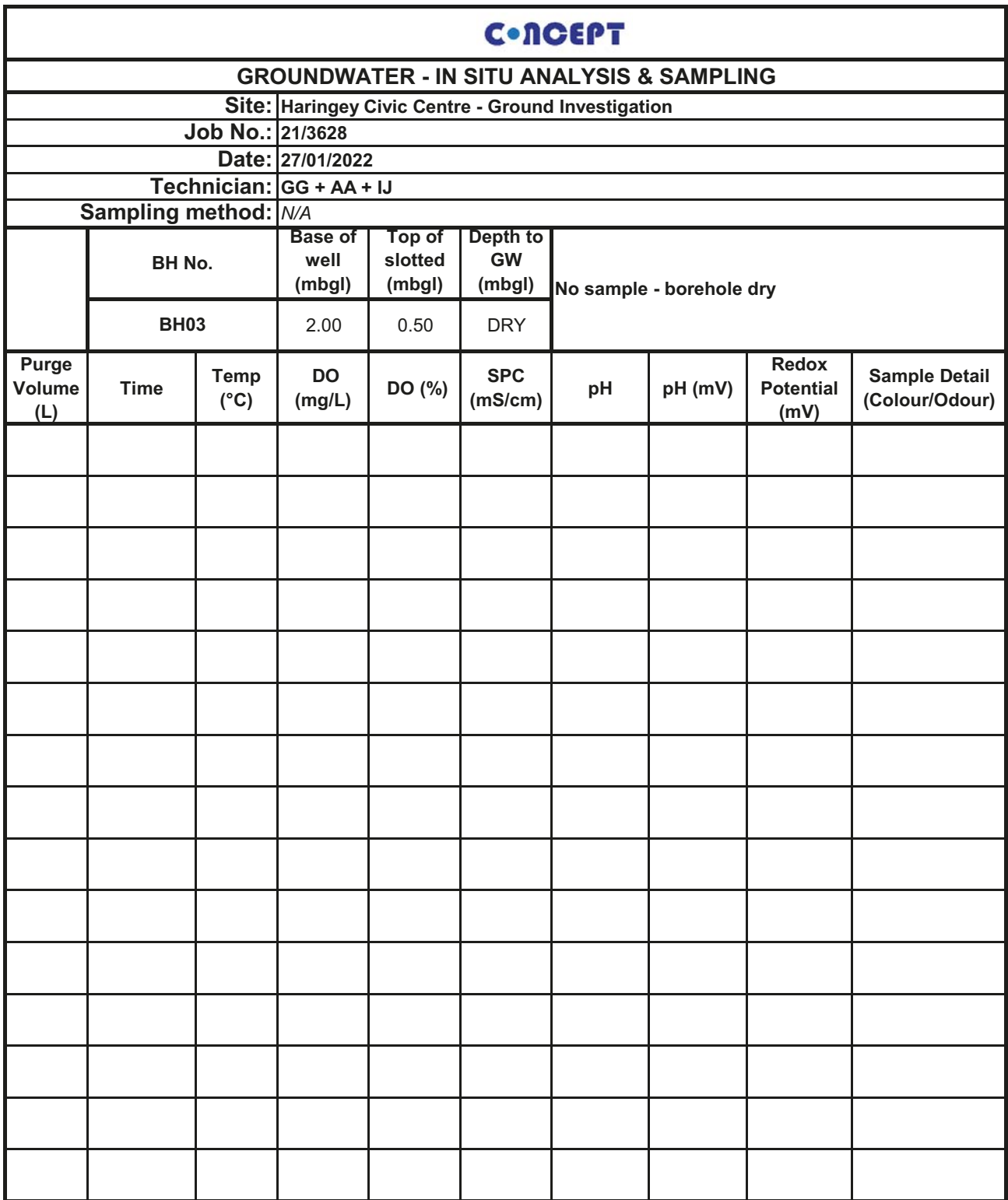
aP: Atmospheric Pressure
dP: Differential Pressure

NR: Not Recorded

Note: Where 0.0 is shown on the results indicates value lower than the detection limit of the instrument.

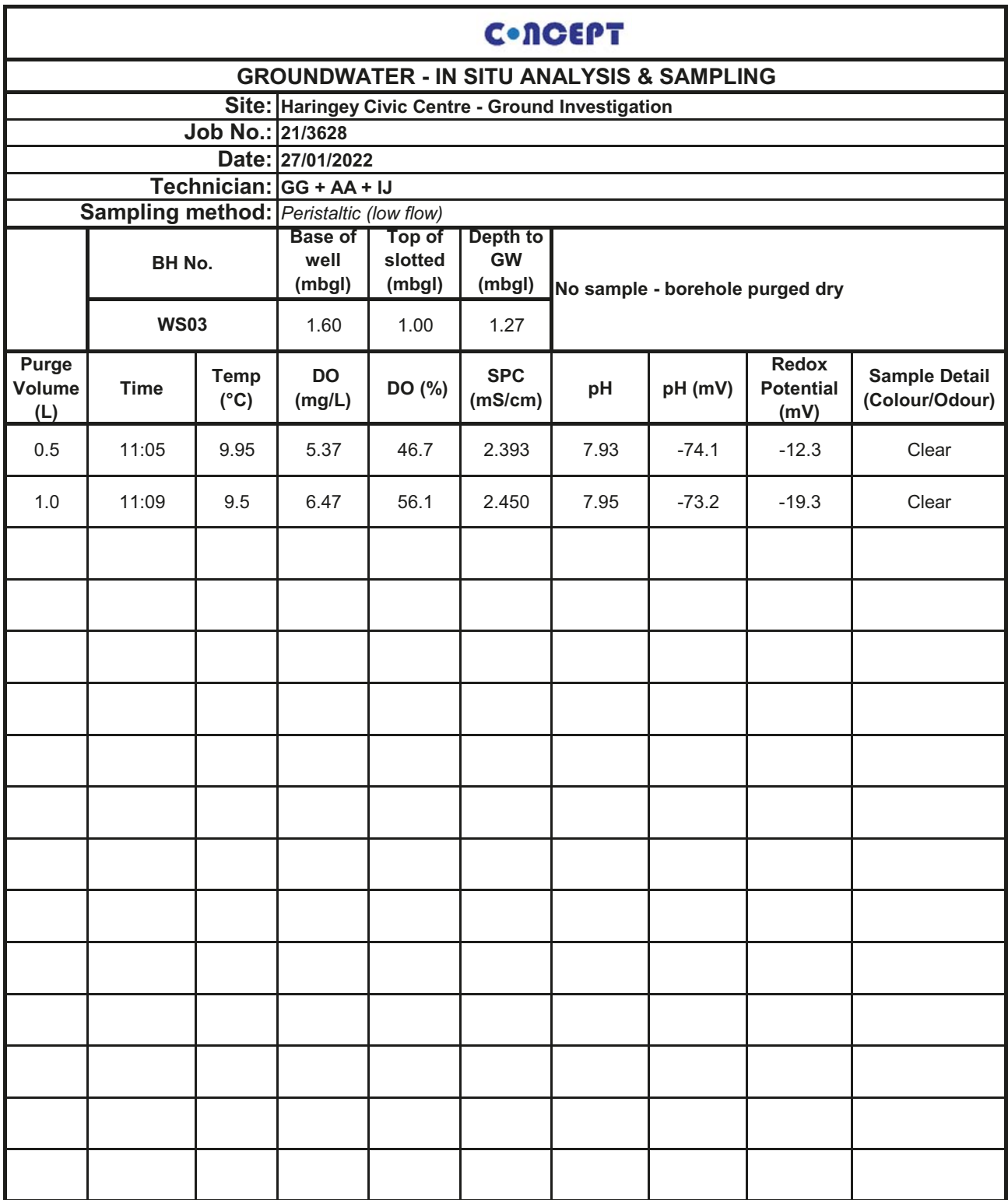


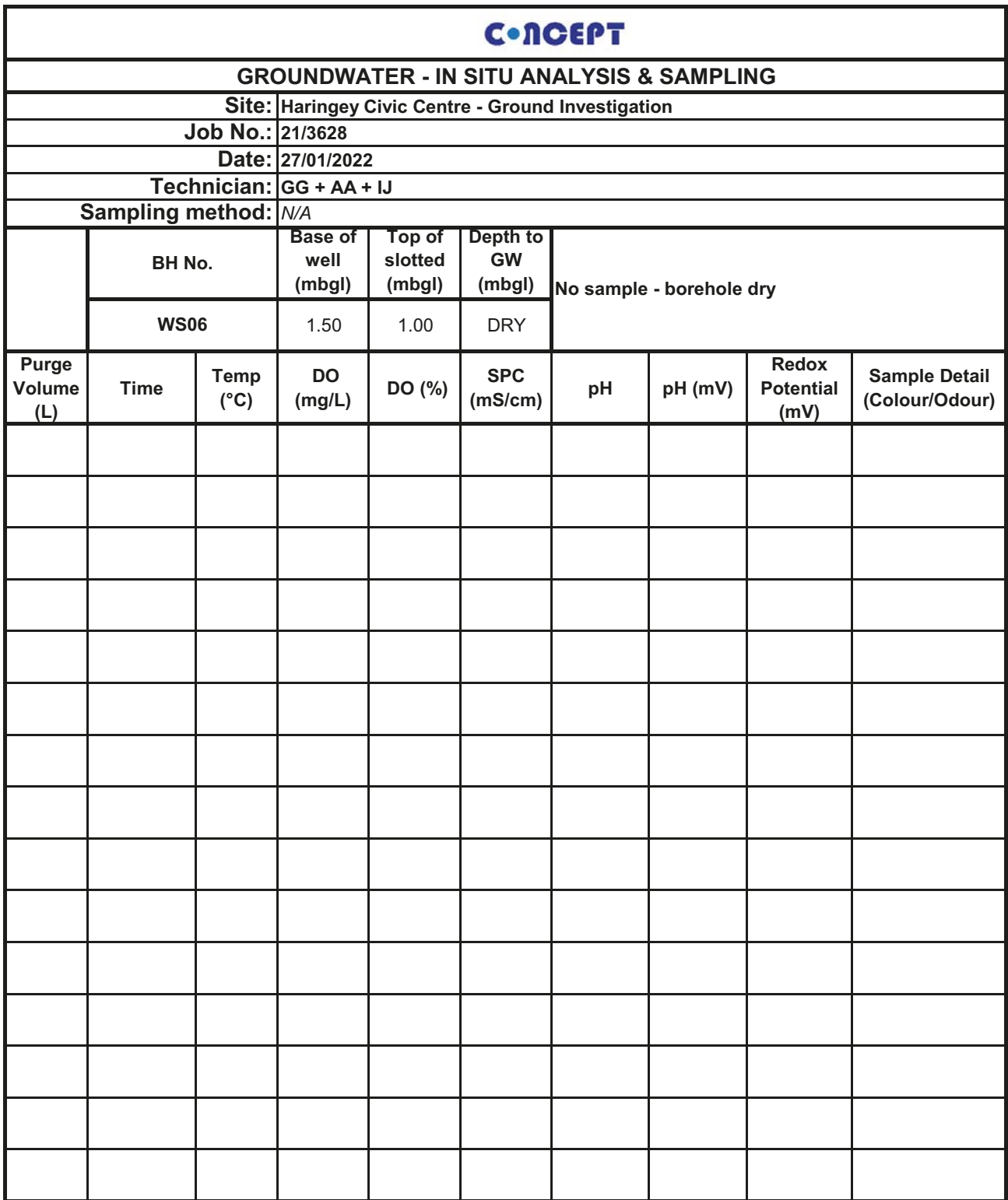


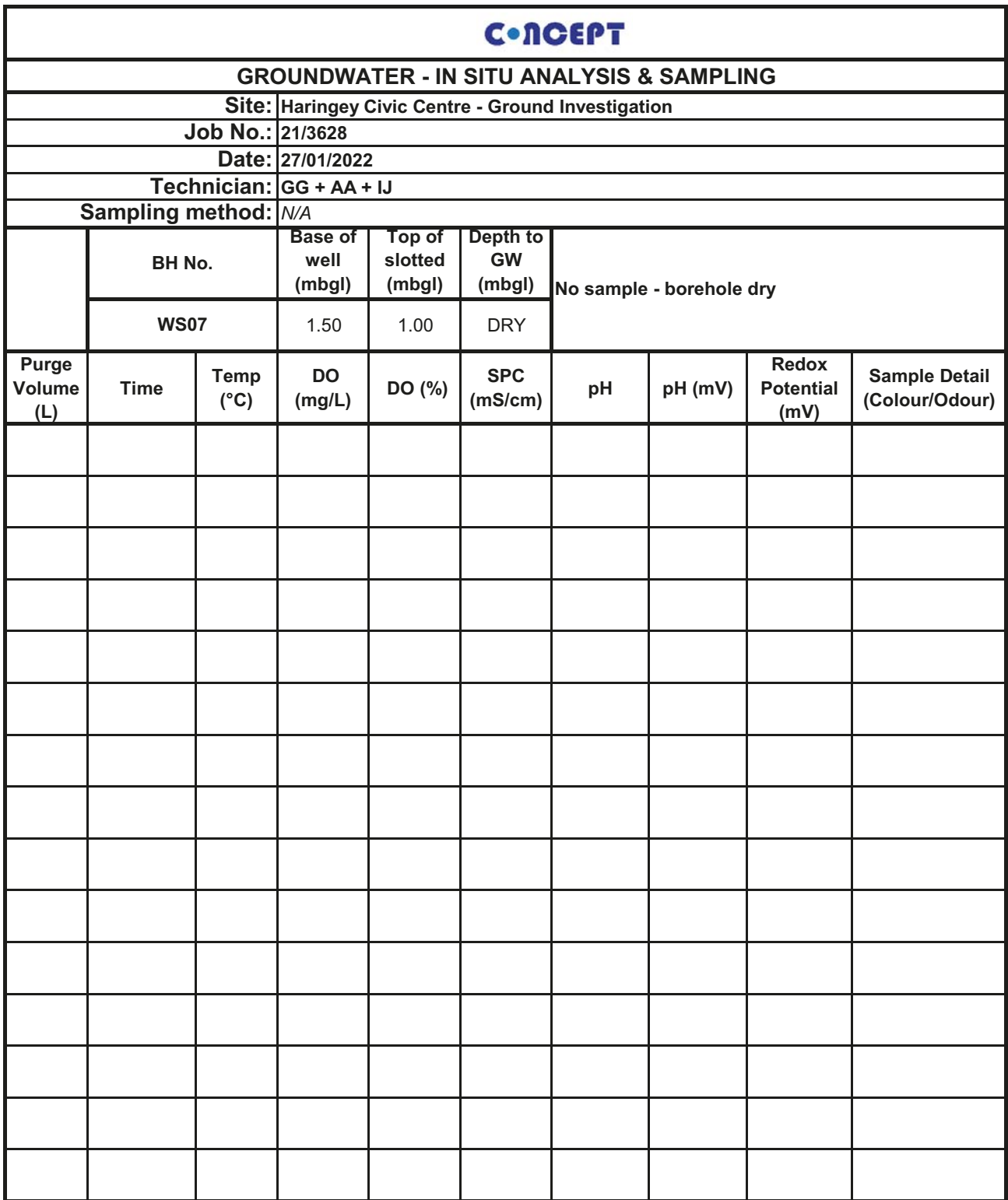


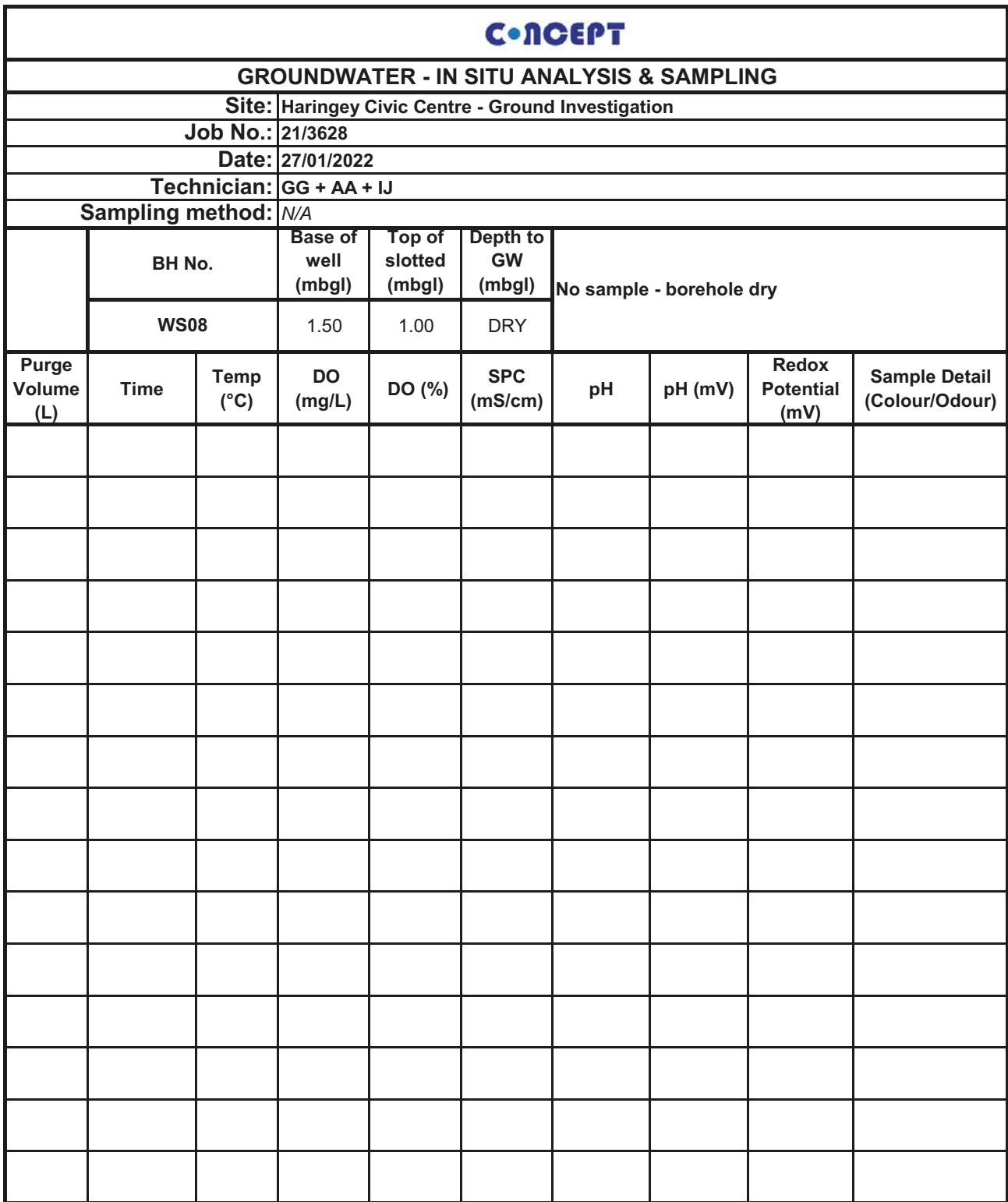
**GROUNDWATER - IN SITU ANALYSIS & SAMPLING****Site:** Haringey Civic Centre - Ground Investigation**Job No.:** 21/3628**Date:** 27/01/2022**Technician:** GG + AA + IJ**Sampling method:** Peristaltic (low flow)

	BH No.		Base of well (mbgl)	Top of slotted (mbgl)	Depth to GW (mbgl)				
	BH04		11.00	1.00	9.83				
Purge Volume (L)	Time	Temp (°C)	DO (mg/L)	DO (%)	SPC (mS/cm)	pH	pH (mV)	Redox Potential (mV)	Sample Detail (Colour/Odour)
1.0	13:24	11.6	6.72	64.0	10.17	7.06	-28.2	196.3	Clear
2.0	13:29	12.6	6.70	66.7	10.19	7.04	-22.8	186.3	Clear
3.0	13:34	12.8	6.72	62.9	10.17	7.02	-24.9	185.3	Cloudy









**GROUNDWATER - IN SITU ANALYSIS & SAMPLING****Site:** Haringey Civic Centre - Ground Investigation**Job No.:** 21/3628**Date:** 10/02/2022**Technician:** FS + IJ + AA**Sampling method:** PP1

	BH No.		Base of well (mbgl)	Top of slotted (mbgl)	Depth to GW (mbgl)				
	BH01		30.00	25.00	10.82				
Purge Volume (L)	Time	Temp (°C)	DO (mg/L)	DO (%)	SPC (mS/cm)	pH	pH (mV)	Redox Potential (mV)	Sample Detail (Colour/Odour)
1.0	12:18	11.7	4.34	41.0	6.604	7.18	-30.1	43.0	Clear
3.0	12:22	11.6	3.75	35.0	6.706	7.17	-29.5	-13.8	Clear
5.0	12:26	11.7	3.19	30.1	6.782	7.17	-29.5	-33.8	Clear
7.0	12:30	11.7	3.08	28.9	6.794	7.17	-29.3	-39.8	Clear

**GROUNDWATER - IN SITU ANALYSIS & SAMPLING****Site:** Haringey Civic Centre - Ground Investigation**Job No.:** 21/3628**Date:** 10/02/2022**Technician:** FS + IJ + AA**Sampling method:** Peristaltic (low flow)

	BH No.		Base of well (mbgl)	Top of slotted (mbgl)	Depth to GW (mbgl)				
	BH02 (Shallow)		1.50	0.50	0.60				
Purge Volume (L)	Time	Temp (°C)	DO (mg/L)	DO (%)	SPC (mS/cm)	pH	pH (mV)	Redox Potential (mV)	Sample Detail (Colour/Odour)
1.0	11:39	8.8	8.96	77.6	1.148	7.60	-53.8	-12.8	Brown
1.5	11:42	8.3	8.74	74.3	0.853	7.78	-63.2	-14.2	Brown
2.0	11:45	7.8	9.06	76.0	0.698	7.87	-67.6	-23.2	Brown
2.5	11:48	7.9	8.67	73.2	0.851	7.78	-62.8	-18.4	Brown



GROUNDWATER - IN SITU ANALYSIS & SAMPLING

Site: Haringey Civic Centre - Ground Investigation

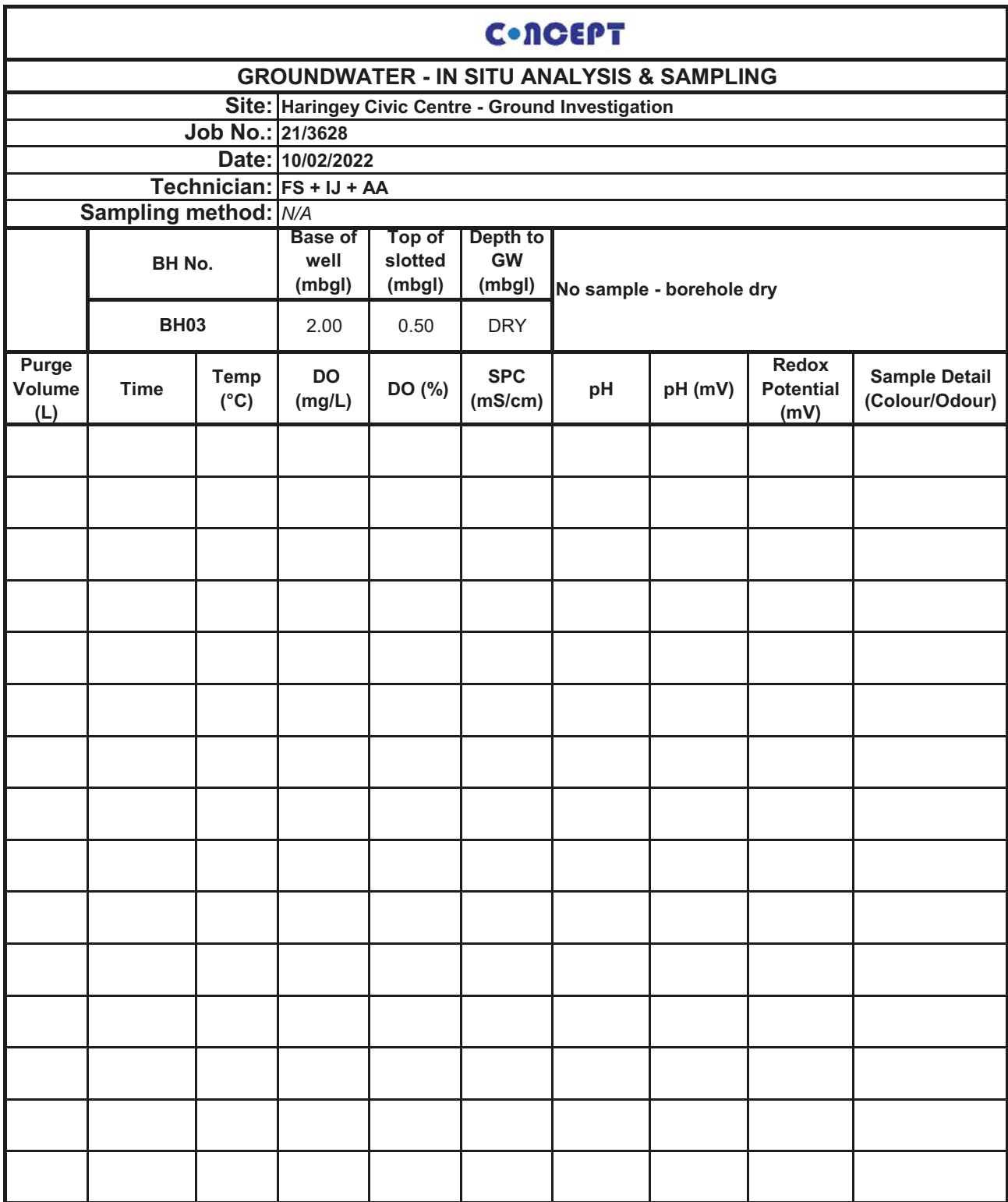
Job No.: 21/3628

Date: 10/02/2022

Technician: FS + IJ + AA

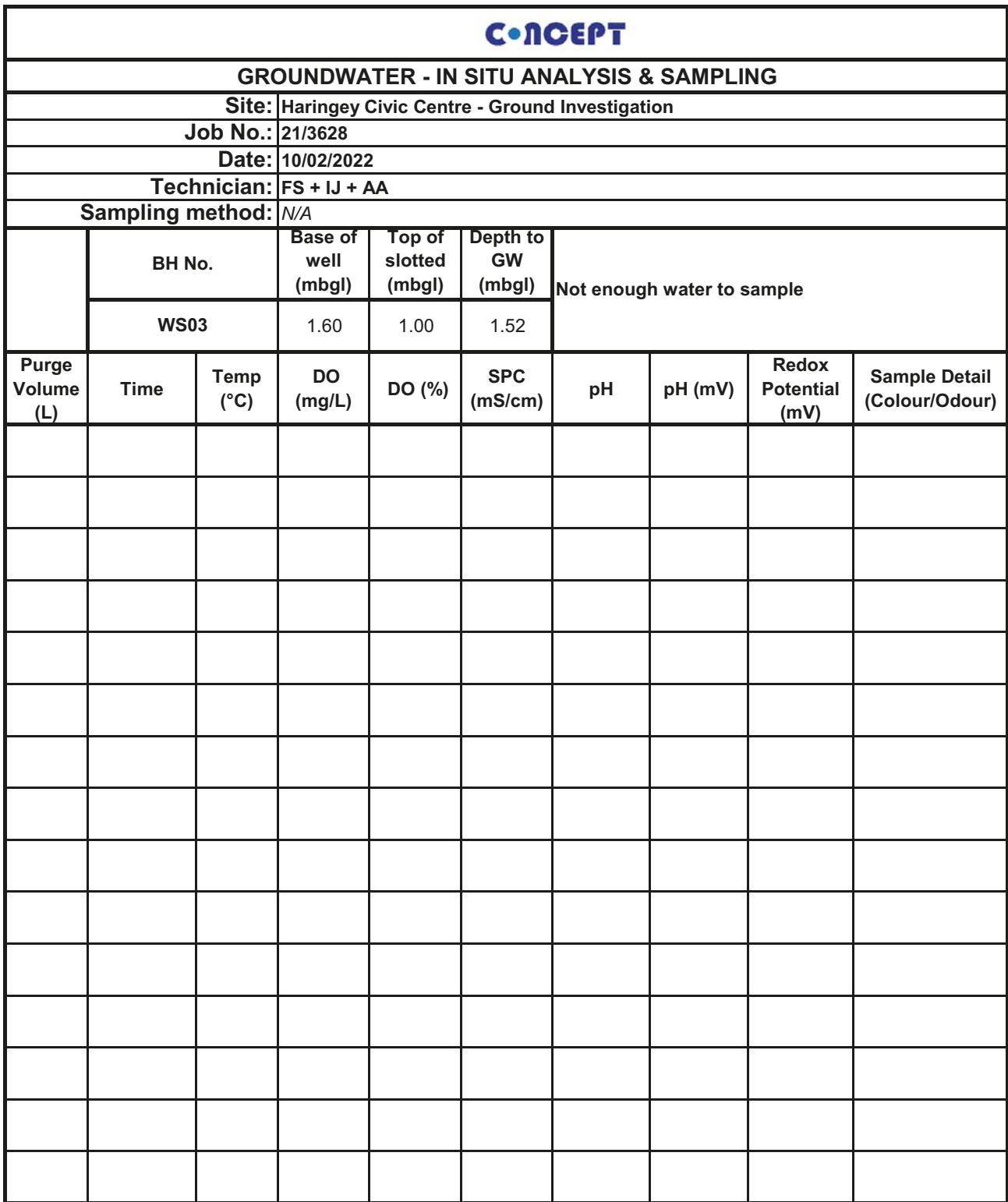
Sampling method: Peristaltic (low flow)

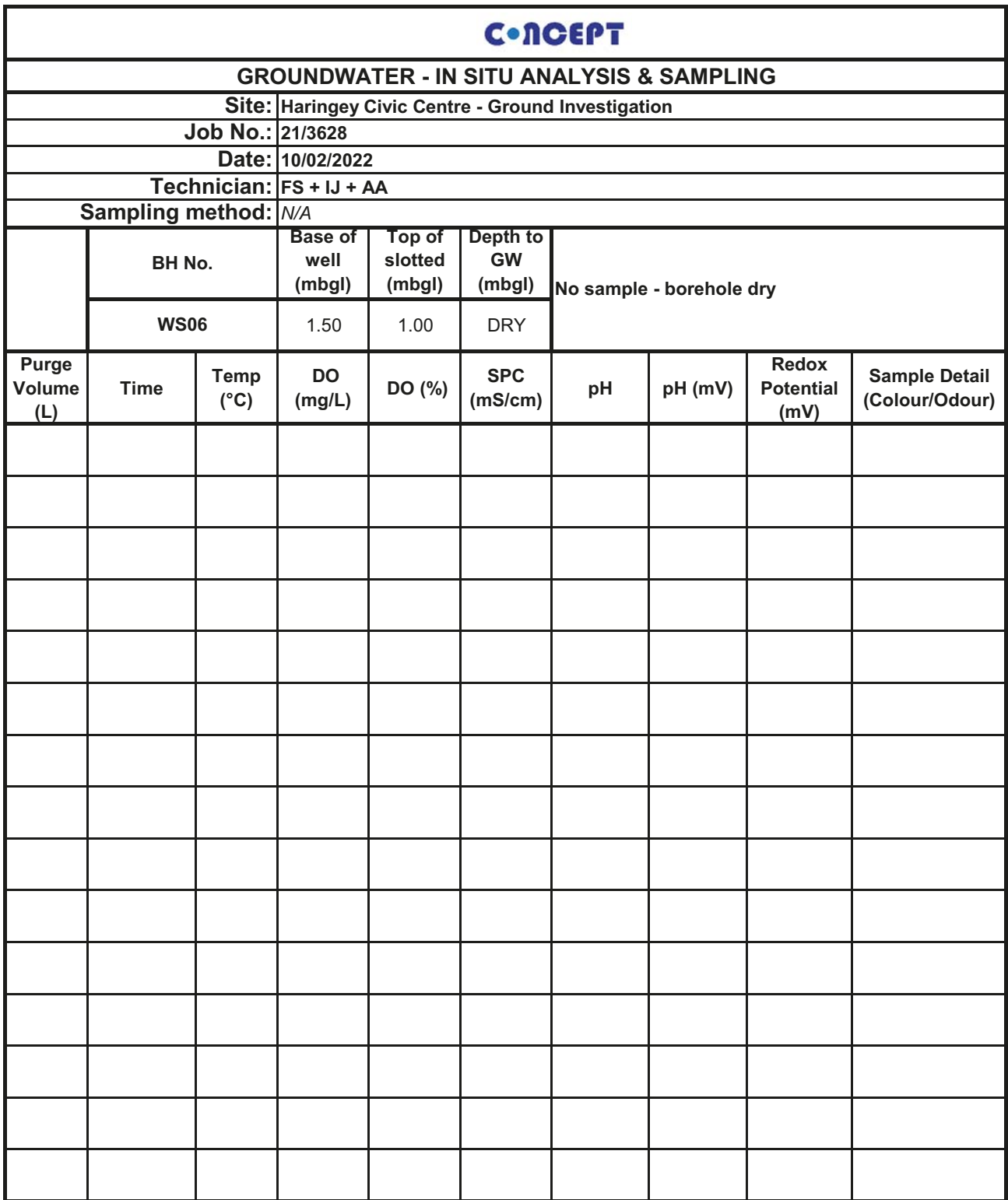
	BH No.		Base of well (mbgl)	Top of slotted (mbgl)	Depth to GW (mbgl)				
	BH02 (Deep)		20.00	5.00	2.23				
Purge Volume (L)	Time	Temp (°C)	DO (mg/L)	DO (%)	SPC (mS/cm)	pH	pH (mV)	Redox Potential (mV)	Sample Detail (Colour/Odour)
1.0	11:07	12.9	20.92	213.0	4.653	7.13	-26.6	145.9	Cloudy
3.0	11:11	13.0	10.80	104.0	4.618	7.01	-21.0	93.7	Cloudy
5.0	11:15	13.0	9.47	91.3	4.537	6.99	-19.7	61.3	Cloudy
7.0	11:19	13.0	8.49	81.4	4.197	6.98	-19.4	29.3	Cloudy
9.0	11:23	12.9	7.40	70.7	3.790	6.99	-19.7	13.0	Cloudy
11.0	11:27	12.9	7.20	68.2	3.086	7.01	-20.3	3.2	Cloudy
13.0	11:31	12.9	7.08	66.9	2.973	7.03	-21.7	0.8	Cloudy

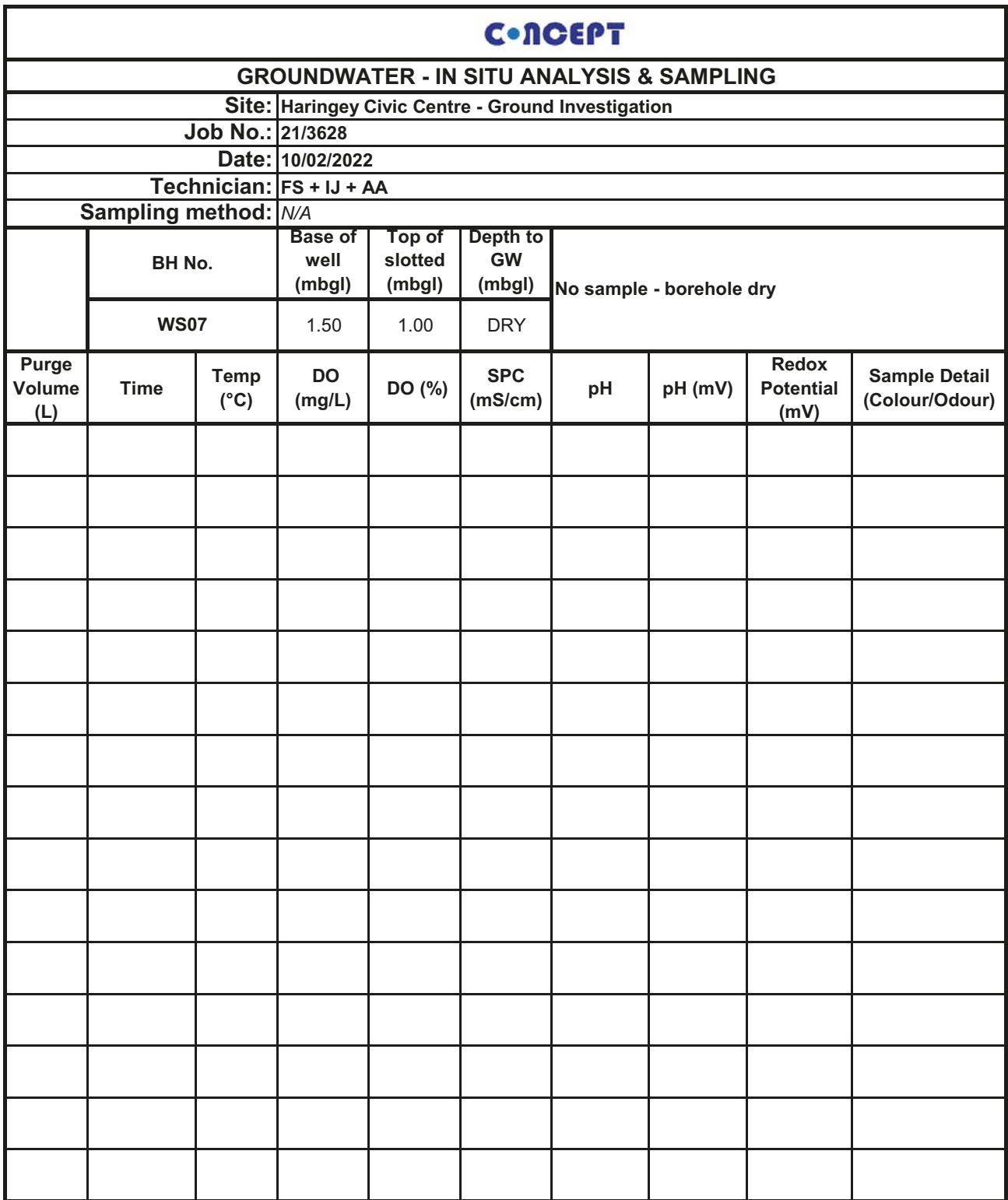


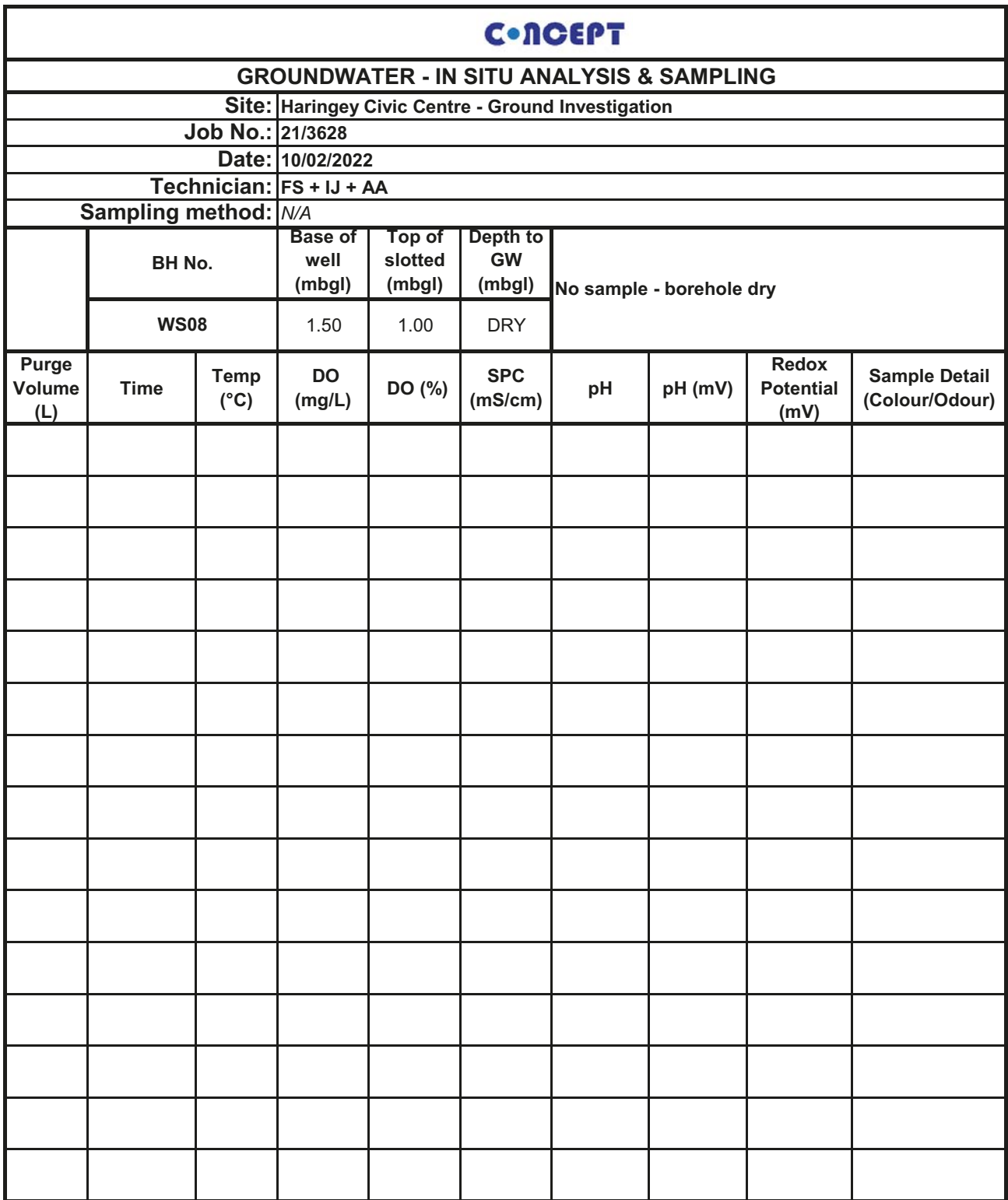
**GROUNDWATER - IN SITU ANALYSIS & SAMPLING****Site:** Haringey Civic Centre - Ground Investigation**Job No.:** 21/3628**Date:** 10/02/2022**Technician:** FS + IJ + AA**Sampling method:** *Bailer*

	BH No.		Base of well (mbgl)	Top of slotted (mbgl)	Depth to GW (mbgl)				
	BH04		11.00	1.00	10.15				
Purge Volume (L)	Time	Temp (°C)	DO (mg/L)	DO (%)	SPC (mS/cm)	pH	pH (mV)	Redox Potential (mV)	Sample Detail (Colour/Odour)
1.0	13:13	13.1	3.92	37.8	9.944	6.94	-16.7	34.8	Cloudy
2.0	13:17	13.5	3.31	32.8	9.992	6.98	-13.9	-5.6	Cloudy
3.0	13:21	13.6	3.09	30.8	9.989	6.97	-18.5	-17.2	Cloudy
4.0	13:25	13.6	2.98	29.3	9.998	6.93	-16.6	-21.3	Cloudy









TEST DATE AND CONDITIONS	
Date	3/11/21
Atmospheric pressure	991. mb
Ambient Temp	22.7 °C
EnviroNics Serial No.	N/A

GAS DATA LTD	
Unit 4 Fairfield court	
Seven Stars Estate	
Coventry	
CV3 4LJ, UK	
+44 (0) 24 7630 3311	

GFM436-3 OUTWARD INSPECTION & QUALITY CHECK SHEET

INSTRUMENT DETAILS				
SO Number	Instrument Banner	Instrument Serial Number + SW Version	Job Number(s)	
329483	GFM436	13240 / 27-10	22205	

Calibration Technician SSD

DATE 2-11-21

Inspection Technician W. Biggs

DATE 3/11/21

INSTRUMENT CHECKS		Pass (P), Fail (F) or not applicable(NA)	INSTRUMENT PACKING LIST		Tick if included
Function Tests	Dust Caps Fitted	P	Instrument		✓
	Keyboard Test (All keys)	P	Leather Case		X
	Backlight Test	P	Instrument Strap		✓
	Clock Set / Running	P	AC Battery Charger (UK)		✓
	Comms Test	P	AC Battery Charger (EURO)		X
	Pump Flow Test (In & Out)	P	AC Battery Charger (US)		X
	Overall Leak Test (30mb)	N/A	AC Battery Charger (AUS)		X
	Battery Charge Test	P	Gas Sample Pipe		✓
	Service Date set to?	2/11/22	Hard Carry Case		✓
Channel Tests	Data Logging Enabled?	P	Spares Pot		X
	Verify CH4/LEL/Hexane/PID	P	Allen Key		X
	Verify CO2	P	Flow Sample Pipe		✓
	Verify O2	P	Temperature Probe		X
	Verify H2S	P	Vane Anemometer		X
	Verify CO	P	USB Cable		X
	Verify LEL	P	USB Memory Stick		X
	Verify 1st Option gas	N/A	SM V5 Software	Ver	X
	Verify atmospheric pressure	P	Internal Filter Pack	Qty 1	✓
	Verify differential pressure	P	External Filter Pack	Qty	X
	Verify flow	P	Field Guide		X
	Verify temperature probe input	P	Extra Items:		
	Verify vane anemometer input	P			
DataBase Checks	Jobcard(s) completed and signed	P			
	Jobcard(s) booked off database	P			
	Calibration certificate completed	P			
	Complete & print QI record	N/A			
Label Checks	No. of Calibration label fitted	10756	Comments		
	MCERTS label not displayed	P			
	Warranty label fitted	P			
H2S Range	H2S Range from SO	50000 ppm			
	H2S Range from cal cert	50000 ppm			
	Over-range value correct?	P			

TEST DATE AND CONDITIONS	
Date	02/11/21
Atmospheric pressure	985mb
Ambient Temp	23.7°C
EnviroNics Serial No.	3268/2518

GAS DATA LTD
Unit 4 Fairfield court
Seven Stars Estate
Coventry
CV3 4LJ, UK
+44 (0) 24 7630 3311



GFM436-3 FINAL INSPECTION & CALIBRATION CHECK CERTIFICATE

INSTRUMENT DETAILS	
Serial No	Customer
13240	Concept Site Investigations

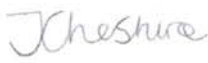
INSTRUMENT CHECKS			
Keyboard	✓	Pump Flow	500cc/min
Display Contrast	✓	Pump Flow @ -200mB	300cc/min
Clock Set / Running	✓	S/W Version	G436.0027/0010
Labels Fitted	✓	Recalibration Date	02/11/22

GAS CHECKS							
Calibration Gas		Instrument Gas Channels Read					
Gas Type	Applied Conc.	CH4 (%)	tol. (% vol.)	CO2 (%)	tol. (% vol.)	O2 (%)	tol. (% vol.)
N2	100%	0.0	0.0	0.0	0.0	0.0	+/-0.1
CH4	5%	5.0	+/-0.3	0.0	0.0	0.0	+/-0.1
	60%	59.8	+/-3.0	0.0	0.0	0.0	+/-0.1
CO2	5%	0.0	0.0	5.1	+/-0.3	0.0	+/-0.1
	40%	0.0	0.0	40.1	+/-3.0	0.0	+/-0.1
O2	20.9%	0.0	0.0	0.0	+0.1	20.9	+/-0.5

OPTIONAL GAS CHECKS							
Calibration Gas		Instrument Gas Channels Read					
Gas Type	Applied Conc.	Label Range	H2S 5000ppm	CO 2000ppm		Hexane 2.00%	tol. (% vol.)
N2	100%		0	0		0	0.0
H2S	1500ppm		1500	0			+/- 5.0
CO	1000ppm		260	997			+/- 5.0
Hexane	2.00%					1.964	+/- 10.0

PRESSURE CHECKS							
Calibration Pressure		Instrument Pressure Channels Read					
Pressure @	Applied Pressure	Atmospheric [Ap] (mB)	tol. (mB)				
All Ports	Current Atmospheric	984	+/-2.0				
Ap Port (Internal)	+800mB(a)	798	+/-5.0				
	+1200mB(a)	1197	+/-5.0				

CALIBRATION CERTIFICATE NO: 70716

ISSUED BY: SHAWCITY LIMITED
DATE: 15-Apr-21
APPROVED SIGNATORY: 
NAME: Jack Cheshire
CUSTOMER: Concept Engineering Consultants
INSTRUMENT: PhoCheck Tiger
SERIAL NUMBER: T-108843
CALIBRATION METHOD: CM03
AMBIENT CONDITIONS: 20°C ± 2°C and 50% (± 20%) RH

Prior to calibration the instrument was allowed to stabilise in the laboratory for at least 30 minutes.
The instrument was calibrated by exposing the sensor to known values of gas concentrations.
All gases were sampled through the complete probe and in line filter, where applicable.
The reference value is that generated by the certified source and the indicated value is that measured by the instrument.

CALIBRATION RESULTS

GAS	LOT No	REF. VALUE	INDICATED VALUE
Isobutylene	WO262581-1	100 ppm	100 ppm
Isobutylene	WO256926-1	1000 ppm	1000 ppm

COMMENTS:

The reported uncertainty is based on a standard uncertainty multiplied by a coverage factor of $k=2$.
This provides a level of confidence of uncertainty of approximately 95%.
The uncertainty of measurement is $\pm 2\%$
The results indicate that the instrument conforms to the applicable parts of the published specification.

HEALTH & SAFETY, OCCUPATIONAL HYGIENE AND ENVIRONMENTAL MONITORING INSTRUMENTS



Life-saving solutions

CERTIFICATE OF CALIBRATION

Phocheck Tiger

CALIBRATION CERTIFICATE NO:

72552

ISSUED BY: SHAWCITY LIMITED
DATE: 21/12/2021

APPROVED SIGNATORY:

NAME: Joe Herbert

CUSTOMER: Shawcity Ltd -Exhibition equipment
INSTRUMENT: PhoCheck Tiger
SERIAL NUMBER: T-115619

CALIBRATION METHOD: CM03
AMBIENT CONDITIONS: 20°C ± 2°C and 50% (± 20%) RH

Prior to calibration the instrument was allowed to stabilise in the laboratory for at least 30 minutes.
The instrument was calibrated by exposing the sensor to known values of gas concentrations.
All gases were sampled through the complete probe and in line filter, where applicable.
The reference value is that generated by the certified source and the indicated value is that measured by the instrument.

CALIBRATION RESULTS

GAS	LOT No	REF. VALUE	INDICATED VALUE
Isobutylene	WO318917-1	100 ppm	100 ppm
Isobutylene	WO302774-2	1000 ppm	1000 ppm

COMMENTS:

The reported uncertainty is based on a standard uncertainty multiplied by a coverage factor of $k=2$.
This provides a level of confidence of uncertainty of approximately 95%.
The uncertainty of measurement is $\pm 2\%$
The results indicate that the instrument conforms to the applicable parts of the published specification.

HEALTH & SAFETY, OCCUPATIONAL HYGIENE AND ENVIRONMENTAL MONITORING INSTRUMENTS

Tel: 01793 780622
www.shawcity.co.uk

Instrument House, 91-92 Shrivenham Hundred Business Park
Watchfield, Oxfordshire, SN6 8TY

Fax: 01793 784466
service@shawcity.co.uk

13. GEOTECHNICAL LABORATORY TEST RESULTS

CONCEPT SITE INVESTIGATIONS

Site Name:	Haringey Civic Centre	Job No.:	21/3628
Client:	Haringey Council	Date Reported:	21/03/2022

Summary Test Report

Determination of Moisture Content and Liquid and Plastic Limits by 4 Point Cone Method

Borehole No.	Sample Type	Sample No.	Depth m	Description	Natural Moisture Content %	Washed Natural	Passing 425 µm sieve %	Liquid Limit %	Plastic Limit %	Plasticity Index %	Remarks
BH01	D	2A	0.20	Reddish brown silty sandy GRAVEL with rare pockets of clay. Gravel comprises of fine to coarse flint, asphalt, brick and limestone fragments	4.7				NP		Non=Plastic
BH01	D	4A	0.70	Brown mottled greenish grey slightly gravelly silty CLAY. Gravel is fine to medium flint	36	Washed	95	75	25	50	
BH01	D	5	1.20	Orangish brown silty CLAY	31	Natural	100	75	27	48	
BH02	D	4A	0.70	Dark brown slightly gravelly slightly sandy silty CLAY. Gravel comprises of fine to coarse flint and brick fragments	27	Washed	77	53	29	24	
BH02	D	7	1.20	Dark brown silty CLAY with rare silt nodules and pockets of light grey silty fine sand	33	Natural	98	79	26	53	

BS 1377: Part 2: Clause 4.3 & 4.4: 1990 Determination of the liquid limit by the cone penetrometer method

BS 1377: Part 2: Clause 5: 1990 Determination of the plastic limit and plasticity index

BS 1377: Part 2: Clause 3.2: 1990 Determination of the moisture content by the oven drying method



Remarks: The results reported relate only to the items tested or sampled.

Date - samples received:		03/12/2021		CONCEPT Unit D, Herald Way, Coventry CV3 2RQ Tel: 02477087673 Email:coventrylab@conceptconsultants.co.uk
Date - sample testing commenced :	11/02/2022	Checked / Approved by:	LG	
Date - sample testing completed :	28/02/2022	Date Approved:	21/03/2022	
Approved Signatories: L Griffin LG (QA Technical & Lab Mngr) – K Mazerant KM (Lab Mngr)				

CONCEPT SITE INVESTIGATIONS

Site Name:	Haringey Civic Centre	Job No.:	21/3628
Client:	Haringey Council	Date Reported:	21/03/2022

Summary Test Report

Determination of Moisture Content and Liquid and Plastic Limits by 4 Point Cone Method

Borehole No.	Sample Type	Sample No.	Depth m	Description	Natural Moisture Content %	Washed Natural	Passing 425 µm sieve %	Liquid Limit %	Plastic Limit %	Plasticity Index %	Remarks
BH03	D	5	1.20	Orangish brown mottled bluish grey slightly gravelly silty CLAY with rare selenite crystals. Gravel is fine to medium flint	29	Washed	79	62	27	35	
BH03	D	9	3.00	Orangish brown mottled bluish grey slightly micaceous silty CLAY with rare selenite crystals	31	Natural	99	81	28	53	
BH03	D	14	5.00	Stiff to very stiff, extremely closely fissured brown mottled bluish grey slightly micaceous silty CLAY	28	Washed	99	71	24	47	
BH03	U	26	10.00	Brown mottled orangish brown slightly micaceous silty CLAY with occasional selenite crystals	29	Natural	99	77	31	46	
BH03	U	44	19.00	Very stiff, extremely closely fissured dark brown slightly micaceous silty CLAY with occasional pockets of light grey silty sand (<30mm)		Natural	100	70	27	43	1 Point Cone Method Used
BH03	U	50	22.00	Very stiff, extremely closely fissured dark brown slightly micaceous silty CLAY with rare shell fragments (<6mm), and rare pockets of light grey silty sand (<30mm)		Natural	100	72	27	45	1 Point Cone Method Used
BH04	D	14	4.00	Brown and grey silty CLAY with rare pockets of grey silty sand	33	Natural	100	80	28	52	
BH04	D	18	5.00	Orangish brown silty CLAY with frequent selenite crystals	32	Natural	99	78	29	49	1 Point Cone Method Used

BS 1377: Part 2: Clause 4.3 & 4.4: 1990 Determination of the liquid limit by the cone penetrometer method

BS 1377: Part 2: Clause 5: 1990 Determination of the plastic limit and plasticity index

BS 1377: Part 2: Clause 3.2: 1990 Determination of the moisture content by the oven drying method

Remarks: The results reported relate only to the items tested or sampled.



Date - samples received: 15/12/2021		CONCEPT Unit D, Herald Way, Coventry CV3 2RQ Tel: 02477087673 Email: coventrylab@conceptconsultants.co.uk
Date - sample testing commenced: 02/02/2022	Checked / Approved by: LG	
Date - sample testing completed: 04/03/2022	Date Approved: 21/03/2022	
Approved Signatories: L Griffin LG (QA Technical & Lab Mgr) – K Mazerant KM (Lab Mgr)		

CONCEPT SITE INVESTIGATIONS

Site Name:	Haringey Civic Centre	Job No.:	21/3628
Client:	Haringey Council	Date Reported:	21/03/2022

Summary Test Report

Determination of Moisture Content and Liquid and Plastic Limits by 4 Point Cone Method

Borehole No.	Sample Type	Sample No.	Depth m	Description	Natural Moisture Content %	Washed Natural	Passing 425 µm sieve %	Liquid Limit %	Plastic Limit %	Plasticity Index %	Remarks
BH04	D	20	6.00	Orangish brown silty CLAY	31	Natural	100	74	26	48	
BH04	D	23	7.00	Brown silty CLAY with occasional selenite crystals	29	Natural	99	81	28	53	1 Point Cone Method Used
BH05	D	14	4.00	Brown mottled grey silty CLAY with occasional selenite crystals	29	Natural	99	77	27	50	
BH05	D	15	5.00	Brown mottled grey silty CLAY with occasional selenite crystals	32	Natural	99	80	26	54	1 Point Cone Method Used
BH05	U	17	6.00	Firm, brown mottled bluish slightly micaceous silty CLAY with frequent selenite crystals	30	Natural	100	82	30	52	
BH05	D	23	8.00	Brown mottled grey silty CLAY with occasional selenite crystals	28	Washed	98	73	25	48	1 Point Cone Method Used
BH05	D	28	10.00	Brown mottled grey silty CLAY with occasional selenite crystals and rare shell fragments	28	Natural	99	74	26	48	
BH06	D	5	1.20	Orangish brown slightly gravelly silty CLAY. Gravel is fine to coarse flint	29	Washed	64	63	24	39	

BS 1377: Part 2: Clause 4.3 & 4.4: 1990 Determination of the liquid limit by the cone penetrometer method

BS 1377: Part 2: Clause 5: 1990 Determination of the plastic limit and plasticity index

BS 1377: Part 2: Clause 3.2: 1990 Determination of the moisture content by the oven drying method

Remarks: The results reported relate only to the items tested or sampled.



Date - samples received:	15/12/2021	CONCEPT Unit D, Herald Way, Coventry CV3 2RQ Tel: 02477087673 Email: coventrylab@conceptconsultants.co.uk
Date - sample testing commenced :	02/02/2022	
Date - sample testing completed :	04/03/2022	
Approved Signatories: L Griffin LG (QA Technical & Lab Mngr) – K Mazerant KM (Lab Mngr)		

CONCEPT SITE INVESTIGATIONS

Site Name:	Haringey Civic Centre	Job No.:	21/3628
Client:	Haringey Council	Date Reported:	21/03/2022

Summary Test Report

Determination of Moisture Content and Liquid and Plastic Limits by 4 Point Cone Method

Borehole No.	Sample Type	Sample No.	Depth m	Description	Natural Moisture Content %	Washed Natural	Passing 425 µm sieve %	Liquid Limit %	Plastic Limit %	Plasticity Index %	Remarks
WS01	D	1A	0.30	Dark brown slightly gravelly sandy silty CLAY with frequent roots. Gravel comprises of fine to coarse flint, brick and pottery fragments	29						
WS01	D	3A	0.70	Brown silty CLAY with rare selenite crystals	37	Natural	99	85	27	58	1 Point Cone Method Used
WS01	D	7	1.40	Brown silty CLAY with occasional selenite crystals	31	Natural	99	77	25	52	1 Point Cone Method Used
WS01	D	14	3.60	Brown and light bluish grey silty CLAY with occasional pockets of light grey and dark brown sand, selenite crystals	29						

BS 1377: Part 2: Clause 4.3 & 4.4: 1990 Determination of the liquid limit by the cone penetrometer method

BS 1377: Part 2: Clause 5: 1990 Determination of the plastic limit and plasticity index

BS 1377: Part 2: Clause 3.2: 1990 Determination of the moisture content by the oven drying method

Remarks: The results reported relate only to the items tested or sampled.



Date - samples received:	15/12/2021	CONCEPT Unit D, Herald Way, Coventry CV3 2RQ Tel: 02477087673 Email: coventrylab@conceptconsultants.co.uk
Date - sample testing commenced :	02/02/2022	
Date - sample testing completed :	04/03/2022	
Approved Signatories: L Griffin LG (QA Technical & Lab Mngr) – K Mazerant KM (Lab Mngr)		

CONCEPT SITE INVESTIGATIONS

Site Name:	Haringey Civic Centre	Job No.:	21/3628
Client:	Haringey Council	Date Reported:	21/03/2022

Summary Test Report

Determination of Moisture Content and Liquid and Plastic Limits by 4 Point Cone Method

Borehole No.	Sample Type	Sample No.	Depth m	Description	Natural Moisture Content %	Washed Natural	Passing 425 µm sieve %	Liquid Limit %	Plastic Limit %	Plasticity Index %	Remarks
WS02B	D	1A	0.30	Dark brown silty slightly clayey gravelly fine to coarse SAND with occasional roots. Gravel comprises fine to coarse flint brick, concrete and slate fragments	14						
WS02B	D	3A	0.70	Orangish brown mottled dark grey slightly gravelly slightly sandy silty CLAY with occasional rootlets and rare wood fragments. Gravel comprises fine and medium flint and brick fragments	31						
WS02B	D	5A	1.00	Brown slightly gravelly slightly sandy silty CLAY with rare roots. Gravel is fine to medium flint	27	Washed	94	60	23	37	1 Point Cone Method Used
WS02B	D	15	4.00	Brown with rare light bluish grey silty CLAY with occasional pockets of orangish brown silty fine sand and selenite crystals	29						

BS 1377: Part 2: Clause 4.3 & 4.4: 1990 Determination of the liquid limit by the cone penetrometer method

BS 1377: Part 2: Clause 5: 1990 Determination of the plastic limit and plasticity index

BS 1377: Part 2: Clause 3.2: 1990 Determination of the moisture content by the oven drying method

Remarks: The results reported relate only to the items tested or sampled.



Date - samples received:	15/12/2021	CONCEPT Unit D, Herald Way, Coventry CV3 2RQ Tel: 02477087673 Email: coventrylab@conceptconsultants.co.uk
Date - sample testing commenced :	02/02/2022	
Date - sample testing completed :	04/03/2022	
Approved Signatories: L Griffin LG (QA Technical & Lab Mngr) – K Mazerant KM (Lab Mngr)		

CONCEPT SITE INVESTIGATIONS

Site Name:	Haringey Civic Centre	Job No.:	21/3628
Client:	Haringey Council	Date Reported:	21/03/2022

Summary Test Report

Determination of Moisture Content and Liquid and Plastic Limits by 4 Point Cone Method

Borehole No.	Sample Type	Sample No.	Depth m	Description	Natural Moisture Content %	Washed Natural	Passing 425 µm sieve %	Liquid Limit %	Plastic Limit %	Plasticity Index %	Remarks
WS03	D	5	0.50	Orangish brown slightly sandy gravelly silty CLAY with occasional roots. Gravel comprises of fine to coarse flint, brick, concrete and coal fragments	38	Washed	75	61	26	35	
WS03	D	8	1.50	Orangish brown and grey slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse flint	27	Washed	77	63	23	40	
WS03	D	11	2.20	Orangish brown and grey slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse flint	27	Washed	93	72	24	48	
WS03	D	16	4.00	Orangish brown mottled grey slightly sandy slightly micaceous silty CLAY	30	Natural	100	80	29	51	
WS03	D	18	5.00	Brown silty CLAY with selenite crystals	31	Natural	99	74	27	47	

BS 1377: Part 2: Clause 4.3 & 4.4: 1990 Determination of the liquid limit by the cone penetrometer method

BS 1377: Part 2: Clause 5: 1990 Determination of the plastic limit and plasticity index

BS 1377: Part 2: Clause 3.2: 1990 Determination of the moisture content by the oven drying method

Remarks: The results reported relate only to the items tested or sampled.



4503

Date - samples received:		03/12/2021		CONCEPT Unit D, Herald Way, Coventry CV3 2RQ Tel: 02477087673 Email:coventrylab@conceptconsultants.co.uk
Date - sample testing commenced :	11/02/2022	Checked / Approved by:	LG	
Date - sample testing completed :	11/03/2022	Date Approved:	21/03/2022	
Approved Signatories: L Griffin LG (QA Technical & Lab Mngr) – K Mazerant KM (Lab Mngr)				

CONCEPT SITE INVESTIGATIONS

Site Name:	Haringey Civic Centre	Job No.:	21/3628
Client:	Haringey Council	Date Reported:	21/03/2022

Summary Test Report

Determination of Moisture Content and Liquid and Plastic Limits by 4 Point Cone Method

Borehole No.	Sample Type	Sample No.	Depth m	Description	Natural Moisture Content %	Washed Natural	Passing 425 µm sieve %	Liquid Limit %	Plastic Limit %	Plasticity Index %	Remarks
WS04	D	2	0.00	Brown sandy slightly gravelly silty CLAY with occasional roots. Gravel comprises of fine to coarse flint and brick fragments	19						
WS04	D	5	0.60	Orangish brown mottled grey slightly sandy slightly gravelly silty CLAY. Gravel is fine to coarse flint	28	Washed	78	70	26	44	1 Point Cone Method Used
WS04	D	9	1.90	Orangish brown mottled grey silty CLAY	25	Natural	100	72	26	46	1 Point Cone Method Used
WS04	D	13	3.00	Orangish brown mottled grey silty CLAY	27						

BS 1377: Part 2: Clause 4.3 & 4.4: 1990 Determination of the liquid limit by the cone penetrometer method

BS 1377: Part 2: Clause 5: 1990 Determination of the plastic limit and plasticity index

BS 1377: Part 2: Clause 3.2: 1990 Determination of the moisture content by the oven drying method

Remarks: The results reported relate only to the items tested or sampled.



Date - samples received:	03/12/2021	CONCEPT Unit D, Herald Way, Coventry CV3 2RQ Tel: 02477087673 Email: coventrylab@conceptconsultants.co.uk
Date - sample testing commenced :	11/02/2022	
Date - sample testing completed :	11/03/2022	
Approved Signatories: L Griffin LG (QA Technical & Lab Mngr) – K Mazerant KM (Lab Mngr)		

CONCEPT SITE INVESTIGATIONS

Site Name:	Haringey Civic Centre	Job No.:	21/3628
Client:	Haringey Council	Date Reported:	21/03/2022

Summary Test Report

Determination of Moisture Content and Liquid and Plastic Limits by 4 Point Cone Method

Borehole No.	Sample Type	Sample No.	Depth m	Description	Natural Moisture Content %	Washed Natural	Passing 425 µm sieve %	Liquid Limit %	Plastic Limit %	Plasticity Index %	Remarks
WS06	D	5	0.70	Orangish brown slightly sandy gravelly silty CLAY with occasional roots. Gravel comprises of fine to coarse flint, brick, concrete and coal fragments	23	Washed	60	56	24	32	
WS06	D	8	1.40	Orangish brown mottled grey slightly gravelly silty CLAY with rare roots. Gravel is fine to medium flint	34	Washed	85	66	25	41	
WS06	D	11	2.30	Orangish brown mottled bluish grey silty CLAY	26	Natural	100	69	25	44	
WS07	D	2	0.30	Dark brown and grey slightly gravelly sandy silty CLAY with rare roots. Gravel comprises of fine to coarse flint, brick and concrete fragments	14						
WS08	D	6	1.80	Orangish brown silty CLAY with occasional silt nodules and selenite crystals	27	Natural	98	64	22	42	

BS 1377: Part 2: Clause 4.3 & 4.4: 1990 Determination of the liquid limit by the cone penetrometer method

BS 1377: Part 2: Clause 5: 1990 Determination of the plastic limit and plasticity index

BS 1377: Part 2: Clause 3.2: 1990 Determination of the moisture content by the oven drying method

Remarks: The results reported relate only to the items tested or sampled.



Date - samples received:		03/12/2021		CONCEPT Unit D, Herald Way, Coventry CV3 2RQ Tel: 02477087673 Email:coventrylab@conceptconsultants.co.uk
Date - sample testing commenced :	11/02/2022	Checked / Approved by:	LG	
Date - sample testing completed :	11/03/2022	Date Approved:	21/03/2022	
Approved Signatories: L Griffin LG (QA Technical & Lab Mng'r) – K Mazerant KM (Lab Mng'r)				

CONCEPT SITE INVESTIGATIONS

PARTICLE SIZE DISTRIBUTION

TEST REPORT

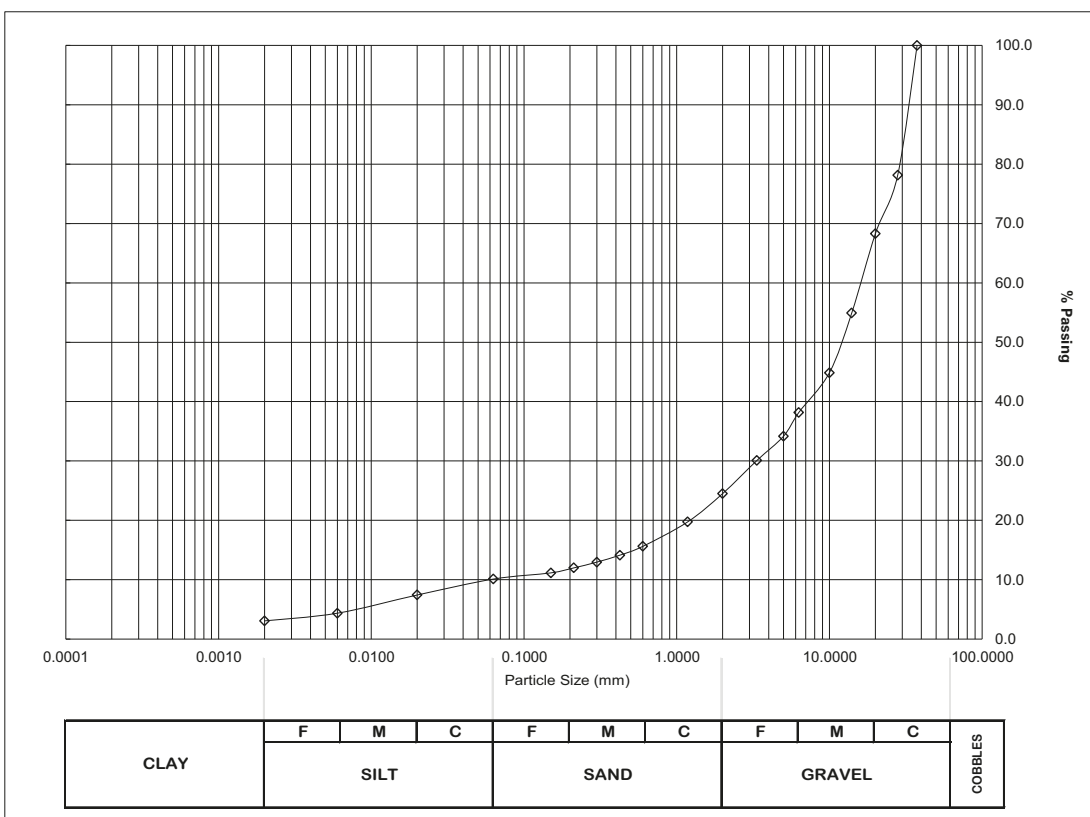
Site Name:	Haringey Civic Centre	Job Number:	21/3628
Client:	Haringey Council	Date Reported:	21/03/2022
Borehole No:	BH01	Sample Type/No.	D 2A
		Top Depth:	0.20 m
		Bottom Depth:	m

Soil Description:

Reddish brown silty sandy GRAVEL with rare pockets of clay. Gravel comprises of fine to coarse flint, asphalt, brick and limestone fragments

BS Test Sieves	
Size (mm)	% Passing
75.000	100
63.000	100
50.000	100
37.500	100
28.000	78
20.000	68
14.000	55
10.000	45
6.300	38
5.000	34
3.350	30
2.000	25
1.180	20
0.600	16
0.425	14
0.300	13
0.212	12
0.150	11
0.063	10

Sedimentation (*if applicable)	
Size (mm)	% Passing
0.020	7
0.006	4
0.002	3



Method/type:	Wet Sieving	BS 1377: Part 2: Clause 9.2: 1990 Determination of particle size distribution - wet sieving method.
	Pipette	BS 1377: Part 2: Clause 9.4: 1990 Determination of sedimentation by the pipette method.

Particle Proportions %	
Cobbles	
Gravel	75.5
Sand	14.4
Silt	7.0
Clay	3.1



Remarks:

The results reported relate only to the items tested or sampled.

Date - samples received:	03/12/2021	CONCEPT 47-49 Brunel Road, London W3 7XR Tel: 02087401553 Email: lab@conceptconsultants.co.uk
Date - sample testing commenced :	08/03/2022	
Date - sample testing completed :	16/03/2022	
Checked / Approved by: LG Date Approved: 21/03/2022		
Approved Signatories: L Griffin LG (QA Technical & Lab Mgr) – K Mazerant KM (Lab Mgr)		

CONCEPT SITE INVESTIGATIONS

PARTICLE SIZE DISTRIBUTION

TEST REPORT

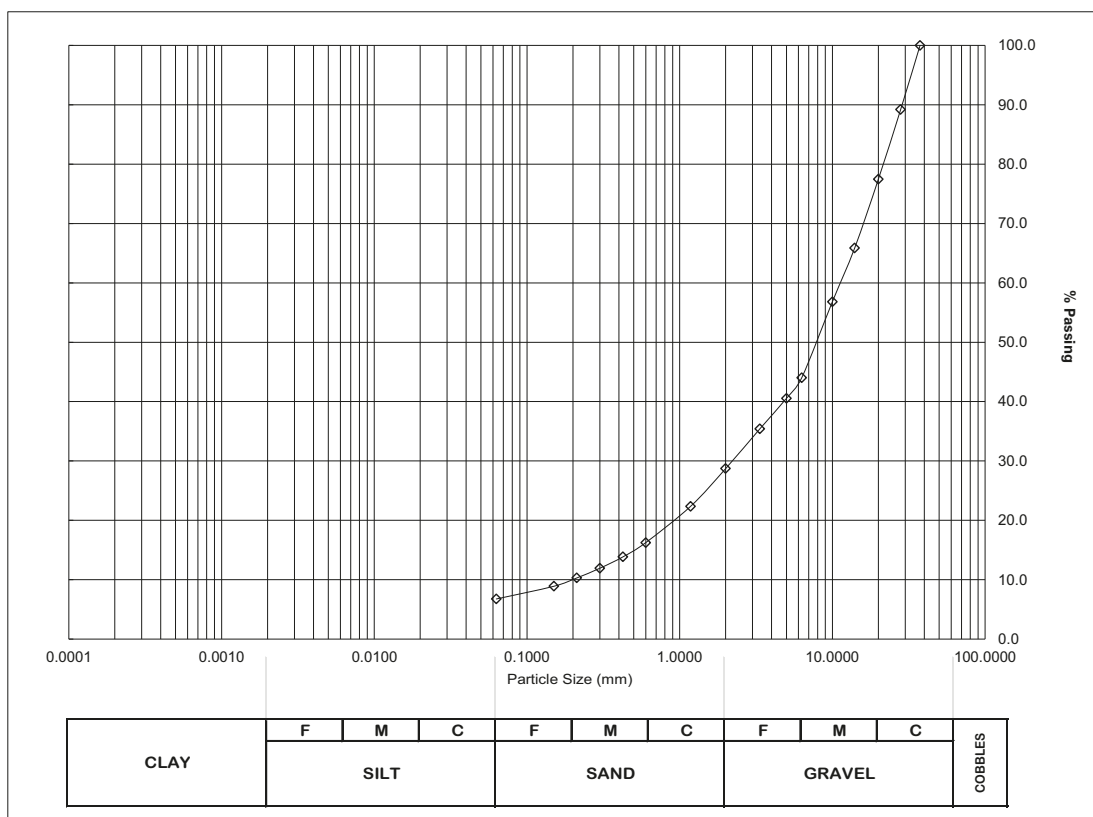
Site Name:	Haringey Civic Centre	Job Number:	21/3628
Client:	Haringey Council	Date Reported:	21/03/2022
Borehole No:	BH02	Sample Type/No.	B 2
		Top Depth:	0.15 m
		Bottom Depth:	0.25 m

Soil Description:

Dark grey and brown slightly silty very sandy GRAVEL with rare pockets of clay. Gravel comprises of fine to coarse flint, asphalt, brick and limestone fragments

BS Test Sieves	
Size (mm)	% Passing
75.000	100
63.000	100
50.000	100
37.500	100
28.000	89
20.000	77
14.000	66
10.000	57
6.300	44
5.000	41
3.350	35
2.000	29
1.180	22
0.600	16
0.425	14
0.300	12
0.212	10
0.150	9
0.063	7

Sedimentation (*if applicable)	
Size (mm)	% Passing
0.020	
0.006	
0.002	



Method/type:	Wet Sieving	BS 1377: Part 2: Clause 9.2: 1990 Determination of particle size distribution - wet sieving method.
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Particle Proportions %	
Cobbles	
Gravel	71.3
Sand	22.0
Silt and Clay	6.8



Remarks:

The results reported relate only to the items tested or sampled.

Date - samples received:	03/12/2021	CONCEPT 47-49 Brunel Road, London W3 7XR Tel: 02087401553 Email: lab@conceptconsultants.co.uk
Date - sample testing commenced :	08/03/2022	
Date - sample testing completed :	15/03/2022	
Checked / Approved by: LG Date Approved: 21/03/2022		
Approved Signatories: L Griffin LG (QA Technical & Lab Mngr) – K Mazerant KM (Lab Mngr)		

CONCEPT SITE INVESTIGATIONS

PARTICLE SIZE DISTRIBUTION

TEST REPORT

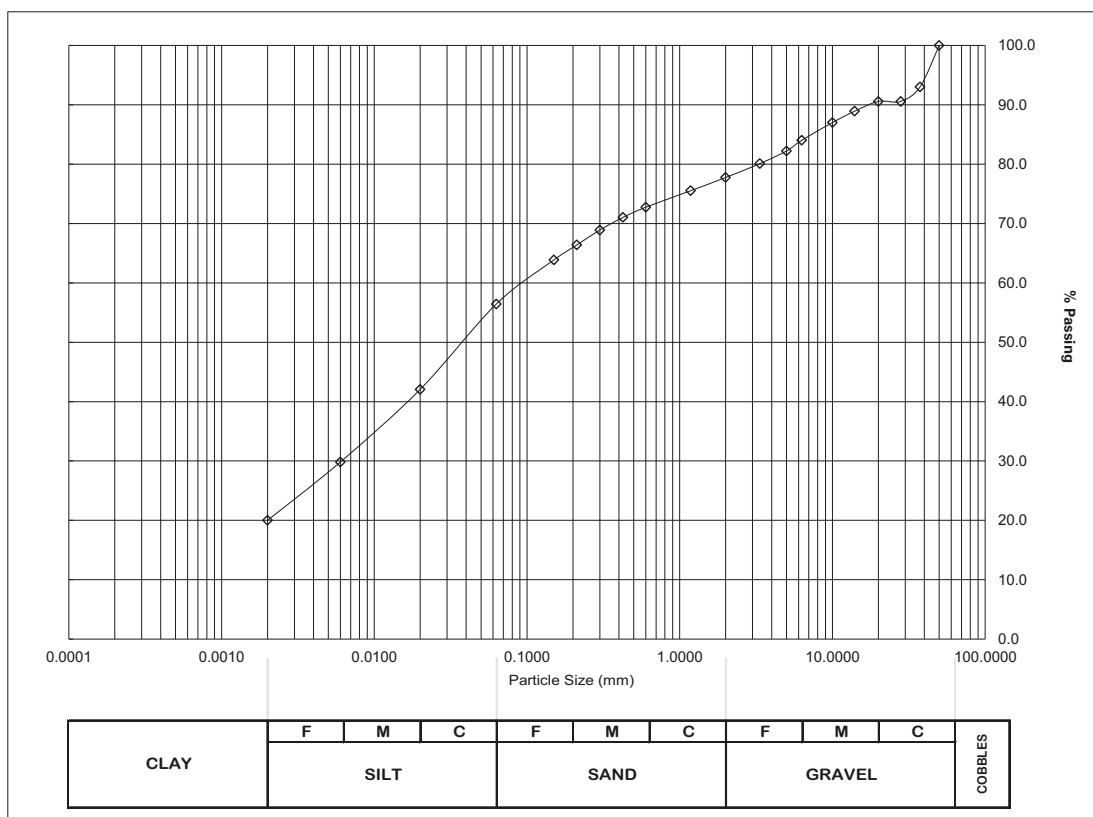
Site Name:	Haringey Civic Centre	Job Number:	21/3628
Client:	Haringey Council	Date Reported:	21/03/2022
Borehole No:	BH02	Sample Type/No.	B 4
		Top Depth:	0.25 m
		Bottom Depth:	0.75 m

Soil Description:

Dark brown slightly gravelly slightly sandy silty CLAY. Gravel comprises of fine to coarse flint and brick fragments

BS Test Sieves	
Size (mm)	% Passing
75.000	100
63.000	100
50.000	100
37.500	93
28.000	91
20.000	91
14.000	89
10.000	87
6.300	84
5.000	82
3.350	80
2.000	78
1.180	76
0.600	73
0.425	71
0.300	69
0.212	66
0.150	64
0.063	56

Sedimentation (*if applicable)	
Size (mm)	% Passing
0.020	42
0.006	30
0.002	20



Method/type:	Wet Sieving	BS 1377: Part 2: Clause 9.2: 1990 Determination of particle size distribution - wet sieving method.
	Pipette	BS 1377: Part 2: Clause 9.4: 1990 Determination of sedimentation by the pipette method.

Particle Proportions %	
Cobbles	
Gravel	22.2
Sand	21.3
Silt	36.5
Clay	20.0



Remarks:

The results reported relate only to the items tested or sampled.

Date - samples received:	03/12/2021	CONCEPT 47-49 Brunel Road, London W3 7XR Tel: 02087401553 Email: lab@conceptconsultants.co.uk
Date - sample testing commenced :	08/03/2022	
Date - sample testing completed :	09/03/2022	
Checked / Approved by: LG Date Approved: 21/03/2022		
Approved Signatories: L Griffin LG (QA Technical & Lab Mgr) – K Mazerant KM (Lab Mgr)		

CONCEPT SITE INVESTIGATIONS

PARTICLE SIZE DISTRIBUTION

TEST REPORT

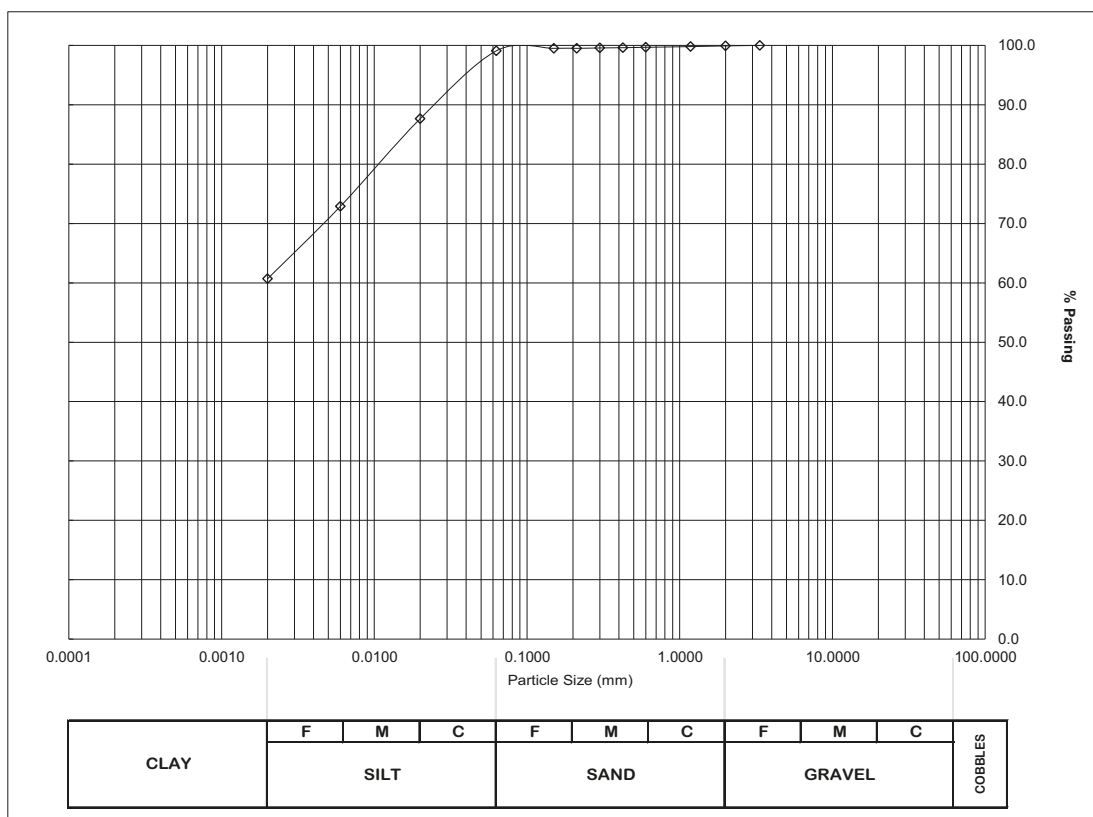
Site Name:	Haringey Civic Centre	Job Number:	21/3628
Client:	Haringey Council	Date Reported:	21/03/2022
Borehole No:	BH04	Sample Type/No.	B 15
		Top Depth:	4.00 m
		Bottom Depth:	4.50 m

Soil Description:

Brown and grey silty CLAY with rare pockets of grey silty sand

BS Test Sieves	
Size (mm)	% Passing
75.000	100
63.000	100
50.000	100
37.500	100
28.000	100
20.000	100
14.000	100
10.000	100
6.300	100
5.000	100
3.350	100
2.000	100
1.180	100
0.600	100
0.425	100
0.300	100
0.212	100
0.150	100
0.063	99

Sedimentation (*if applicable)	
Size (mm)	% Passing
0.020	88
0.006	73
0.002	61



Method/type:	Wet Sieving	BS 1377: Part 2: Clause 9.2: 1990 Determination of particle size distribution - wet sieving method.
	Pipette	BS 1377: Part 2: Clause 9.4: 1990 Determination of sedimentation by the pipette method.

Particle Proportions %	
Cobbles	
Gravel	0.1
Sand	0.8
Silt	38.4
Clay	60.7



Remarks:

The results reported relate only to the items tested or sampled.

Date - samples received:	15/12/2021		
Date - sample testing commenced :	08/03/2022	Checked / Approved by:	LG
Date - sample testing completed :	16/03/2022	Date Approved:	21/03/2022
Approved Signatories: L Griffin LG (QA Technical & Lab Mngr) – K Mazerant KM (Lab Mngr)			

CONCEPT
47-49 Brunel Road, London W3 7XR
Tel: 02087401553
Email: lab@conceptconsultants.co.uk

CONCEPT SITE INVESTIGATIONS

PARTICLE SIZE DISTRIBUTION

TEST REPORT

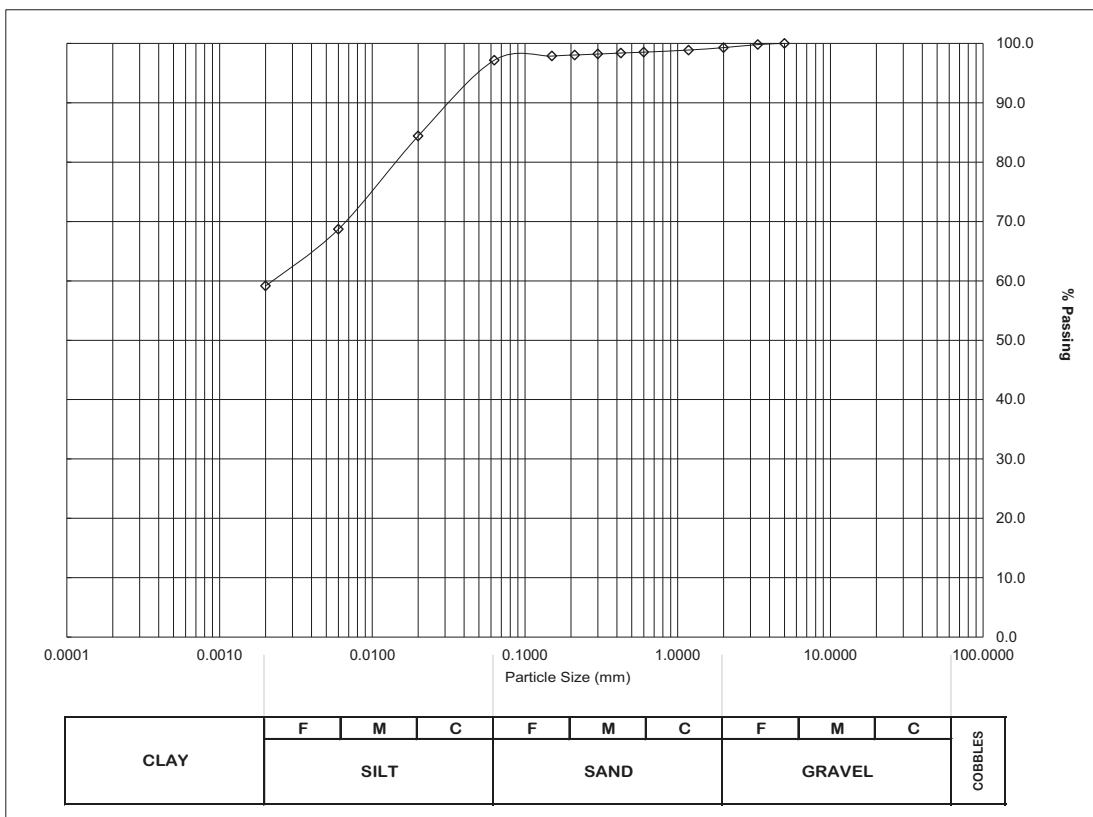
Site Name: Haringey Civic Centre					Job Number: 21/3628	
Client: Haringey Council					Date Reported: 21/03/2022	
Borehole No: BH05		Sample Type/No. D 11	Top Depth: 3.00 m		Bottom Depth: m	

Soil Description:

Brown mottled grey silty CLAY with occasional selenite crystals and rare pockets of silty sand

BS Test Sieves	
Size (mm)	% Passing
75.000	100
63.000	100
50.000	100
37.500	100
28.000	100
20.000	100
14.000	100
10.000	100
6.300	100
5.000	100
3.350	100
2.000	99
1.180	99
0.600	99
0.425	98
0.300	98
0.212	98
0.150	98
0.063	97

Sedimentation (*if applicable)	
Size (mm)	% Passing
0.020	84
0.006	69
0.002	59



Method/type:	Wet Sieving	BS 1377: Part 2: Clause 9.2: 1990 Determination of particle size distribution - wet sieving method.
	Pipette	BS 1377: Part 2: Clause 9.4: 1990 Determination of sedimentation by the pipette method.

Particle Proportions %	
Cobbles	
Gravel	0.7
Sand	2.1
Silt	38.0
Clay	59.1



Remarks:

The results reported relate only to the items tested or sampled.

Date - samples received:	15/12/2021	
Date - sample testing commenced :	08/03/2022	Checked / Approved by: LG
Date - sample testing completed :	16/03/2022	Date Approved: 21/03/2022
Approved Signatories: L Griffin LG (QA Technical & Lab Mngnr) – K Mazerant KM (Lab Mngnr)		

CONCEPT
47-49 Brunel Road, London W3 7XR
Tel: 02087401553
Email: lab@conceptconsultants.co.uk

CONCEPT SITE INVESTIGATIONS

PARTICLE SIZE DISTRIBUTION

TEST REPORT

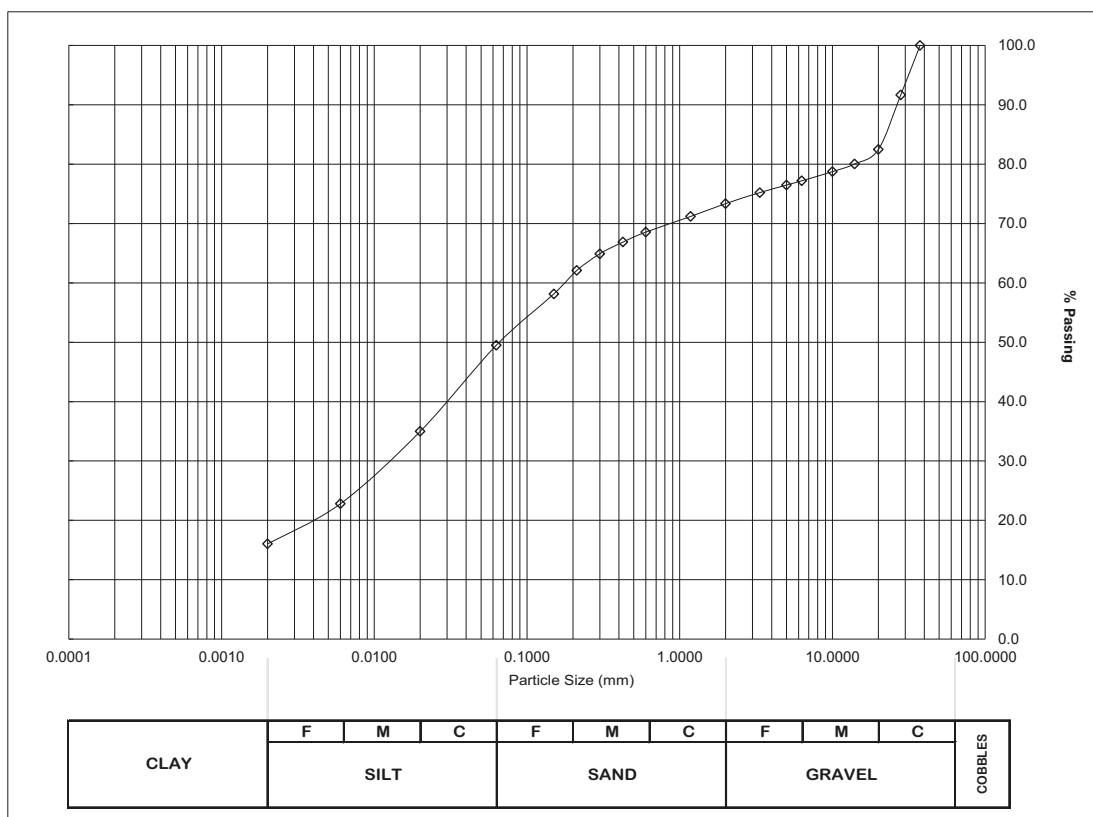
Site Name:	Haringey Civic Centre	Job Number:	21/3628
Client:	Haringey Council	Date Reported:	21/03/2022
Borehole No:	WS01	Sample Type/No.	D 1A
		Top Depth:	0.30 m
		Bottom Depth:	m

Soil Description:

Dark brown slightly gravelly sandy silty CLAY with frequent roots. Gravel comprises of fine to coarse flint, brick and pottery fragments

BS Test Sieves	
Size (mm)	% Passing
75.000	100
63.000	100
50.000	100
37.500	100
28.000	92
20.000	82
14.000	80
10.000	79
6.300	77
5.000	76
3.350	75
2.000	73
1.180	71
0.600	69
0.425	67
0.300	65
0.212	62
0.150	58
0.063	50

Sedimentation (*if applicable)	
Size (mm)	% Passing
0.020	35
0.006	23
0.002	16



Method/type:	Wet Sieving	BS 1377: Part 2: Clause 9.2: 1990 Determination of particle size distribution - wet sieving method.
	Pipette	BS 1377: Part 2: Clause 9.4: 1990 Determination of sedimentation by the pipette method.

Particle Proportions %	
Cobbles	
Gravel	26.6
Sand	23.9
Silt	33.5
Clay	16.0



Remarks:

The results reported relate only to the items tested or sampled.

Date - samples received:	15/12/2021	Checked / Approved by:	LG	CONCEPT 47-49 Brunel Road, London W3 7XR Tel: 02087401553 Email: lab@conceptconsultants.co.uk
Date - sample testing commenced :	08/03/2022	Date Approved:	21/03/2022	
Date - sample testing completed :	16/03/2022			
Approved Signatories: L Griffin LG (QA Technical & Lab Mng'r) – K Mazerant KM (Lab Mng'r)				

CONCEPT SITE INVESTIGATIONS

PARTICLE SIZE DISTRIBUTION

TEST REPORT

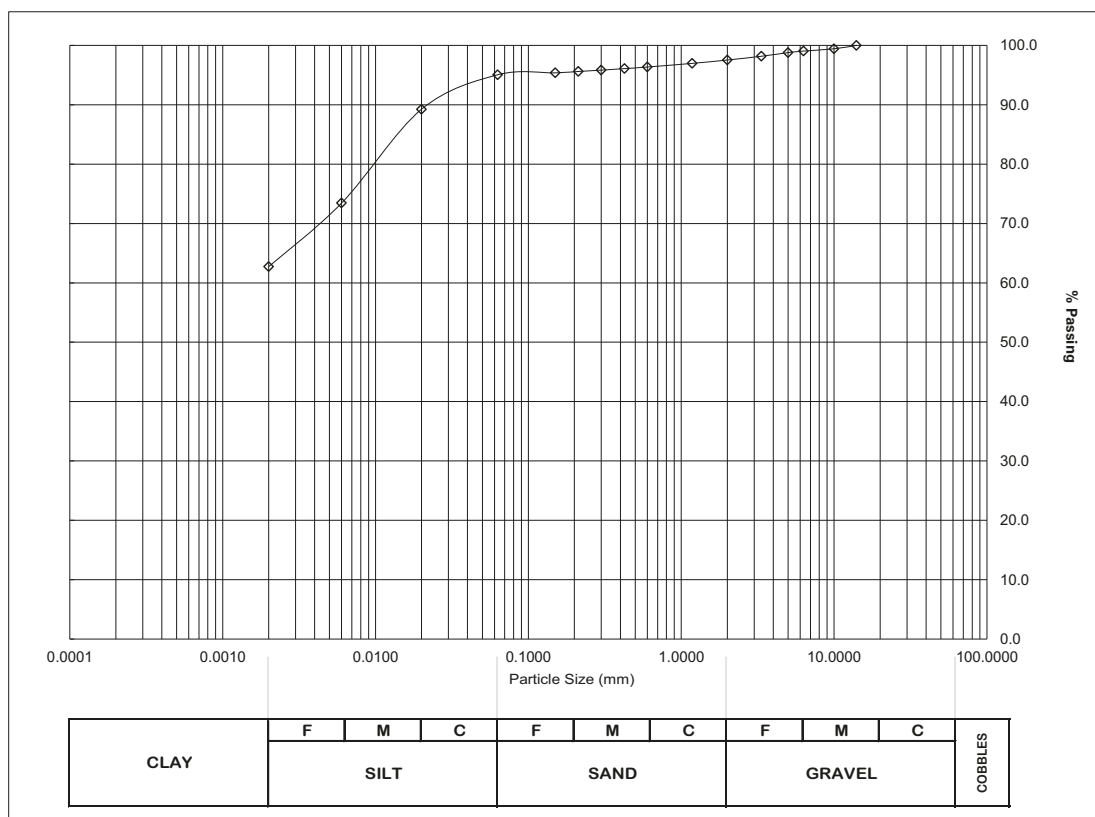
Site Name:	Haringey Civic Centre	Job Number:	21/3628
Client:	Haringey Council	Date Reported:	21/03/2022
Borehole No:	WS01	Sample Type/No.	B 6
		Top Depth:	1.20 m
		Bottom Depth:	m

Soil Description:

Brown and light bluish grey silty CLAY with rare pockets of light silty fine sand and silt nodules, occasional selenite crystals

BS Test Sieves	
Size (mm)	% Passing
75.000	100
63.000	100
50.000	100
37.500	100
28.000	100
20.000	100
14.000	100
10.000	99
6.300	99
5.000	99
3.350	98
2.000	98
1.180	97
0.600	96
0.425	96
0.300	96
0.212	96
0.150	95
0.063	95

Sedimentation (*if applicable)	
Size (mm)	% Passing
0.020	89
0.006	73
0.002	63



Method/type:	Wet Sieving	BS 1377: Part 2: Clause 9.2: 1990 Determination of particle size distribution - wet sieving method.
	Pipette	BS 1377: Part 2: Clause 9.4: 1990 Determination of sedimentation by the pipette method.

Particle Proportions %	
Cobbles	
Gravel	2.5
Sand	2.5
Silt	32.3
Clay	62.7



Remarks:

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Date - samples received:	15/12/2021	CONCEPT 47-49 Brunel Road, London W3 7XR Tel: 02087401553 Email: lab@conceptconsultants.co.uk
Date - sample testing commenced :	08/03/2022	
Date - sample testing completed :	16/03/2022	
Checked / Approved by: LG Date Approved: 21/03/2022		
Approved Signatories: L Griffin LG (QA Technical & Lab Mgr) – K Mazerant KM (Lab Mgr)		

CONCEPT SITE INVESTIGATIONS

PARTICLE SIZE DISTRIBUTION

TEST REPORT

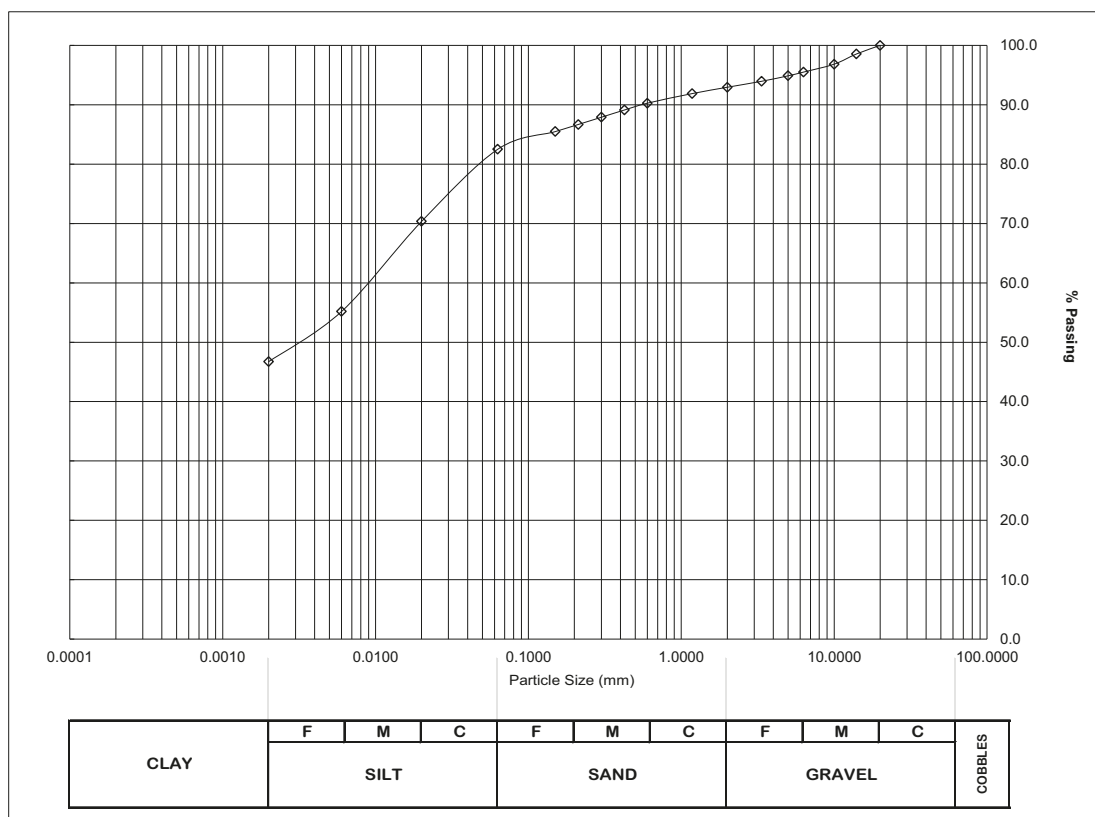
Site Name:	Haringey Civic Centre	Job Number:	21/3628
Client:	Haringey Council	Date Reported:	21/03/2022
Borehole No:	WS02B	Sample Type/No.	D 3A
		Top Depth:	0.70 m
		Bottom Depth:	m

Soil Description:

Orangish brown mottled dark grey slightly gravelly slightly sandy silty CLAY with occasional rootlets and rare wood fragments. Gravel comprises fine and medium flint and brick fragments

BS Test Sieves	
Size (mm)	% Passing
75.000	100
63.000	100
50.000	100
37.500	100
28.000	100
20.000	100
14.000	99
10.000	97
6.300	96
5.000	95
3.350	94
2.000	93
1.180	92
0.600	90
0.425	89
0.300	88
0.212	87
0.150	85
0.063	83

Sedimentation (*if applicable)	
Size (mm)	% Passing
0.020	70
0.006	55
0.002	47



Method/type:	Wet Sieving	BS 1377: Part 2: Clause 9.2: 1990 Determination of particle size distribution - wet sieving method.
	Pipette	BS 1377: Part 2: Clause 9.4: 1990 Determination of sedimentation by the pipette method.

Particle Proportions %	
Cobbles	
Gravel	7.0
Sand	10.4
Silt	35.8
Clay	46.7



Remarks:

The results reported relate only to the items tested or sampled.

Date - samples received:	15/12/2021	CONCEPT 47-49 Brunel Road, London W3 7XR Tel: 02087401553 Email: lab@conceptconsultants.co.uk
Date - sample testing commenced :	08/03/2022	
Date - sample testing completed :	16/03/2022	
Checked / Approved by: LG Date Approved: 21/03/2022		
Approved Signatories: L Griffin LG (QA Technical & Lab Mngr) – K Mazerant KM (Lab Mngr)		

CONCEPT SITE INVESTIGATIONS

PARTICLE SIZE DISTRIBUTION

TEST REPORT

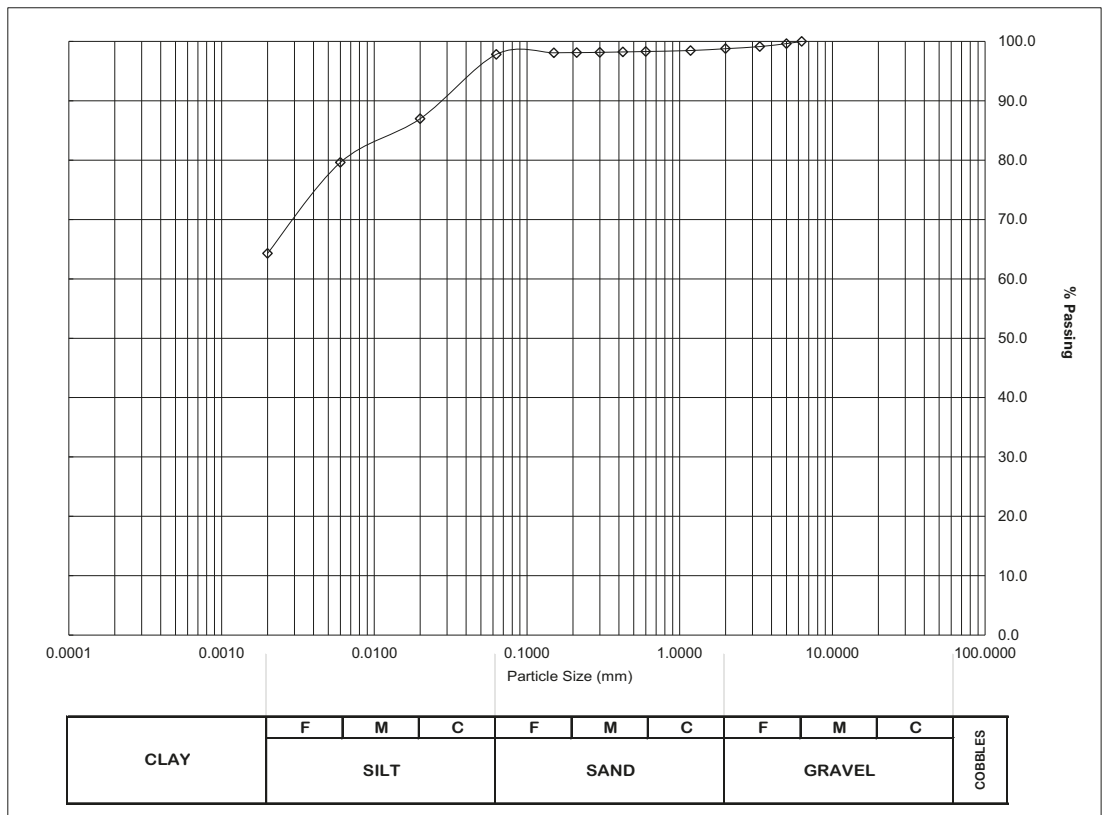
Site Name:	Haringey Civic Centre	Job Number:	21/3628
Client:	Haringey Council	Date Reported:	21/03/2022
Borehole No:	WS02B	Sample Type/No.	B 9
		Top Depth:	1.75 m
		Bottom Depth:	2.00 m

Soil Description:

Brown and grey slightly gravelly silty CLAY with rare roots and rare pockets of sand. Gravel is fine flint

BS Test Sieves	
Size (mm)	% Passing
75.000	100
63.000	100
50.000	100
37.500	100
28.000	100
20.000	100
14.000	100
10.000	100
6.300	100
5.000	100
3.350	99
2.000	99
1.180	98
0.600	98
0.425	98
0.300	98
0.212	98
0.150	98
0.063	98

Sedimentation (*if applicable)	
Size (mm)	% Passing
0.020	87
0.006	80
0.002	64



Method/type:	Wet Sieving	BS 1377: Part 2: Clause 9.2: 1990 Determination of particle size distribution - wet sieving method.
	Pipette	BS 1377: Part 2: Clause 9.4: 1990 Determination of sedimentation by the pipette method.

Particle Proportions %	
Cobbles	
Gravel	1.2
Sand	1.0
Silt	33.5
Clay	64.3



Remarks:

The results reported relate only to the items tested or sampled.

Date - samples received:	15/12/2021	CONCEPT 47-49 Brunel Road, London W3 7XR Tel: 02087401553 Email: lab@conceptconsultants.co.uk
Date - sample testing commenced :	08/03/2022	
Date - sample testing completed :	16/03/2022	
Checked / Approved by: LG Date Approved: 21/03/2022		
Approved Signatories: L Griffin LG (QA Technical & Lab Mngr) – K Mazerant KM (Lab Mngr)		

**Lynn Griffin**

Concept Site Investigations
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i2 Analytical Ltd.
7 Woodshots Meadow,
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Analytical Report Number : 22-44248

Project / Site name: Haringey Civic Centre

Samples received on: 08/03/2022

Your job number: 21 3628

**Samples instructed on/
Analysis started on:** 08/03/2022

Your order number: L2751

Analysis completed by: 15/03/2022

Report Issue Number: 1

Report issued on: 15/03/2022

Samples Analysed: 5 soil samples

Signed:


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

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

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

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

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

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

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

Analytical Report Number: 22-44248
Project / Site name: Haringey Civic Centre
Your Order No: L2751

Lab Sample Number				2198069	2198070	2198071	2198072	2198073
Sample Reference				BH03	BH04	BH05	WS03	WS04
Sample Number				5	20	9	13	2
Depth (m)				1.20-1.65	6.00-6.45	2.00	2.85-3.00	0.00-0.50
Date Sampled				04/03/2022	04/03/2022	04/03/2022	04/03/2022	04/03/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	12	18	19	20	12
Total mass of sample received	kg	0.001	NONE	0.7	0.5	0.7	0.7	0.7

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.8	7.9	8.4	8.1	8
Total Sulphate as SO ₄	mg/kg	50	MCERTS	2400	8000	550	640	590
Water Soluble Sulphate (Soil Equivalent)	g/kg	0.0025	MCERTS	1.9	6.1	0.38	0.59	0.078
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	1900	6100	380	590	78
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.97	3.1	0.19	0.29	0.039
Total Sulphur	mg/kg	50	MCERTS	700	3200	170	220	310

Heavy Metals / Metalloids

Magnesium (water soluble)	mg/kg	5	NONE	-	760	-	-	-
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U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 22-44248

Project / Site name: Haringey Civic Centre

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2198069	BH03	5	1.20-1.65	Brown clay and sand with gravel.
2198070	BH04	20	6.00-6.45	Brown clay.
2198071	BH05	9	2	Brown clay.
2198072	WS03	13	2.85-3.00	Brown clay.
2198073	WS04	2	0.00-0.50	Brown loam and clay with gravel and vegetation.

Analytical Report Number : 22-44248

Project / Site name: Haringey Civic Centre

Water matrix abbreviations:

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Magnesium, water soluble, in soil	Determination of water soluble magnesium by extraction with water followed by ICP-OES.	In-house method based on TRL 447	L038-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total Sulphur in soil	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In house method.	L038-PL	D	MCERTS

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

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

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

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

CONCEPT SITE INVESTIGATIONS

Site Name	Haringey Civic Centre	Job No.	21/3628
Carried out for:	Haringey Council	Date:	29/03/2022

One Dimensional Consolidation Test

Borehole No.:	BH04	Sample No.:	U 13	Depth (m):	4.00
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Test details

Sample description	Firm, orangish brown mottled grey slightly gravelly silty CLAY with occasional selenite crystals and calcrete nodules. Gravel is fine to medium flint
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Depth within original sample (m):	0.40
Orientation within original sample	Vertical
Specimen preparation	Undisturbed

Specimen details		Initial	Final
Height	mm :	20.0	18.9
Diameter	mm :	75.0	-
Bulk density	Mg/m ³ :	1.98	2.06
Moisture content	% :	28	26
Dry density	Mg/m ³ :	1.55	1.64
Voids Ratio	:	0.71	0.62
Degree of saturation	% :	104.2	-
Particle density	Mg/m ³ :	2.65	-
Swelling pressure	kPa :	-	-
Average Laboratory Temperature	°C :	21	

Assumed ☒

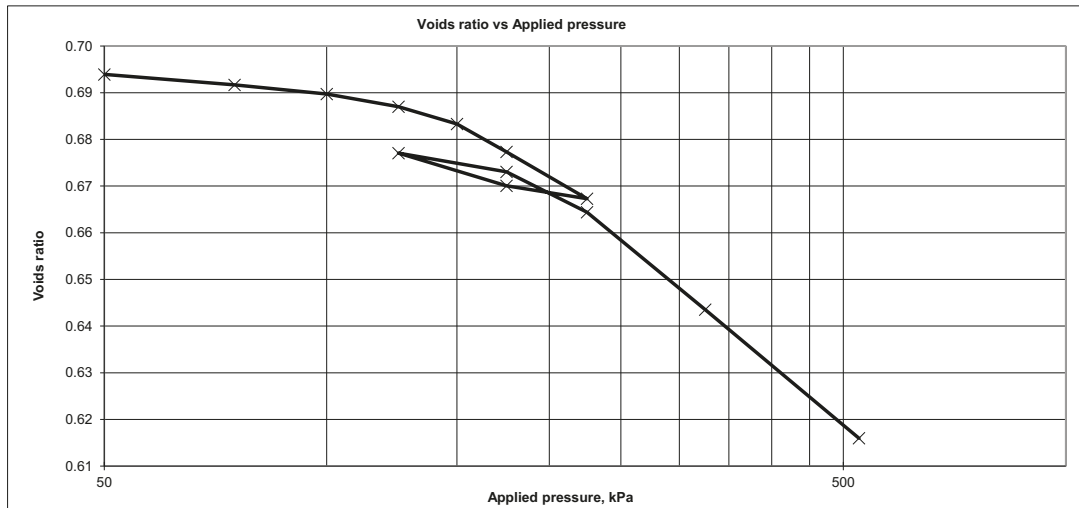
Consolidation Stage

Stage	Applied Pressure	Voids Ratio	Coefficient of Consolidation	Coefficient of Compressibility	Stage	Applied Pressure	Voids Ratio	Coefficient of Consolidation	Coefficient of Compressibility
Number	kPa		m ² /year	m ² /MN	Number	kPa		m ² /year	m ² /MN
1 *	50	0.694	#	0.207	11	225	0.664	7.28	0.103
2 *	75	0.692	#	0.053	12	325	0.644	1.99	0.125
3 *	100	0.690	#	0.047	13	525	0.616	0.18	0.084
4	125	0.687	25.41	0.065					
5	150	0.683	1.61	0.087					
6	175	0.677	1.57	0.142					
7	225	0.667	0.75	0.119					
8	175	0.670	11.72	0.033					
9	125	0.677	1.84	0.084					
10	175	0.673	21.26	0.048					

*** specimen swelled

"#" not possible to assess

Notes : Coefficient of consolidation determined by the square root of time fitting method



BS 1377 : Part 5 : Clause 3 : 1990

Determination of the one-dimensional consolidation properties
The results reported relate only to the items tested or sampled.



Date - samples received: 03/12/2021

Date - sample testing commenced : 16/03/2022

Date - sample testing completed : 25/03/2022

Checked / Approved by: LG

Date Approved: 29/03/2022

Approved Signatories: L Griffin LG (QA Technical & lab Mngr) – K Mazerant KM (Lab Mngr)

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CONCEPT SITE INVESTIGATIONS

Site Name	Haringey Civic Centre	Job No.	21/3628
Carried out for:	Haringey Council	Date:	29/03/2022

One Dimensional Consolidation Test

Borehole No.:	BH04	Sample No.:	U 17	Depth (m):	5.00
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Test details

Sample description	Firm, brown silty CLAY with occasional selenite crystals
--------------------	--

Depth within original sample (m):	0.40
Orientation within original sample	Vertical
Specimen preparation	Undisturbed

Specimen details		Initial	Final
Height	mm :	19.9	18.5
Diameter	mm :	74.9	-
Bulk density	Mg/m ³ :	1.91	2.02
Moisture content	% :	33	31
Dry density	Mg/m ³ :	1.43	1.55
Voids Ratio	:	0.85	0.71
Degree of saturation	% :	103.3	-
Particle density	Mg/m ³ :	2.65	-
Swelling pressure	kPa :	-	-
Average Laboratory Temperature	°C :	21	-

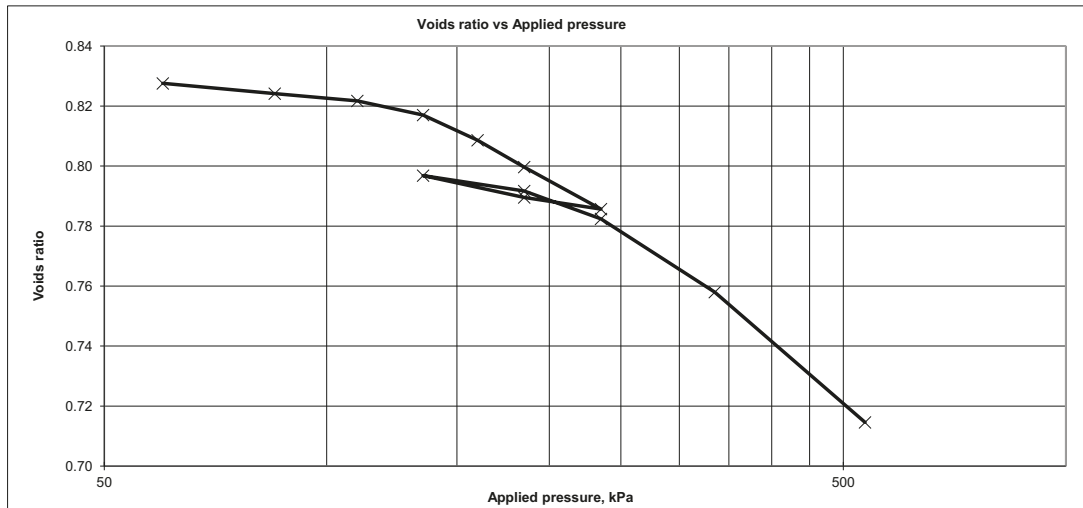
Assumed ☒

Consolidation Stage

Stage	Applied Pressure	Voids Ratio	Coefficient of Consolidation	Coefficient of Compressibility	Stage	Applied Pressure	Voids Ratio	Coefficient of Consolidation	Coefficient of Compressibility
Number	kPa		m ² /year	m ² /MN	Number	kPa		m ² /year	m ² /MN
1 *	60	0.828	#	0.193	11	235	0.782	0.60	0.104
2 *	85	0.824	#	0.075	12	335	0.758	3.39	0.137
3 *	110	0.822	#	0.053	13	535	0.715	0.66	0.123
4	135	0.817	23.64	0.104					
5	160	0.809	1.56	0.184					
6	185	0.800	1.32	0.197					
7	235	0.786	3.94	0.156					
8	185	0.790	3.14	0.044					
9	135	0.797	3.16	0.081					
10	185	0.792	4.50	0.057					

*# not possible to assess *** specimen swelled

Notes : Coefficient of consolidation determined by the square root of time fitting method



BS 1377 : Part 5 : Clause 3 : 1990

Determination of the one-dimensional consolidation properties
The results reported relate only to the items tested or sampled.



Date - samples received:	03/12/2021		
Date - sample testing commenced :	09/03/2022	Checked / Approved by:	LG
Date - sample testing completed :	22/03/2022	Date Approved:	29/03/2022
Approved Signatories:	L Griffin LG (QA Technical & lab Mngr) – K Mazerant KM (Lab Mngr)		

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CONCEPT SITE INVESTIGATIONS

Site Name	Haringey Civic Centre	Job No.	21/3628
Carried out for:	Haringey Council	Date:	29/03/2022

One Dimensional Consolidation Test

Borehole No.:	BH04	Sample No.:	U 22	Depth (m):	7.00
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Test details

Sample description	Firm, brown silty CLAY with occasional selenite crystals
--------------------	--

Depth within original sample (m):	0.40
Orientation within original sample	Vertical
Specimen preparation	Undisturbed

Specimen details		Initial	Final
Height	mm :	20.1	19.3
Diameter	mm :	74.9	-
Bulk density	Mg/m ³ :	1.95	2.04
Moisture content	% :	29	30
Dry density	Mg/m ³ :	1.50	1.57
Voids Ratio	:	0.76	0.69
Degree of saturation	% :	102.3	-
Particle density	Mg/m ³ :	2.65	-
Swelling pressure	kPa :	-	-
Average Laboratory Temperature	°C :	21	

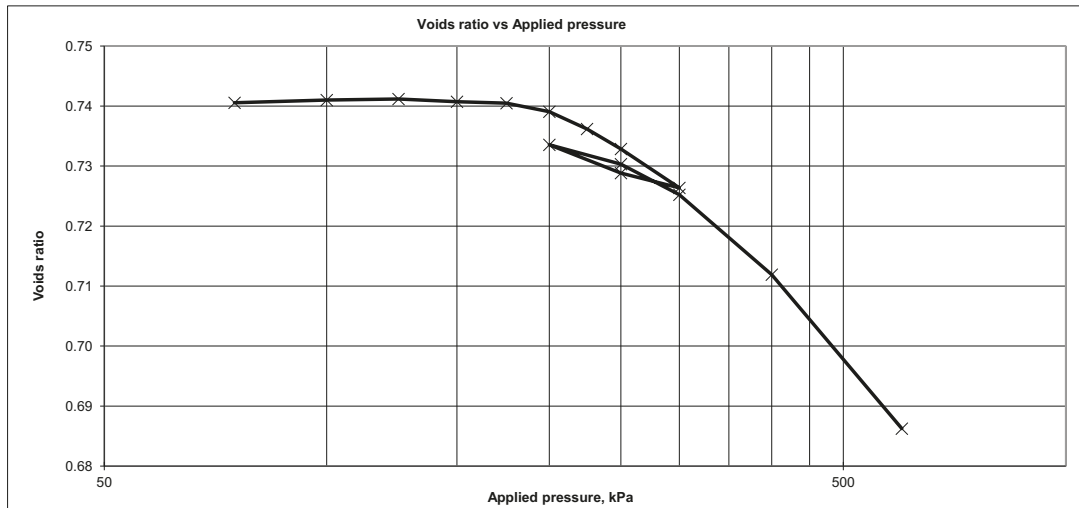
Assumed ☒

Consolidation Stage

Stage	Applied Pressure	Voids Ratio	Coefficient of Consolidation	Coefficient of Compressibility	Stage	Applied Pressure	Voids Ratio	Coefficient of Consolidation	Coefficient of Compressibility
Number	kPa		m ² /year	m ² /MN	Number	kPa		m ² /year	m ² /MN
1 *	75	0.741	#	0.158	11	200	0.734	3.41	0.055
2 *	100	0.741	#	-0.010	12	250	0.730	18.87	0.037
3 *	125	0.741	#	-0.004	13	300	0.725	8.64	0.059
4 *	150	0.741	#	0.010	14	400	0.712	2.56	0.077
5 *	175	0.740	#	0.006	15	600	0.686	1.28	0.075
6	200	0.739	54.74	0.032					
7	225	0.736	0.57	0.066					
8	250	0.733	1.25	0.077					
9	300	0.726	3.83	0.075					
10	250	0.729	2.19	0.028					

*# not possible to assess *** specimen swelled

Notes : Coefficient of consolidation determined by the square root of time fitting method



BS 1377 : Part 5 : Clause 3 : 1990

Determination of the one-dimensional consolidation properties
The results reported relate only to the items tested or sampled.



Date - samples received:	03/12/2021		
Date - sample testing commenced :	09/03/2022	Checked / Approved by:	LG
Date - sample testing completed :	23/03/2022	Date Approved:	29/03/2022
Approved Signatories:	L Griffin LG (QA Technical & lab Mngr) – K Mazerant KM (Lab Mngr)		

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CONCEPT SITE INVESTIGATIONS

Site Name	Haringey Civic Centre	Job No.	21/3628
Carried out for:	Haringey Council	Date:	29/03/2022

One Dimensional Consolidation Test

Borehole No.:	BH05	Sample No.:	U 13	Depth (m):	4.00
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Test details

Sample description	Firm, brown silty CLAY with occasional selenite crystals and occasional pockets of sand
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Depth within original sample (m):	0.40
Orientation within original sample	Vertical
Specimen preparation	Undisturbed

Specimen details		Initial	Final
Height	mm :	18.9	17.9
Diameter	mm :	75.0	-
Bulk density	Mg/m ³ :	1.94	2.05
Moisture content	% :	29	29
Dry density	Mg/m ³ :	1.50	1.59
Voids Ratio	:	0.77	0.67
Degree of saturation	% :	101.7	-
Particle density	Mg/m ³ :	2.65	-
Swelling pressure	kPa :	-	-
Average Laboratory Temperature	°C :	21	

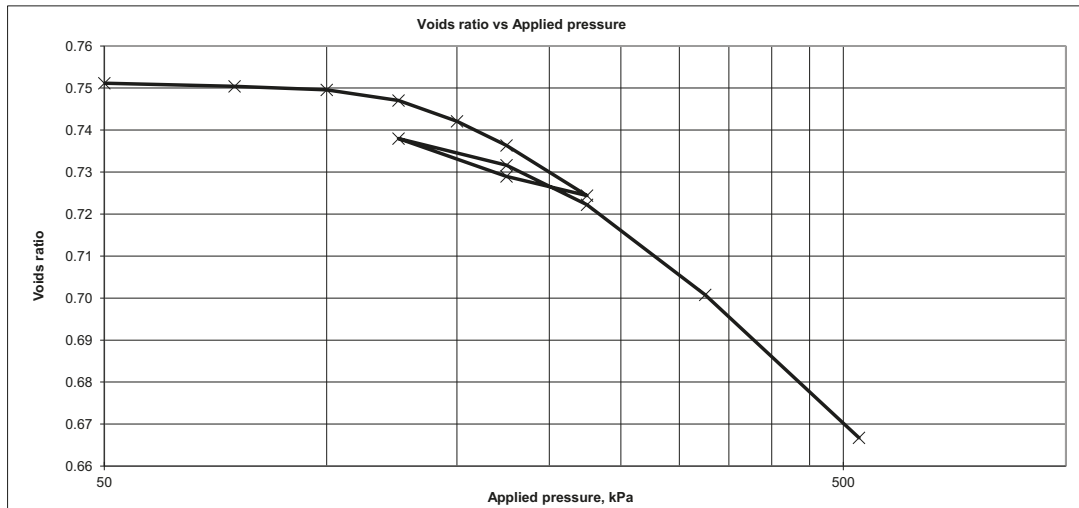
Assumed ☒

Consolidation Stage

Stage	Applied Pressure	Voids Ratio	Coefficient of Consolidation	Coefficient of Compressibility	Stage	Applied Pressure	Voids Ratio	Coefficient of Consolidation	Coefficient of Compressibility
Number	kPa		m ² /year	m ² /MN	Number	kPa		m ² /year	m ² /MN
1 *	50	0.751	#	0.174	11	225	0.722	1.45	0.109
2 *	75	0.750	#	0.017	12	325	0.701	0.78	0.125
3 *	100	0.750	#	0.019	13	525	0.667	4.16	0.100
4	125	0.747	24.38	0.058					
5	150	0.742	1.01	0.113					
6	175	0.736	0.41	0.133					
7	225	0.724	2.13	0.138					
8	175	0.729	3.80	0.053					
9	125	0.738	2.15	0.105					
10	175	0.732	2.98	0.073					

*# not possible to assess *** specimen swelled

Notes : Coefficient of consolidation determined by the square root of time fitting method



BS 1377 : Part 5 : Clause 3 : 1990

Determination of the one-dimensional consolidation properties
The results reported relate only to the items tested or sampled.



Date - samples received:	03/12/2021		
Date - sample testing commenced :	09/03/2022	Checked / Approved by:	LG
Date - sample testing completed :	23/03/2022	Date Approved:	29/03/2022
Approved Signatories:	L Griffin LG (QA Technical & lab Mngr) – K Mazerant KM (Lab Mngr)		

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CONCEPT SITE INVESTIGATIONS

Site Name	Haringey Civic Centre	Job No.	21/3628
Carried out for:	Haringey Council	Date:	29/03/2022

One Dimensional Consolidation Test

Borehole No.:	BH05	Sample No.:	U 17	Depth (m):	6.00
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Test details

Sample description Firm to stiff, fissured brown silty CLAY with occasional selenite crystals and occasional pockets of sand

Depth within original sample (m):	0.40
Orientation within original sample	Vertical
Specimen preparation	Undisturbed

Specimen details		Initial	Final
Height	mm :	20.1	18.9
Diameter	mm :	75.0	-
Bulk density	Mg/m ³ :	1.86	2.00
Moisture content	% :	30	31
Dry density	Mg/m ³ :	1.43	1.53
Voids Ratio	:	0.85	0.73
Degree of saturation	% :	93.5	-
Particle density	Mg/m ³ :	2.65	-
Swelling pressure	kPa :	-	-
Average Laboratory Temperature	°C :	21	

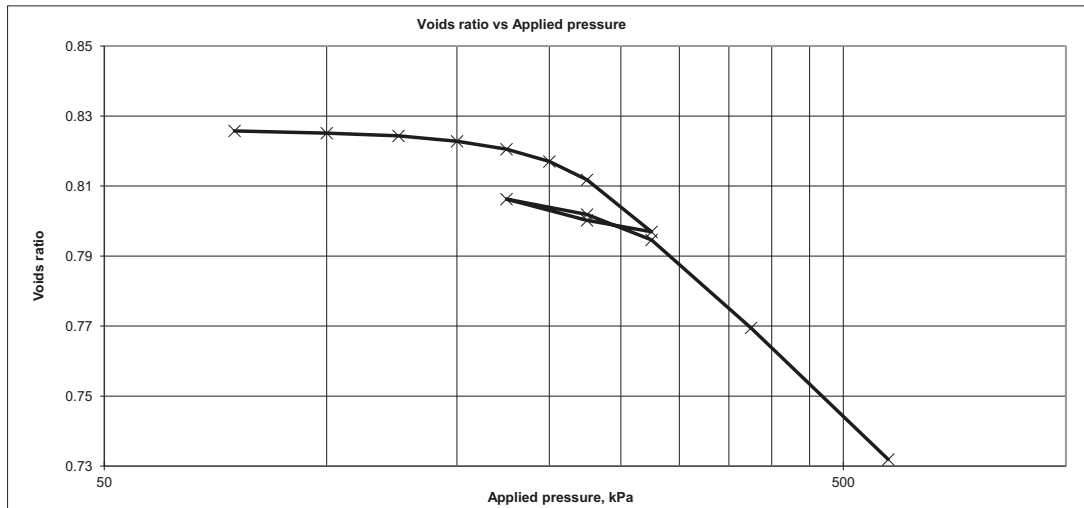
Assumed ☒

Consolidation Stage

Stage	Applied Pressure	Voids Ratio	Coefficient of Consolidation	Coefficient of Compressibility	Stage	Applied Pressure	Voids Ratio	Coefficient of Consolidation	Coefficient of Compressibility
Number	kPa		m ² /year	m ² /MN	Number	kPa		m ² /year	m ² /MN
1 *	75	0.826	#	0.155	11	225	0.802	10.20	0.049
2 *	100	0.825	#	0.014	12	275	0.795	5.26	0.081
3 *	125	0.824	#	0.016	13	375	0.769	7.89	0.140
4 *	150	0.823	#	0.034	14	575	0.732	15.52	0.106
5	175	0.821	29.13	0.050					
6	200	0.817	11.46	0.077					
7	225	0.812	4.42	0.115					
8	275	0.797	6.04	0.164					
9	225	0.800	5.19	0.037					
10	175	0.806	4.98	0.067					

*# not possible to assess *** specimen swelled

Notes : Coefficient of consolidation determined by the square root of time fitting method



BS 1377 : Part 5 : Clause 3 : 1990

Determination of the one-dimensional consolidation properties
The results reported relate only to the items tested or sampled.



Date - samples received: 03/12/2021

Date - sample testing commenced : 09/03/2022

Date - sample testing completed : 22/03/2022

Checked / Approved by: LG

Date Approved: 29/03/2022

Approved Signatories: L Griffin LG (QA Technical & lab Mngr) – K Mazerant KM (Lab Mngr)

CONCEPT

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CONCEPT SITE INVESTIGATIONS

Site Name	Haringey Civic Centre	Job No.	21/3628
Carried out for:	Haringey Council	Date:	29/03/2022

One Dimensional Consolidation Test

Borehole No.:	BH05	Sample No.:	U 22	Depth (m):	8.00
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Test details

Sample description	Stiff, fissured brown silty CLAY with occasional selenite crystals
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Depth within original sample (m):	0.40
Orientation within original sample	Vertical
Specimen preparation	Undisturbed

Specimen details		Initial	Final
Height	mm :	19.9	18.9
Diameter	mm :	74.9	-
Bulk density	Mg/m ³ :	1.94	2.06
Moisture content	% :	29	30
Dry density	Mg/m ³ :	1.50	1.59
Voids Ratio	:	0.76	0.67
Degree of saturation	% :	100.3	-
Particle density	Mg/m ³ :	2.65	-
Swelling pressure	kPa :	-	-
Average Laboratory Temperature	°C :	21	

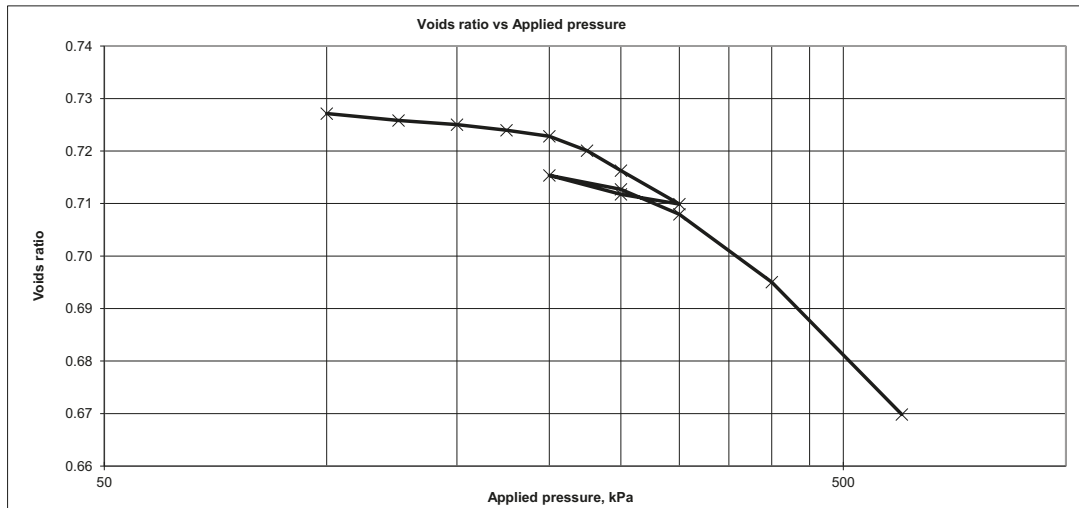
Assumed ☒

Consolidation Stage

Stage	Applied Pressure	Voids Ratio	Coefficient of Consolidation	Coefficient of Compressibility	Stage	Applied Pressure	Voids Ratio	Coefficient of Consolidation	Coefficient of Compressibility
Number	kPa		m ² /year	m ² /MN	Number	kPa		m ² /year	m ² /MN
1 *	100	0.727	#	0.192	11	250	0.713	4.53	0.031
2 *	125	0.726	#	0.031	12	300	0.708	5.61	0.056
3 *	150	0.725	#	0.018	13	400	0.695	5.87	0.076
4 *	175	0.724	#	0.025	14	600	0.670	7.87	0.074
5	200	0.723	28.09	0.027					
6	225	0.720	8.76	0.064					
7	250	0.716	1.32	0.088					
8	300	0.710	6.21	0.074					
9	250	0.712	3.61	0.022					
10	200	0.715	5.02	0.042					

*# not possible to assess *** specimen swelled

Notes : Coefficient of consolidation determined by the square root of time fitting method



BS 1377 : Part 5 : Clause 3 : 1990

Determination of the one-dimensional consolidation properties
The results reported relate only to the items tested or sampled.



Date - samples received:	03/12/2021	Checked / Approved by:	LG
Date - sample testing commenced :	09/03/2022	Date Approved:	29/03/2022
Date - sample testing completed :	23/03/2022		
Approved Signatories:	L Griffin LG (QA Technical & lab Mngr) – K Mazerant KM (Lab Mngr)		

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CONCEPT SITE INVESTIGATIONS

Site Name	Haringey Civic Centre	Job No.	21/3628
Carried out for:	Haringey Council	Date:	29/03/2022

One Dimensional Consolidation Test

Borehole No.:	BH05	Sample No.:	U 27	Depth (m):	10.00
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Test details

Sample description	Stiff, fissured brown silty CLAY with occasional selenite crystals
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Depth within original sample (m):	0.40
Orientation within original sample	Vertical
Specimen preparation	Undisturbed

Specimen details		Initial	Final
Height	mm :	19.8	19.4
Diameter	mm :	75.1	-
Bulk density	Mg/m ³ :	1.98	2.06
Moisture content	% :	26	28
Dry density	Mg/m ³ :	1.57	1.60
Voids Ratio	:	0.69	0.65
Degree of saturation	% :	100.4	-
Particle density	Mg/m ³ :	2.65	-
Swelling pressure	kPa :	-	-
Average Laboratory Temperature	°C :	21	

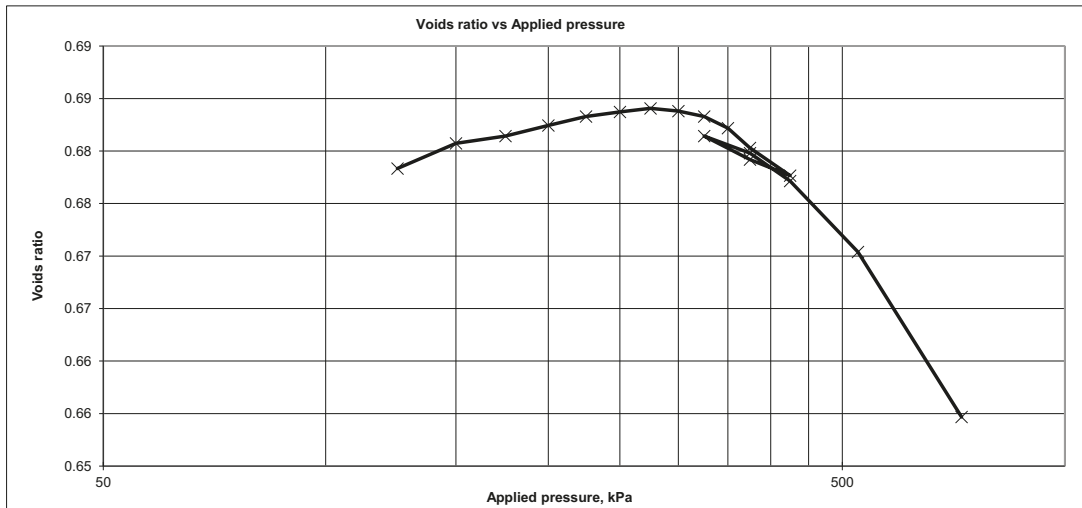
Assumed ☒

Consolidation Stage

Stage	Applied Pressure	Voids Ratio	Coefficient of Consolidation	Coefficient of Compressibility	Stage	Applied Pressure	Voids Ratio	Coefficient of Consolidation	Coefficient of Compressibility
Number	kPa		m ² /year	m ² /MN	Number	kPa		m ² /year	m ² /MN
1 *	125	0.678	#	0.067	11	375	0.680	5.06	0.045
2 *	150	0.681	#	-0.057	12	425	0.678	6.40	0.032
3 *	175	0.681	#	-0.016	13	375	0.679	6.30	0.018
4 *	200	0.682	#	-0.024	14	325	0.681	12.27	0.026
5 *	225	0.683	#	-0.020	15	375	0.680	8.42	0.019
6 *	250	0.684	#	-0.010	16	425	0.677	3.30	0.032
7 *	275	0.684	#	-0.008	17	525	0.670	2.66	0.040
8 *	300	0.684	#	0.006	18	725	0.655	11.68	0.047
9	325	0.683	61.58	0.012					
10	350	0.682	11.33	0.026					

*# not possible to assess *** specimen swelled

Notes : Coefficient of consolidation determined by the square root of time fitting method



BS 1377 : Part 5 : Clause 3 : 1990

Determination of the one-dimensional consolidation properties
The results reported relate only to the items tested or sampled.



Date - samples received:	03/12/2021		
Date - sample testing commenced :	09/03/2022	Checked / Approved by:	LG
Date - sample testing completed :	23/03/2022	Date Approved:	29/03/2022
Approved Signatories:	L Griffin LG (QA Technical & lab Mngr) – K Mazerant KM (Lab Mngr)		

CONCEPT
Unit D, Herald Way, Coventry CV3 2RQ
Tel: 02477087673 Email: Coventrylab@conceptconsultants.co.uk

CONCEPT SITE INVESTIGATIONS				Summary Test Report - Undrained Triaxial Compression (Single-Stage) BS 1377 : Part 7: 1990 Clause 8						Date Reported: 21/03/2022		Job No.: 21/3628	
Site Location: Haringey Civic Centre				Client: Haringey Council									
BH No.	Sample Type	Sample No	Depth top (m)	Description	Cell pressure kN/m2	Strain at failure %	Bulk Density Mg/m3	Dry Density Mg/m3	NMC %	Max Dev. Stress kPa	Shear Strength kPa	Mode of failure/Comments	
BH01	U	6	2.00	Firm to stiff, very closely fissured orangish brown mottled bluish grey slightly micaceous silty CLAY with 1No pocket of sand (80mm) at 2.29m	75	9.2	1.91	1.43	33	131	66	Brittle	
BH01	U	16	6.00	Very stiff, extremely closely fissured brown mottled orangish brown slightly micaceous silty CLAY with occasional selenite crystals (<4mm)	150	5.1	1.95	1.50	30	230	115	Brittle	
BH01	U	26	10.00	Very stiff, extremely closely fissured brown mottled orangish brown slightly micaceous silty CLAY with rare pockets of orangish brown silt (<30mm)	250	2.6	1.96	1.50	30	249	125	Brittle	
BH01	U	61	28.00	Very stiff, extremely closely fissured dark brown mottled orangish brown slightly micaceous silty CLAY with rare shell fragments (<3mm), and occasional pockets of light brown silty sand (25mm)	600	4.1	2.03	1.61	26	339	170	Brittle	

Remarks: The results reported relate only to the items tested or sampled.

Date - samples received: 03/12/2021		CONCEPT 47-49 Brunel Road, London W3 7XR Tel: 02087401553 Email: Lab@conceptconsultants.co.uk	 ASSOCIATION OF GEOTECHNICAL & GEOTECHNICAL SPECIALISTS	 4503
Date - sample testing commenced: 15/03/2022	Checked/Approved by: LG			
Date - sample testing completed: 16/03/2022	Date Approved: 21/03/2022			
Approved Signatories: L Griffin LG (QA Technical & Lab Mngr) – K Mazerant KM (Lab Mngr)				

CONCEPT SITE INVESTIGATIONS				Summary Test Report - Undrained Triaxial Compression (Single-Stage) BS 1377 : Part 7: 1990 Clause 8						Date Reported: 21/03/2022		
										Job No.: 21/3628		
Site Location: Haringey Civic Centre					Client: Haringey Council							
BH No.	Sample Type	Sample No	Depth top (m)	Description	Cell pressure kN/m ²	Strain at failure %	Bulk Density Mg/m ³	Dry Density Mg/m ³	NMC %	Max Dev. Stress kPa	Shear Strength kPa	Mode of failure/Comments
BH02	U	13	4.00	Stiff to very stiff, very closely fissured brown mottled bluish grey slightly micaceous silty CLAY with rare rootlets, rare shell fragments (<2mm), and 1No band of claystone between 4.00m and 4.06m	100	6.1	1.96	1.50	31	230	115	Brittle
BH02	U	23	8.00	Very stiff, extremely closely fissured brown mottled orangish brown slightly micaceous silty CLAY with occasional selenite crystals (<3mm)	200	6.4	1.96	1.51	29	287	144	Brittle
BH02	U	34	13.00	Very stiff, extremely closely fissured dark brown slightly micaceous silty CLAY with frequent pockets of light brown silty sand (<60mm)	300	3.4	2.02	1.64	23	393	197	Brittle
BH02	U	46	19.00	Very stiff, extremely closely fissured dark greyish brown slightly micaceous silty CLAY with rare shell fragments (2mm), rare pyrite nodules (<5mm), and rare pockets of silty sand (<35mm)	400	3.3	2.01	1.60	26	432	216	Brittle
BH02	U	52	22.00	Very stiff, dark brown mottled with dark orangish brown slightly micaceous silty CLAY with rare shell fragments (<1mm)	500	3.1	1.97	1.53	28	443	222	Brittle
Remarks: The results reported relate only to the items tested or sampled.												
Date - samples received: 03/12/2021					CONCEPT 47-49 Brunel Road, London W3 7XR Tel: 02087401553 Email: Lab@conceptconsultants.co.uk  							
Date - sample testing commenced: 15/03/2022				Checked/Approved by: LG								
Date - sample testing completed: 16/03/2022				Date Approved: 21/03/2022								
Approved Signatories: L Griffin LG (QA Technical & Lab Mngr) – K Mazerant KM (Lab Mngr)												

CONCEPT SITE INVESTIGATIONS				Summary Test Report - Undrained Triaxial Compression (Single-Stage) BS 1377 : Part 7: 1990 Clause 8						Date Reported: 21/03/2022		Job No.: 21/3628	
Site Location: Haringey Civic Centre					Client: Haringey Council								
BH No.	Sample Type	Sample No	Depth top (m)	Description	Cell pressure kN/m ²	Strain at failure %	Bulk Density Mg/m ³	Dry Density Mg/m ³	NMC %	Max Dev. Stress kPa	Shear Strength kPa	Mode of failure/Comments	
BH03	U	6	2.00	Firm to stiff, extremely closely fissured orangish brown mottled bluish grey slightly micaceous silty CLAY	75	12.7	1.98	1.54	28	154	77	Brittle with slight plastic deformation	
BH03	U	11	4.00	Stiff to very stiff, extremely closely fissured brown mottled bluish grey slightly micaceous silty CLAY	100	9.2	1.96	1.53	28	245	123	Brittle	
BH03	U	16	6.00	Very stiff, extremely closely fissured brown mottled bluish grey slightly micaceous silty CLAY with occasional selenite crystals (<10mm) and rare rootlets	150	5.4	1.97	1.53	29	268	134	Brittle	
BH03	U	21	8.00	Very stiff, extremely closely fissured brown mottled orangish brown slightly micaceous silty CLAY with occasional selenite crystals (<5mm)	200	3.9	1.99	1.55	28	339	170	Brittle	
BH03	U	38	16.00	Very stiff, extremely closely fissured dark brown slightly micaceous silty CLAY with occasional pockets of light grey silty sand (<30mm)	350	5.0	2.03	1.62	25	448	224	Brittle	
BH03	U	56	25.00	Very stiff, extremely closely fissured dark brown slightly micaceous silty CLAY with rare shell fragments (<6mm), and rare pockets of light grey silty sand (<30mm)	550	2.0	2.03	1.61	26	448	224	Brittle	

Remarks: The results reported relate only to the items tested or sampled.

Date - samples received: 15/12/2021		CONCEPT 47-49 Brunel Road, London W3 7XR Tel: 02087401553 Email: Lab@conceptconsultants.co.uk	 ASSOCIATION OF GEOTECHNICAL & GEOTECHNICAL SPECIALISTS	
Date - sample testing commenced: 02/03/2022	Checked/Approved by: LG			
Date - sample testing completed: 10/03/2022	Date Approved: 21/03/2022			
Approved Signatories: L Griffin LG (QA Technical & Lab Mngr) – K Mazerant KM (Lab Mngr)				

CONCEPT SITE INVESTIGATIONS				Summary Test Report - Undrained Triaxial Compression (Single-Stage) BS 1377 : Part 7: 1990 Clause 8						Date Reported: 21/03/2022		
										Job No.: 21/3628		
Site Location: Haringey Civic Centre				Client: Haringey Council								
BH No.	Sample Type	Sample No	Depth top (m)	Description	Cell pressure kN/m ²	Strain at failure %	Bulk Density Mg/m ³	Dry Density Mg/m ³	NMC %	Max Dev. Stress kPa	Shear Strength kPa	Mode of failure/Comments
BH04	U	27	9.00	Very stiff, extremely closely fissured brown mottled orangish brown slightly micaceous silty CLAY with occasional selenite crystals (<3mm)	200	2.9	1.99	1.55	28	330	165	
BH04	U	33	11.50	Very stiff, extremely closely fissured dark brown mottled orangish brown slightly micaceous silty CLAY with rare pyrite nodules (<5mm)	250	3.5	1.98	1.53	29	339	170	
BH04	U	43	17.50	Very stiff, extremely closely fissured dark brown slightly micaceous silty CLAY with rare pockets of light brown silty sand (70mm)	400	2.7	2.02	1.61	26	317	159	
Remarks: The results reported relate only to the items tested or sampled.												
Date - samples received: 15/12/2021					CONCEPT 47-49 Brunel Road, London W3 7XR Tel: 02087401553 Email: Lab@conceptconsultants.co.uk  							
Date - sample testing commenced: 02/03/2022				Checked/Approved by: LG								
Date - sample testing completed: 10/03/2022				Date Approved: 21/03/2022								
Approved Signatories: L Griffin LG (QA Technical & Lab Mngr) – K Mazerant KM (Lab Mngr)												

CONCEPT SITE INVESTIGATIONS				Summary Test Report - Undrained Triaxial Compression (Single-Stage) BS 1377 : Part 7: 1990 Clause 8						Date Reported: 21/03/2022		
										Job No.: 21/3628		
Site Location: Haringey Civic Centre					Client: Haringey Council							
BH No.	Sample Type	Sample No	Depth top (m)	Description	Cell pressure kN/m2	Strain at failure %	Bulk Density Mg/m3	Dry Density Mg/m3	NMC %	Max Dev. Stress kPa	Shear Strength kPa	Mode of failure/Comments
BH05	U	33	13.00	Very stiff, extremely closely fissured dark brown slightly micaceous silty CLAY	300	2.4	1.95	1.50	29	256	128	Brittle
BH05	U	39	16.00	Very stiff, extremely closely fissured dark brown slightly micaceous silty CLAY with rare shell fragments (<2mm), and occasional pockets of silty sand (45mm)	350	2.9	2.04	1.63	25	475	238	Brittle
BH05	U	44	19.00	Very stiff, extremely closely fissured dark brown slightly micaceous silty CLAY with rare pockets of light greyish brown silty sand (<20mm)	400	2.5	2.02	1.61	26	305	153	Brittle
BH05	U	55	25.00	Very stiff, extremely closely fissured dark brown slightly micaceous silty CLAY with rare pockets of light grey silty sand (<6mm)	550	3.8	2.00	1.56	28	482	241	Brittle
Remarks: The results reported relate only to the items tested or sampled.												
Date - samples received: 15/12/2021					 47-49 Brunel Road, London W3 7XR Tel: 02087401553 Email: Lab@conceptconsultants.co.uk  							
Date - sample testing commenced: 02/03/2022												
Date - sample testing completed: 10/03/2022												
Approved Signatories: L Griffin LG (QA Technical & Lab Mngr) – K Mazerant KM (Lab Mngr)												

CONCEPT SITE INVESTIGATIONS				Summary Test Report - Undrained Triaxial Compression (Single-Stage) BS 1377 : Part 7: 1990 Clause 8						Date Reported: 21/03/2022		
										Job No.: 21/3628		
Site Location: Haringey Civic Centre				Client: Haringey Council								
BH No.	Sample Type	Sample No	Depth top (m)	Description	Cell pressure kN/m2	Strain at failure %	Bulk Density Mg/m3	Dry Density Mg/m3	NMC %	Max Dev. Stress kPa	Shear Strength kPa	Mode of failure/Comments
BH06	U	6	2.00	Stiff, brown mottled greyish blue gravelly slightly micaceous silty CLAY. Gravel is fine to coarse flint. Becoming slightly micaceous silty CLAY at 2.20m with 1 No 20mm pocket of claystone fragments (4mm) at 2.42m	75	6.4	2.03	1.61	27	144	72	Brittle
BH06	U	11	4.00	Stiff, extremely closely fissured brown mottled bluish grey slightly micaceous silty CLAY with 1 No pocket of orange sand (<50mm) at 4.11m	100	8.7	1.96	1.52	29	227	114	Brittle
BH06	U	16	6.00	Very stiff, extremely closely fissured brown mottled bluish grey and orangish brown slightly micaceous silty CLAY with occasional selenite crystals (<4mm)	150	4.2	1.98	1.55	28	247	124	Brittle
Remarks: The results reported relate only to the items tested or sampled.												
Date - samples received: 15/12/201					CONCEPT 47-49 Brunel Road, London W3 7XR Tel: 02087401553 Email: Lab@conceptconsultants.co.uk  							
Date - sample testing commenced: 02/03/2022												
Date - sample testing completed: 10/03/2022												
Checked/Approved by: LG Date Approved: 21/03/2022												
Approved Signatories: L Griffin LG (QA Technical & Lab Mngr) – K Mazerant KM (Lab Mngr)												

Site Name	Haringey Civic Centre	Job No.	21/3628	Hole	BH01
Client	Haringey Council	Date	22/02/2022	Depth (m)	4.00-4.45



BH01 4.00-4.45m – Photo 1



BH01 4.00-4.45m – Photo 2

Description:

Firm, extremely closely fissured brown mottled grey silty CLAY with rare pockets of yellowish-brown fine sand (<5mm), lignite fragments (<2mm), off-white shell fragments (<5mm), selenite crystals (<3mm), orangish brown and dark grey discolouration. Fissures are sub-horizontal, sub-vertical, planar, smooth and slightly polished.

Site Name	Haringey Civic Centre	Job No.	21/3628	Hole	BH02
Client	Haringey Council	Date	22/02/2022	Depth (m)	2.00-2.45



BH02 2.00-2.45m – Photo 1



BH02 2.00-2.45m – Photo 2

Description:

Firm, extremely closely fissured brown mottled grey silty CLAY with occasional pockets of yellowish-brown fine sand (<7mm), rare lignite fragments (<3mm), selenite crystals (<3mm), dark grey discolouration and rootlets. Fissures are sub-horizontal, sub-vertical, planar, smooth and slightly polished

Site Name	Haringey Civic Centre	Job No.	21/3628	Hole	BH02
Client	Haringey Council	Date	22/02/2022	Depth (m)	6.00-6.45



BH02 6.00-6.45m – Photo 1



BH02 6.00-6.45m – Photo 2

Description:

Stiff, extremely closely to very closely fissured dark brown mottled brown silty CLAY with rare pockets of yellowish-brown fine sand (<10mm), rare selenite crystals and shell fragments (<4mm). Fissures are sub-horizontal, sub-vertical, planar and undulating, smooth and unpolished



LABORATORY REPORT



4043

Contract Number: PSL22/1617

Report Date: 14 March 2022
Client's Reference: 21/3628
Client Name: Concept Site Investigations
47-49 Brunel Road
London
W3 7XR

For the attention of: Kazia Mazerat

Contract Title Haringey Civic Centre

Date Received: 4/3/2022
Date Commenced: 4/3/2022
Date Completed: 14/03/2022

Notes: Opinions and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced other than in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

A Watkins
(Director)

R Berriman
(Quality Manager)

S Royle
(Laboratory Manager)

L Knight
(Assistant Laboratory Manager)

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Page 1 of

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

[illegible]

4043

PSL
Professional Soils Laboratory

Haringey Civic Centre

Contract No:

PSL22/1617

Client Ref:

L2745

SUMMARY OF SOIL CLASSIFICATION TESTS

(BS1377 : PART 2 : 1990)

[illegible]

SYMBOLS : NP : Non Plastic

*** : Liquid Limit and Plastic Limit Wet Sieved.**



4043

PSL
Professional Soils Laboratory

Haringey Civic Centre

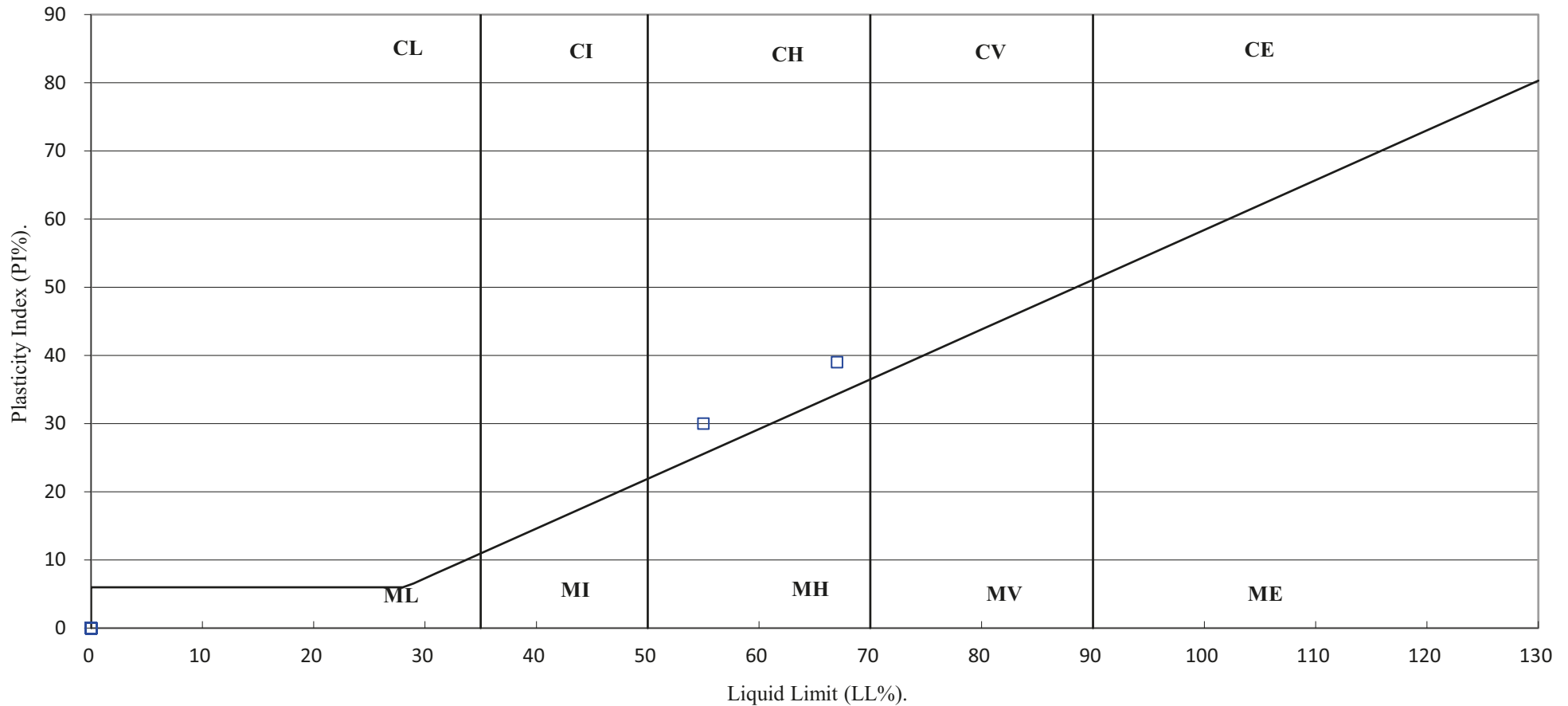
Contract No:

PSL22/1617

Client Ref:

L2745

PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.



4043

PSL
Professional Soils Laboratory

Haringey Civic Centre

Contract No:

PSL22/1617

Client Ref:

L2745

SUMMARY OF SOIL CLASSIFICATION TESTS

Soil Suction Test

BRE Information Paper IP 4/93 Febuary 1993 (CI/SfB p1)

[illegible]

PSL
Professional Soils Laboratory

Haringey Civic Centre

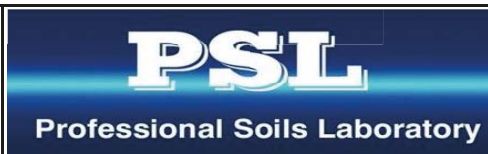
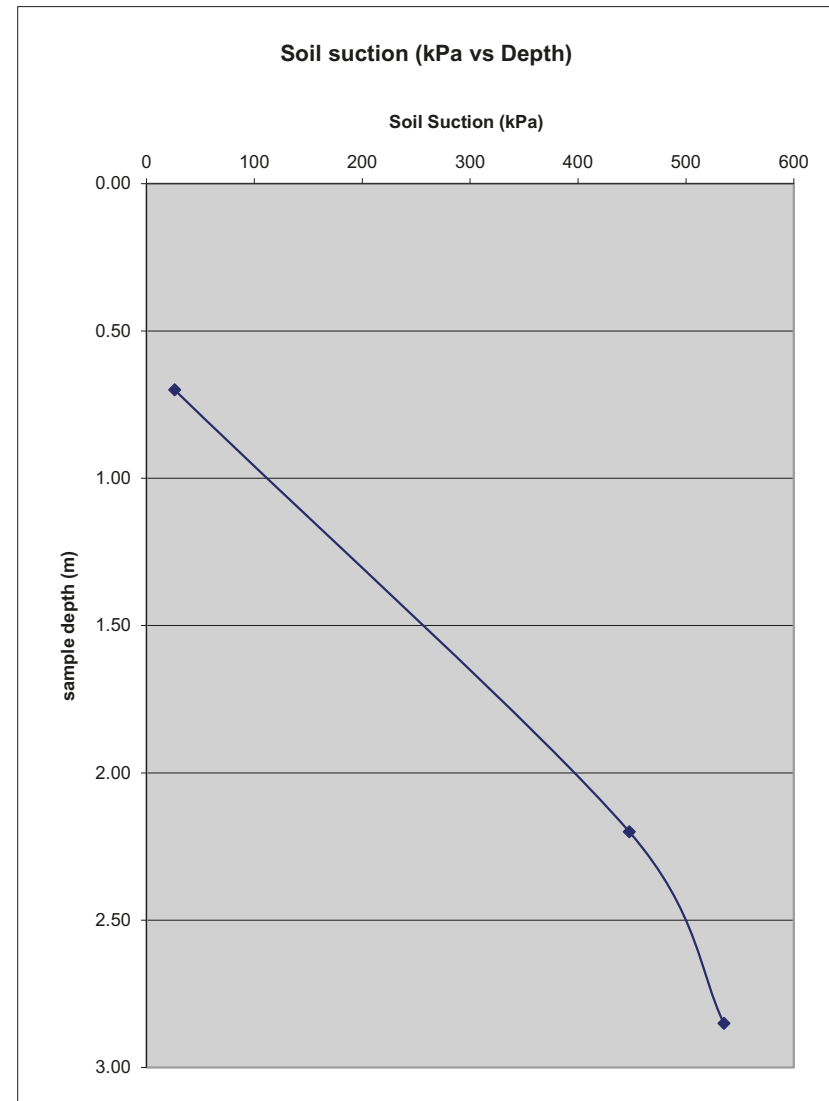
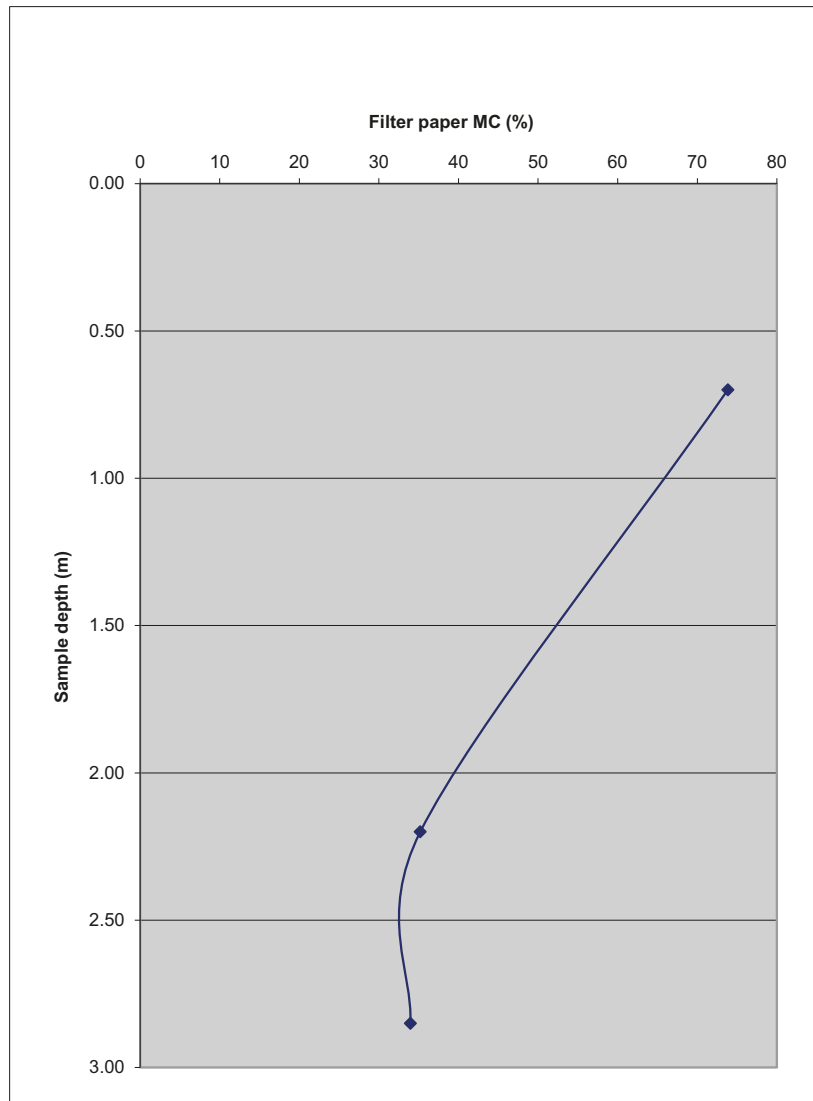
Contract No:

PSL22/1617

Client Ref:

L2745

Soil Suction Test - Graphical data
BRE Information Paper IP 4/93 Febuary 1993 (CI/SfB p1)



Haringey Civic Centre

Contract No:

PSL22/1617

Client Ref:

L2745

SUMMARY OF SOIL CLASSIFICATION TESTS

Soil Suction Test

BRE Information Paper IP 4/93 Febuary 1993 (CI/SfB p1)

[illegible]

PSL
Professional Soils Laboratory

Haringey Civic Centre

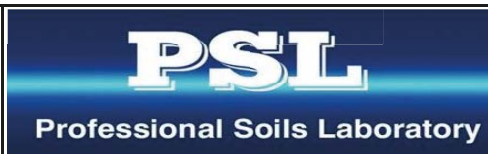
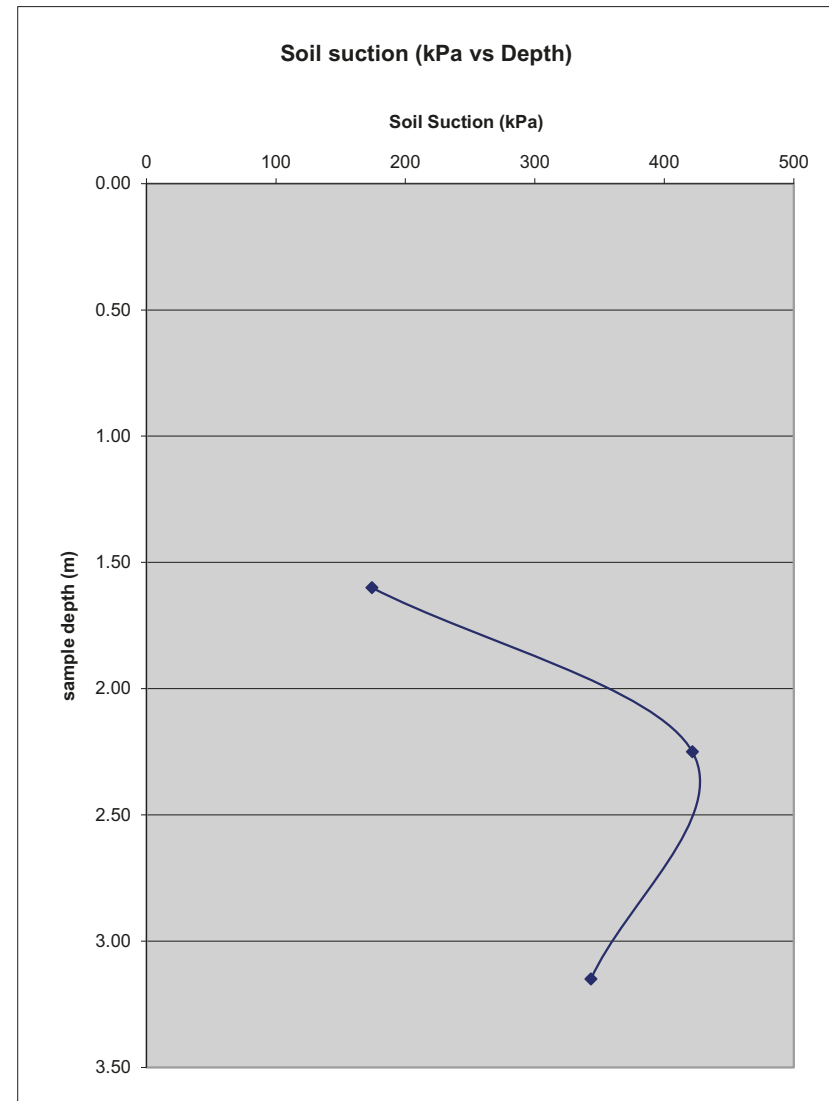
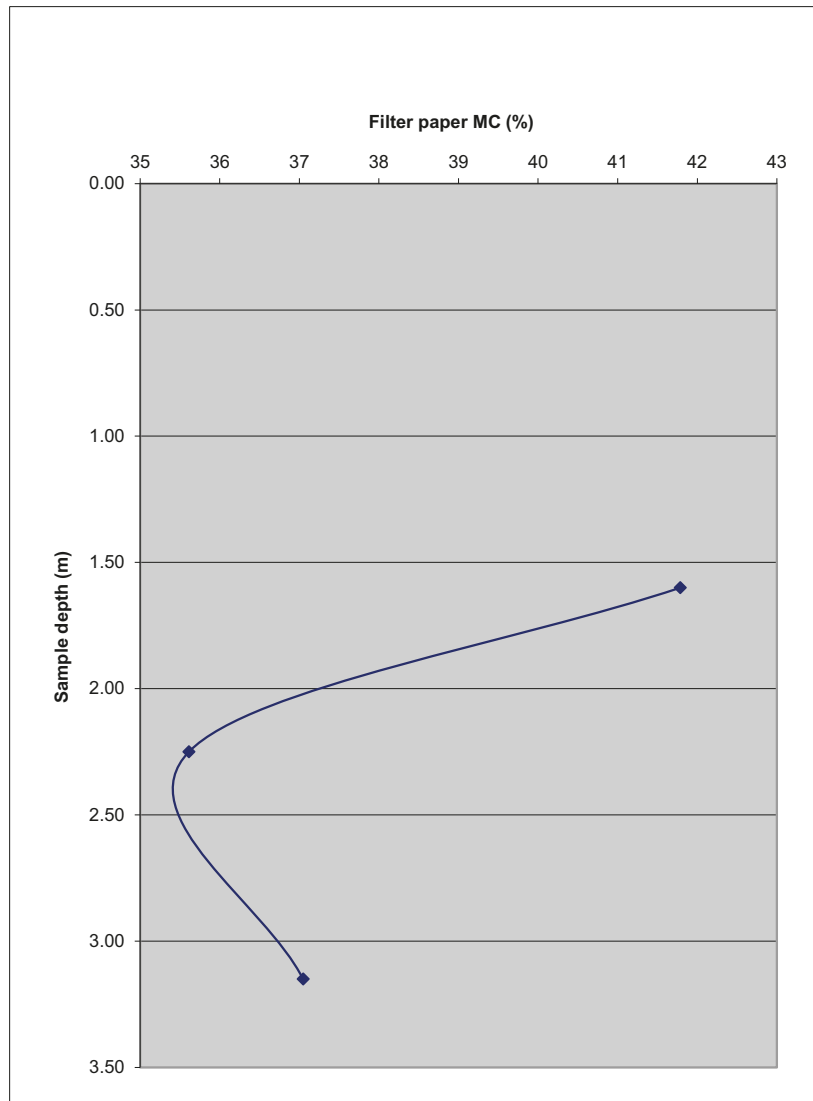
Contract No:

PSL22/1617

Client Ref:

L2745

Soil Suction Test - Graphical data
BRE Information Paper IP 4/93 February 1993 (CI/SfB p1)



Haringey Civic Centre

Contract No:

PSL22/1617

Client Ref:

L2745

14. CONCRETE CORE TEST RESULTS

REPORT 71856/F

HARINGEY CIVIC CENTRE

**ANALYSIS AND COMPRESSIVE STRENGTH
OF CONCRETE CORE SAMPLES**

Sandberg LLP
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London SW4 7TD

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email: mail@sandberg.co.uk
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SANDBERG

CONSULTING ENGINEERS

INVESTIGATION INSPECTION
MATERIALS TESTING

Sandberg LLP
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Tel: 020 7565 7000
email: mail@sandberg.co.uk
web: www.sandberg.co.uk

REPORT 71856/F

HARINGEY CIVIC CENTRE

ANALYSIS AND COMPRESSIVE STRENGTH OF CONCRETE CORE SAMPLES

Concept Consultant Engineering Ltd
218 Northfields Avenue
London
W13 9SJ

This report comprises
3 pages of text
Table 1 of 1 sheet
Table 2 of 1 sheet
Appendix A of 30 sheets

For the attention of Ms K Mazerant

11 March 2022

Partners: N C D Sandberg S C Clarke D J Ellis R A Rogerson M A Eden J D French C Morgan
G S Mayers G C S Moor J Fagan J H Dell Dr E D W Maclean M I Ingle M Faliva A L Pitman
Senior Associates: R A Lucas D A Kinnersley J Glen Dr W R Newby Y N P Guellil P Bennett-Hughes G Lee
Associates: K J Green J Gallagher N A Fetter E McPheat F Easthope E Krylowicz S R Kwincinski C S Newberry

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Sandberg LLP (Reg No OC304229) is registered in England and Wales Registered Office 5 Carpenters Place, London, SW4 7TD

REPORT 71856/F

HARINGEY CIVIC CENTRE

ANALYSIS AND COMPRESSIVE STRENGTH OF CONCRETE CORE SAMPLES

Instructions: Concept Purchase Order No: L2718.

1. INTRODUCTION

Three nominal 100 mm diameter concrete core samples were received in our laboratory on 7 February 2022 and subjected to analysis and compressive strength testing in accordance with your instructions.

2. SAMPLES RECEIVED

Sandberg Reference	Site Reference	Sample Description	As received condition ¹
F23110	CC01: 0.00-0.05	94mm x 50mm	sealed core tube
F23111	CC01: 0.05-0.85	94mm x 740-745mm	sealed core tube
F23112	TP06 CC01: 0.00-0.53	93mm x 510-530mm	sealed box

3. LABORATORY TEST METHODS AND TEST RESULTS

3.1 Determination of Carbonation of Concrete Cores

Depth of concrete carbonation was measured on the core samples selected by Concept. The carbonation test for F23110 (CC01: 0.00-0.05) was carried out in accordance with Sandberg TP/F/10 (based on BRE IP 6/81) using phenolphthalein indicator solution. The carbonation test for F23112 (TP06-CC01: 0.00-0.53) was carried out in conjunction with the petrographic analysis.

The results are given in section 4 of this report.

¹ BS EN 12504-1:2019 'Testing concrete in structures, Part 1: Cored specimens - taking, examining and testing in compression' requires that cores taken for strength testing shall be surface dried with a dry cloth or paper towel and then placed in a sealed container to avoid moisture exchange with the environment. BS EN 13791:2019 'Assessment of insitu compressive strength in structures and precast concrete components' requires cores to be cured with sealed curing rather than water curing. This is primarily to ensure that the core to be tested is at a moisture condition similar to the in situ moisture condition.

3.2 Density and Compressive Strength of Concrete Cores

The two concrete cores selected by Concept were diamond sawn to give specimens with a length/diameter ratio in the range 0.90 to 1.10. The ends of each specimen were ground flat and the prepared specimen was used to determine as-received density and compressive strength in accordance with BS EN 12390-7:2019, BS EN 12504-1:2019 and BS EN 12390-3:2019.

The test results are given in Table 1.

3.3 Determination of Cement Content

The two concrete cores selected by Concept were subjected to chemical analysis to determine cement type and cement content in accordance with BS1881-124:2015+A1:2021.

The approximate cement contents and aggregate/cement ratios were calculated as per cent of the dry concrete from the acid soluble calcium contents, using the assumptions shown in the analysis table.

The cement contents are expressed as per cent by weight of dry, hardened concrete and in kg/m³ using the bulk density values indicated which was determined by us.

The test results are given in Table 2.

3.4 Petrographic Analysis of Concrete Cores

Two concrete cores were selected by Concept for petrographic examination in accordance with BS 1881-211:2016..

The work was carried out by Geomaterials Research Services who are part of Sandberg LLP.

Their petrographic report is reproduced in full as Appendix A.

4. REMARKS

The concrete strength test results are shown below:

Sandberg Reference	Site reference	Carbonation (mm)	Cement content (kg/m ³)	Core compressive strength, MPa (N/mm ²)
F23110	CC01: 0.00-0.05	5-12	N/A	N/A
F23111	CC01: 0.05-0.85	N/A	321	65.7
F23112	TP06-CC01: 0.00-0.53	24-26	331	63.1

The compressive strength test results are given as a 'core compressive strength' which provides a measure of the actual strength of the concrete as it presently exists in the structure and is the value that should be used for any assessment of insitu strength or quality in cases of doubt, in accordance with BS EN 13791:2019.

The cement type for the samples analysed was found to be Portland.

Petrographic examination found the following:

- The coarse and fine aggregates in both cores are composed of dense and robust rock types showing no evidence for deterioration within the concrete.
- The aggregate contains rock types that are possibly reactive with alkalies in cement paste but no evidence has been found to suggest the occurrence of AAR.
- Both cores have a Portland cement based binder and the current levels of microporosity of the paste indicate water/cement ratios of 0.45 for both cores. It should however be noted that the possible effects of moisture ingress on the microporosity of the paste contributes to uncertainty in the petrographic measurement of the water cement ratio of Sample (F23111) CC01.
- Sample CC01 has undergone substantial leaching as a result of the long-term ingress of moisture into the concrete. The extent of weakening of Sample CC01 resulting from leaching is likely to be low.
- No evidence has been found to suggest the ingress of moisture into Sample (F23112) TP06 - CC01.

Concept Consultant Engineering Ltd
218 Northfields Avenue
London
W13 9SJ

For Sandberg LLP

For the attention of Ms K Mazerant

Richard Rogerson
Consultant

File:71856F Report.wpd

11 March 2022

CONCRETE TEST RESULTS

COMPRESSIVE STRENGTH AND DENSITY OF CORES

BS EN 12504-1:2019, BS EN 12390-3:2019 and BS EN 12390-7:2019

Date of Test

17/2/2022

Sandberg Reference	F23111	F23112
Site Mark/Client Reference	CC01	TP 06-CC01
Details: - Location Haringey, Civic Centre	0.05-0.85	0.00-0.53
- Date of coring	NA	NA
- Date received	15/2/2022	15/2/2022
Presence of abnormalities	Honeycombed 30-85mm + 310-430mm	None
Reinforcement, as received (diameter/distance) ¹ mm	None	16/65, 16/85, 16/525
Reinforcement, prepared (diameter/distance) ¹ mm	None	None
Aggregate, maximum nominal size mm	18	18
Condition on receipt	Dry, Sealed Tube	Dry, Sealed Box
Storage conditions	As Received	As Received
Method of End preparation (Cap/Ground)	Ground	Ground
Actual Core Lengths		
- Core length, as received mm	740-745	510-530
- Relation to length, as-received mm	100-200	100-200
Mean Prepared Length mm	98	93
Mean Core Diameter d _m mm	94	93
Length/Diameter ratio of prepared specimen λ	1.04	1.00
Density ² - As received kg/m ³	2290	2300
Exposure time before Test 16 - 24h	✓	✓
Estimation of prepared core excess voidage %	2.0	1.0
Maximum Load at Failure kN	456	361
Compressive Strength ³ MPa (N/mm ²) (Measured Core Strength)	65.7	53.1
Mode of Failure ⁴	Normal	Normal
Deviations from standard	See Note 2	See Note 2
Remarks:		

¹ Centre of bar to core end, before and after end preparation (eg. 20/100/40 = 20mm diameter bar, 100mm from the core end as-received and 40mm

² Volume by water displacement, densities given to nearest 10kg/m³. Balance used complies to BSEN 12504-1:2009. (This will not reduce confidence in the test result.)

³ Compressive strength values given to nearest 0.1 MPa (N/mm²).

⁴ 'Normal' (symmetrical failure) or otherwise as described.

ND = Not determined. NA = Not applicable.

ANALYSIS OF HARDENED CONCRETE

BS 1881:Part 124:2015+A1:2021 and Documented In-house Methods(*)

Date of Test

8-11/03/22

Sandberg Reference	F23111	F23112		
Client Reference	CC01 0.05-0.85	TP06-CC01 0.00-0.53		
Details	Core	Core		
CHEMICAL ANALYSIS % by mass				
Soluble silica, SiO ₂ *	5.16	5.25		
Acid soluble Alumina, Al ₂ O ₃ *	-	-		
Acid soluble Iron, Fe ₂ O ₃ *	-	-		
Acid soluble Calcium, CaO	9.06	9.27		
Acid soluble Potassium, K ₂ O	-	-		
Acid soluble Sodium, Na ₂ O	-	-		
Acid soluble Sulphate, SO ₃	-	-		
Chloride, Cl*	-	-		

As received density, kg/m ³	2290	2300		
--	------	------	--	--

Calculated cement content				
% by mass of dry mass	14.0	14.4		
kg/m ³	321	331		
Aggregate/cement ratio	5.9	5.7		

Sulphate % by mass of cement	-	-		
Chloride % by mass of cement	-	-		
Total alkalies % by mass of cement	-	-		
Probable cement type	Portland	Portland		
Calculation route #	B	B		

Assumptions used in calculations	SiO ₂ %	CaO %	combined water	
Aggregate	0.5	0.0	-	
Portland cement	20.2	64.5	23	

Calculation route:

A using soluble silica

B using acid soluble calcium oxide

REPORT ON THE PETROGRAPHIC EXAMINATION OF TWO CONCRETE CORES
(Site: Haringey Civic Centre; Client: Haringey Council; Job No. 21/3628)

GEOMATERIALS REPORT 71856/F-K
(30 SHEETS TO FOLLOW)



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Report - 71856/F-K

REPORT ON THE PETROGRAPHIC EXAMINATION OF TWO CONCRETE CORES (Site: Haringey Civic Centre; Client: Haringey Council; Job No. 21/3628)



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This report comprises
5 pages of text
Appendix A – 3 pages
Appendix B – 8 pages / photographs
Appendix C – 6 pages / photomicrographs
Appendix D – 6 pages

For the attention of Kasia Mazerant

4 March 2022

Partners: NCD Sandberg SC Clarke DJ Ellis RA Rogerson MA Eden JD French CMorgan
GSMayers GCS Moor JFagan JH Dell Dr EDW Maclean MI Ingle M Faliva AL Pitman
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Where test results are given, the results and our conclusions relate only to the samples tested and apply to the sample(s) as received, except where sampling has been conducted by Sandberg LLP.

Materials, samples and test specimens are retained for a period of 2 months from the issue of the final report.

Tests reported on sheets not bearing the UKAS mark in this report/certificate are not included in the UKAS accredited schedule for this laboratory.

Opinions and interpretations expressed herein are outside the scope for UKAS accreditation.

End of report.





Report - 71856/F-K

REPORT ON THE PETROGRAPHIC EXAMINATION OF TWO CONCRETE CORES (Site: Haringey Civic Centre; Client: Haringey Council; Job No. 21/3628)

1 INTRODUCTION

Two concrete cores were provided on 15 February 2022. It was requested that the samples be examined petrographically to include:

- Aggregate type and content
- Aggregate/cement ratio
- Water/cement ratio
- Carbonation

Instructions to proceed with the analysis were submitted under Purchase Order No. L2718.

2 SAMPLES

The following samples were provided for analysis:

Laboratory reference	Client / site reference	Core diameter / length, mm
F23111	CC01, 0.05-0.85m	93 / 92-95
F23112	TP06 – CC01, 0.00-0.53	92 / 98-101

3 TEST METHODS

The petrographic testing was carried out in accordance with BS 1881-211, 2016¹. A summary of the procedures followed and a glossary of terms used in the description of the samples are given in Appendix D. In brief, the following work was carried out.

- (i) The samples were examined as received and photographed.
- (ii) Longitudinal fluorescent resin impregnated thin sections were prepared from the inner and outer ends of each sample. Each thin section measured about 45x67mm.
- (iii) The thin sections were examined with a Zeiss petrological photomicroscope and the distribution of porosity and microcracking was assessed from an examination of the thin sections in fluorescent light using the petrological microscope.

4 PETROGRAPHIC EXAMINATION RESULTS

4.1 Visual description of the samples

Visual descriptions of the samples as received are given in Table A1 in Appendix A and photographs illustrating the samples as received are given in Appendix B.

4.2 Petrographic description of the aggregate

A petrographic description of the aggregate is given in Table A2 in Appendix A.

4.3 Petrographic description of the paste

A petrographic description of the paste is given in Table A3 in Appendix A. Photomicrographs illustrating the typical appearance of the paste in the thin sections are given in Appendix C.

¹ BS 1881-211:2016 Testing concrete. Procedure and terminology for the petrographic examination of hardened concrete

5 DISCUSSION

5.1 Aggregate characteristics

(i) Aggregate type

The coarse aggregate in both samples is flint gravel and the fine aggregate in both samples is siliceous sand.

(ii) Potential aggregate properties

The coarse and fine aggregates are composed of dense and robust rock types that would be expected to have a very high compressive strength and low water absorption. The combination of aggregates in both cores would be expected to have a low shrinkage potential in concrete.

(iii) Alkali-aggregate reaction (AAR) and aggregate deterioration

The aggregate in both cores includes rock types that are potentially reactive with alkalis in cement paste and the combination of rock types in both cores would be classified as being of “normal reactivity” in the classification of alkali-aggregate reactivity given in Concrete Society Technical Report No.30². No evidence has been found to suggest the occurrence of AAR. It should be noted that deleterious AAR involving aggregates of this type and alkalis in cement paste are, in our experience, rare.

5.2 General paste characteristics in the samples at depth

(i) Binder type

The binder in both cores is based on Portland cement and the paste contains traces of unhydrated cement grains that typically resemble particles of ordinary Portland cement. Neither core contains cement replacement materials such as fly ash or blast furnace slag.

(ii) Moisture ingress and paste alteration

- Sample CC01, 0.05 – 0.85m: The abundance of secondary ettringite within the voids throughout this sample indicates recrystallization of the cement hydrates as a result of the ingress of moisture into the concrete. The abnormally small quantities of portlandite seen throughout the paste indicate that the concrete has undergone leaching as a result of moisture ingress. The microporosity of the paste is lower than would be expected from the degree of leaching and it is possible that this is a reflection of pore space fillings with secondary ettringite.
- Sample TP06 – CC01, 0.00 – 0.53m: No evidence has been found to suggest the ingress of moisture into this sample.

² Concrete Society Technical Report No. 30 "Alkali-silica reaction: minimising the risk of damage to concrete. Guidance notes and model specification clauses.

(iii) Apparent water/binder ratio

The current levels of microporosity of the paste, the size and distribution of the portlandite crystals and the amounts of unhydrated cement have been used in conjunction with laboratory control concretes to make a petrographic assessment of the water/cement ratios for these samples and the results are as follows:

Laboratory reference	Client reference	Apparent Water / cement ratio
F23111	CC01, 0.05-0.85m	0.45 ^{Note 1}
F23112	TP06 – CC01, 0.00-0.53	0.45

Note 1: The possible effect of moisture ingress on the microporosity of the paste contributes to uncertainty in the petrographic measurement of the water cement ratio for this sample.

5.3 Compaction

Sample CC01, 0.05 – 0.85m has unevenly distributed voids and is partially honeycombed along one side of the core. Sample TP06 – CC01 is normally compacted.

5.4 Concrete deterioration at the outer surfaces

Neither sample shows evidence for localised surface weakening. The paste exposed in the surface of Sample CC01 is predominantly uncarbonated and there is a thin layer of calcareous debris on the surface of this core.

Sample TP06 – CC01 is carbonated to a maximum depth of about 26mm and the paste surrounding the reinforcement in this core is uncarbonated.

5.5 Magnitude of deterioration

With respect to the Levels of Deterioration table given in Appendix D the levels of deterioration of these samples are considered to be as follows:

Laboratory reference	Client sample reference	Level of deterioration
F23111	CC01, 0.05-0.85m	Level 3
F23112	TP06 – CC01, 0.00-0.53	Level 2

6 CONCLUSIONS

- 6.1 The coarse and fine aggregates in both cores are composed of dense and robust rock types showing no evidence for deterioration within the concrete.
- 6.2 The aggregate contains rock types that are possibly reactive with alkalis in cement paste but no evidence has been found to suggest the occurrence of AAR.
- 6.3 Both cores have a Portland cement based binder and the current levels of microporosity of the paste indicate water/cement ratios of 0.45 for both cores. It should however be noted that the possible effects of moisture ingress on the microporosity of the paste contributes to uncertainty in the petrographic measurement of the water cement ratio of Sample CC01.
- 6.4 Sample CC01 has undergone substantial leaching as a result of the long-term ingress of moisture into the concrete. The extent of weakening of Sample CC01 resulting from leaching is likely to be low.
- 6.5 No evidence has been found to suggest the ingress of moisture into Sample TP06 – CC01.

7 REMARKS

The above concludes the requested programme of testing. Please do not hesitate to contact us if we can be of any further assistance in this matter.

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for GEOMATERIALS RESEARCH SERVICES
(part of Sandberg LLP)

M. A. Eden, BSc., MSc., FGS., C.Geol., FIMMM
Partner

For the attention of Kasia Mazerant

4 March 2022

Samples can only be retained for a period of one month from the date of issue of the report unless we are instructed otherwise.
Samples can be returned or retained for a further charge.
Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

APPENDIX A – PETROGRAPHIC DESCRIPTION OF THE SAMPLES

**PETROGRAPHIC EXAMINATION OF HARDENED CONCRETE
BS 1881-211, 2016**

TABLE A1 OF 3: VISUAL DESCRIPTION OF THE SAMPLES

Laboratory ref.	F23111	F23112
Client sample ref.	CC01, 0.05-0.85m	TP06 - CC01, 0.00-0.53
Core diameter / length, mm	93 / 92-95	92 / 98-101
Description of outer end	Flat, slightly uneven surface	Formed flat surface
Description of inner end	Sawn end	Sawn end
Paste colour	Light greyish brown	Light greyish brown
Macroscopic cracking	None seen	None seen
Carbonation:		
General depth (mm)	0.0	24.2
Maximum depth (mm)	0.8	26.0
Reinforcement:		
Diameter / Depth	None seen	15mm / 60mm 15mm / 76mm
Corrosion	-	None seen
Voids:		
Maximum size (mm)	18	6
Typical size (mm)	2-6	1
Estimated excess void content (%)	7 (concentration of voids on one side of the core)	0.5

PETROGRAPHIC EXAMINATION OF HARDENED CONCRETE
BS 1881-211, 2016

TABLE A2 OF 3: PETROGRAPHIC DESCRIPTION OF THE AGGREGATE

Laboratory ref.	F23111	F23112
Client sample ref.	CC01, 0.05-0.85m	TP06 - CC01, 0.00-0.53
Coarse aggregate:		
<i>Maximum size (mm)</i>	15	13
<i>Typical shape</i>	Angular to subrounded	Angular to rounded
<i>Major rock types</i>	Flint	Flint
<i>Minor rock types</i>	Quartzite	-
<i>Trace rock types</i>	-	-
Fine aggregate:		
<i>Grading (estimated BS EN 13139 grading classification)</i>	Medium	Medium
<i>Maximum size (mm)</i>	4	4
<i>Typical shape</i>	Subrounded to subangular	Subrounded to subangular
<i>Major rock types</i>	Quartz	Quartz
<i>Minor rock types</i>	Quartzite, Flint	Quartzite, Flint
<i>Trace rock types</i>	Glauconite, Limestone, Ironstone	Glauconite, Limestone, Ironstone
Alkali-aggregate reaction:		
<i>Gel on surfaces of core</i>	None seen	None seen
<i>Gel in voids</i>	None seen	None seen
<i>Gel in cracks</i>	None seen	None seen

PETROGRAPHIC EXAMINATION OF HARDENED CONCRETE
BS 1881-211, 2016

TABLE A3 OF 3: PETROGRAPHIC DESCRIPTION OF THE PASTE

Laboratory ref.	F23111	F23112
Client sample ref.	CC01, 0.05-0.85m	TP06 - CC01, 0.00-0.53
Cement type	Portland – resembles OPC / CEM 1 PC	Portland – resembles OPC / CEM 1 PC
Unhydrated cement (estimated. vol.% of paste)	<1	<1
Cement replacement	None seen	None seen
Portlandite (estimated. vol.% of paste)	1	12
Portlandite – typical size	<0.01	0.01-0.05
Apparent water/cement ratio	0.50-0.60, typically 0.50 ^{Note 1}	0.50-0.60, typically 0.50
Porosity		
<i>General level</i>	Low to moderately high ^{Note 1}	Low to moderately high
<i>Porosity distribution</i>	Patchy	Patchy
Microcracking		
<i>Microcracking level</i>	Low	Low
<i>Microcrack distribution</i>	Typically radial around fine aggregate surfaces	Typically radial around fine aggregate surfaces
Crack fillings	None seen	None seen
Void fillings	Moderate amounts of secondary ettringite	None seen
Paste alteration at the outer surface:	General leaching of portlandite from the paste and very shallow carbonation. Occasional calcite deposition in voids	General fine-textured carbonation.

Note 1: The porosity has been affected by secondary ettringite formation in pore space in cement hydrates thereby mitigating the effects of leaching of the paste on microporosity of the paste.

APPENDIX B – PHOTOGRAPHS ILLUSTRATING THE SAMPLES AS RECEIVED

Figure B1

Sample F23111

The sample as received, side view A:



Figure B2

Sample F23111

The sample as received, side view B:

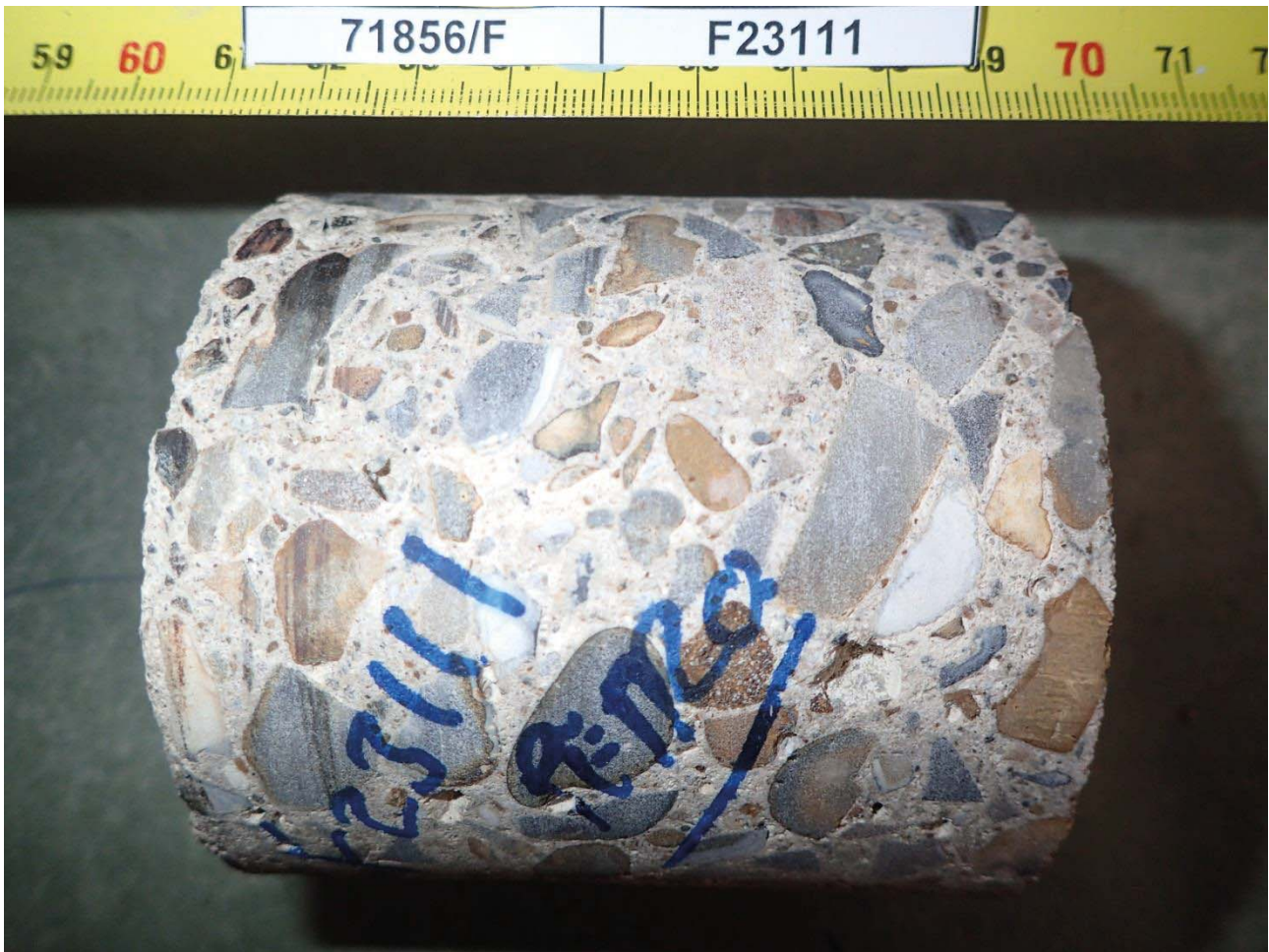


Figure B3

Sample F23111

The sample as received, outer surface:



Figure B4

Sample F23111

The sample as received, inner core end:

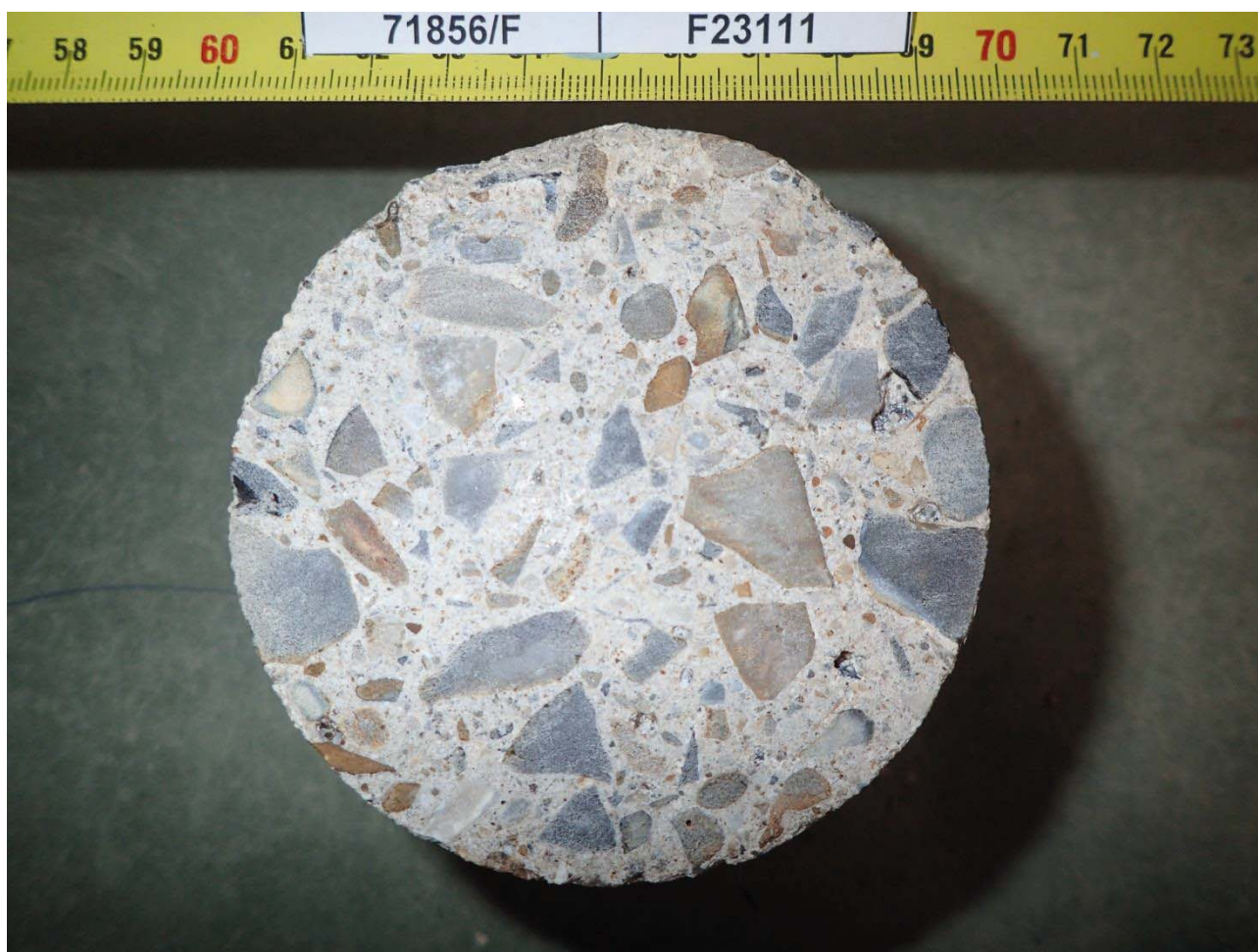


Figure B5

Sample F23112

The sample as received, side view A:

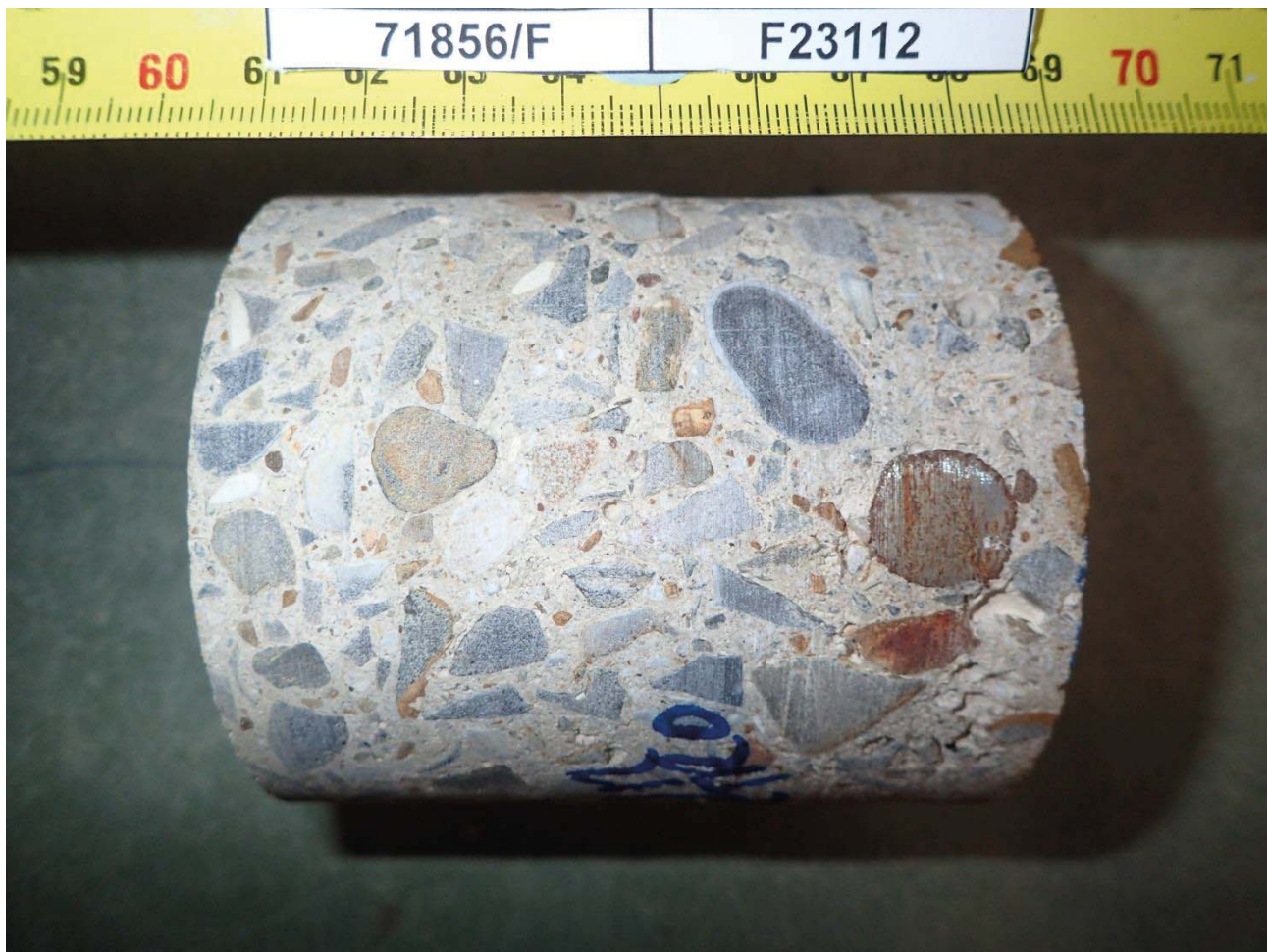


Figure B6

Sample F23112

The sample as received, side view B:



Figure B7

Sample F23112

The sample as received, outer surface:



Figure B8

Sample F23112

The sample as received, inner core end:



APPENDIX C – PHOTOMICROGRAPHS ILLUSTRATING THE THIN SECTIONS

Figure C1

Sample F23111

Thin section, oblique polars: View showing a cross section through the outer surface. The surface is coated with a thin layer of calcareous debris visible from B2 to A6. Much of the field of view is occupied by leached portlandite-depleted paste visible for example around F/G5. Particles of quartz sand can be seen in D4 and H2/3.

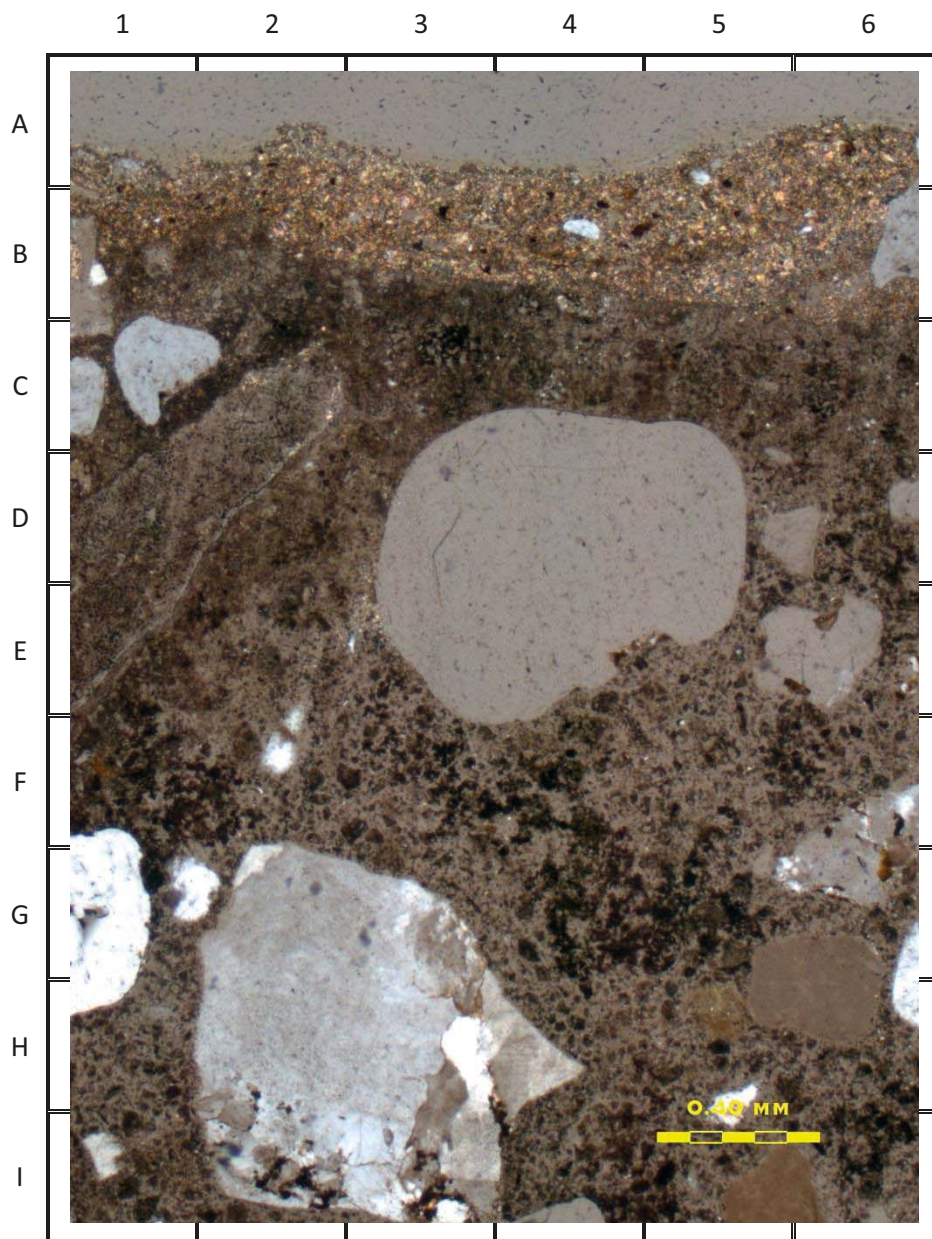


Figure C2

Sample F23111

Thin section, oblique polars: A flint coarse aggregate particle occurs in G/H6. Particles of quartz fine aggregate are visible for example in A1/2 and D2. The aggregate particles are surrounded by paste containing moderate quantities of secondary ettringite that is visible for example in C4/5 and G3.

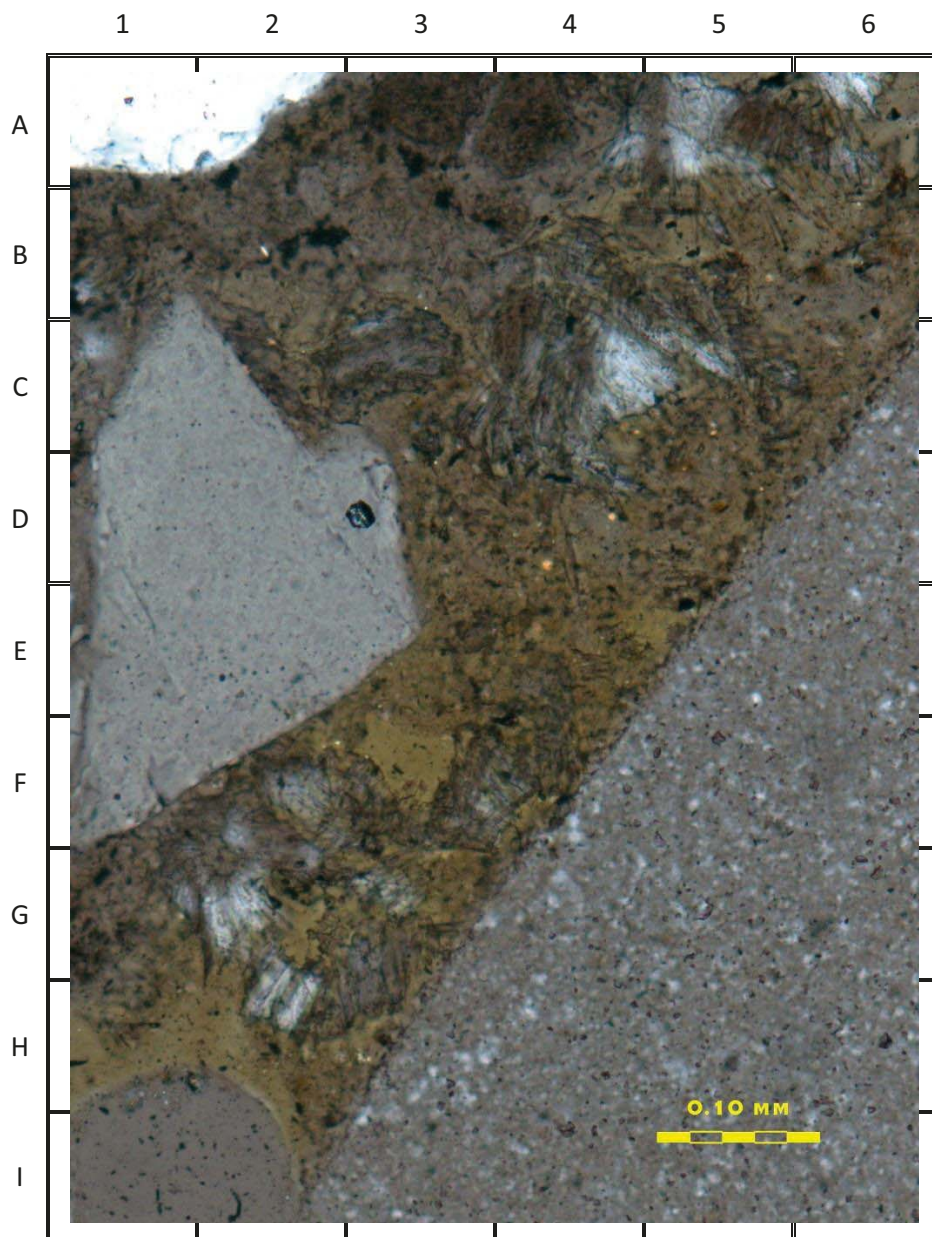


Figure C3

Sample F23111

Thin section, crossed polars: The field of view is dominated by portlandite-depleted paste appearing very dark grey and visible for example in C1/2, B6 and H4. Particles of quartz sand occur in B/C4 and F1 and a glauconite particle occurs in E/F5.

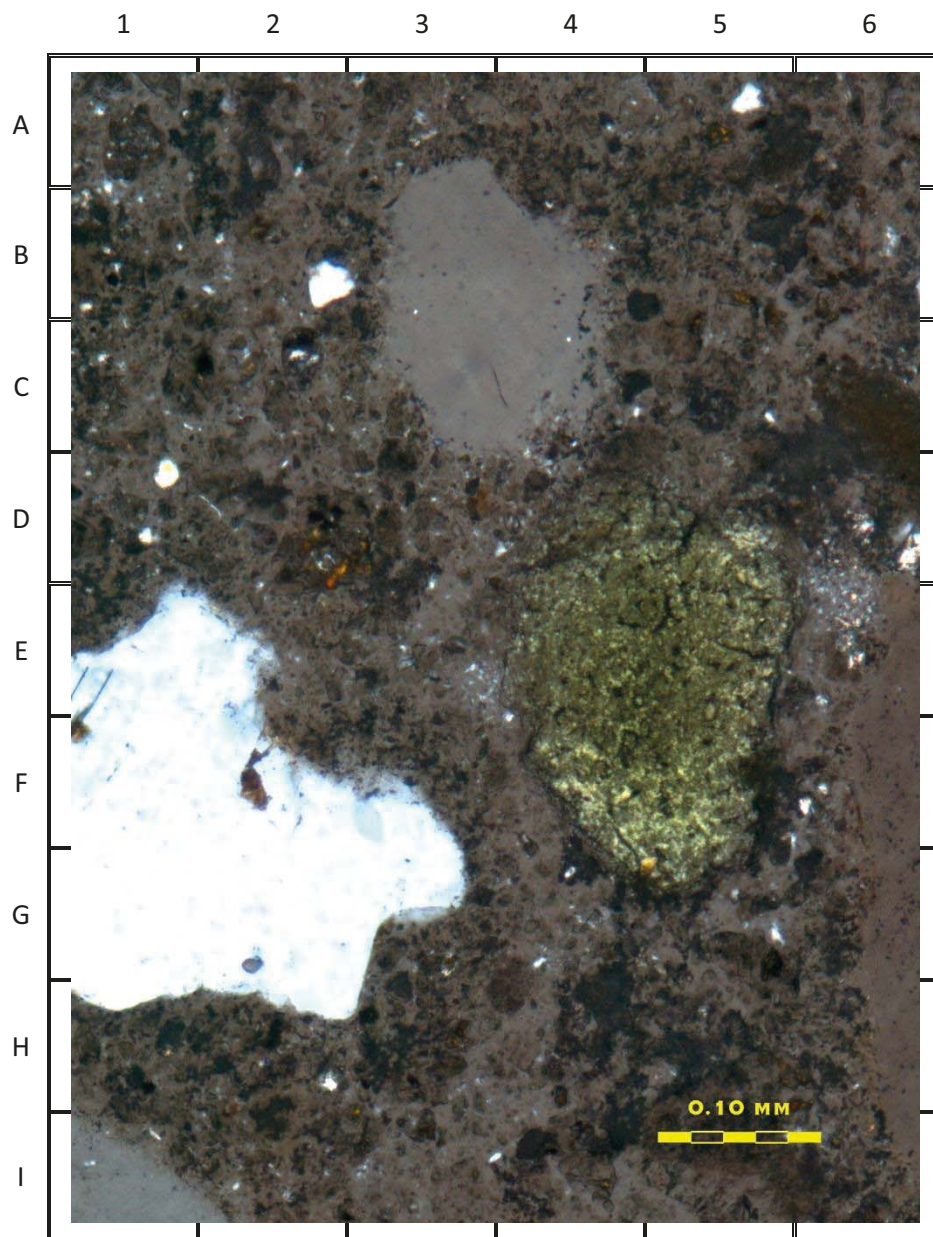


Figure C4

Sample F23112

Thin section, crossed polars: View showing an area of concrete with patchy carbonation. Areas of carbonated paste can be seen for example around B1 and G/H2. Areas of uncarbonated paste containing fine portlandite crystals can be seen for example in I6. A flint coarse aggregate particle occurs in A6. A flint fine aggregate particle occurs in D2 and particles of quartz sand are visible for example in G4/5 and I2.

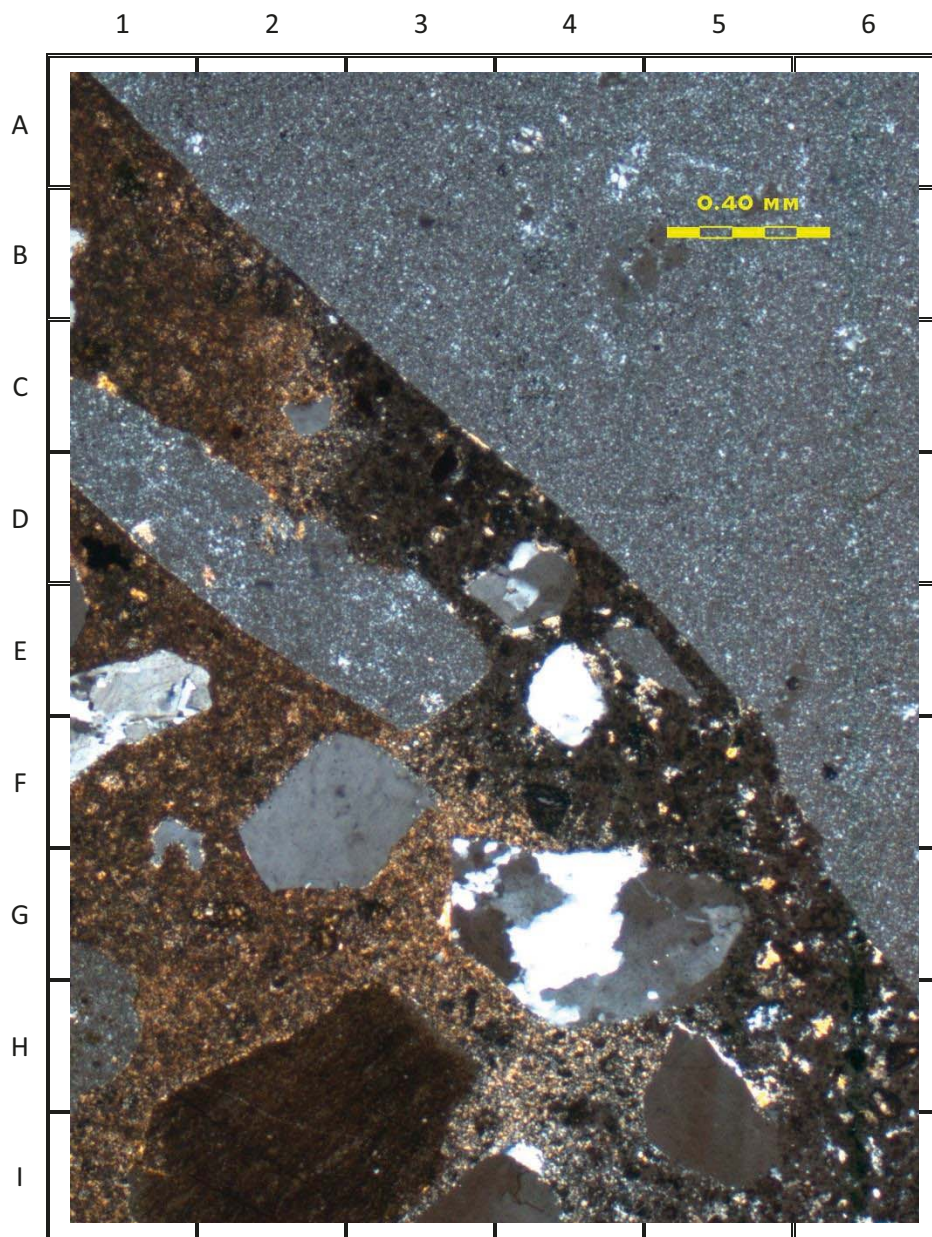


Figure C5

Sample F23112

Thin section, crossed polars: View showing the typical appearance of the uncarbonated paste in thin section. The paste contains moderate quantities of brightly coloured portlandite crystals appearing mottled yellow to orange and visible for example in C2/3 and H5. Particles of quartz sand are visible in A1 and F/G1.

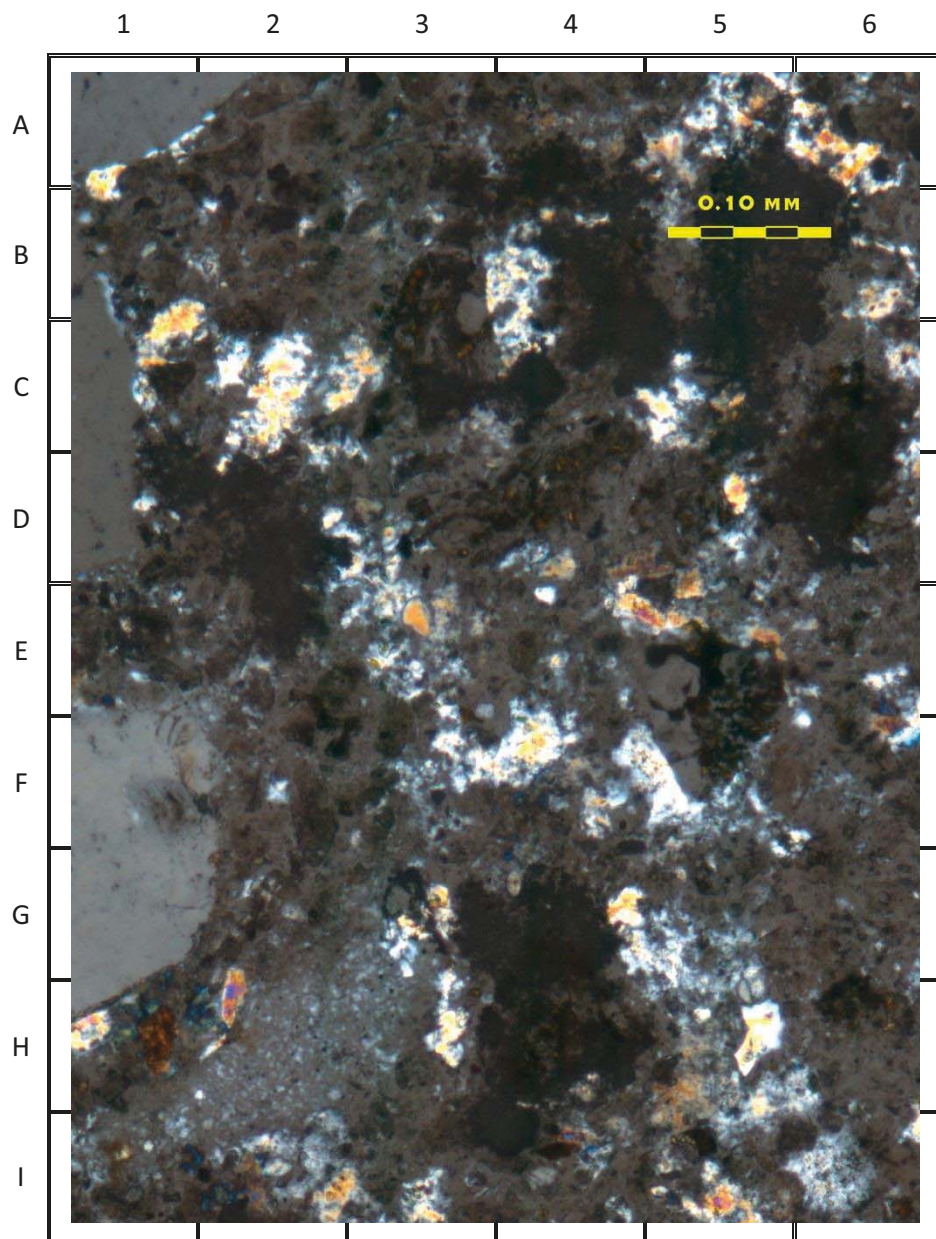
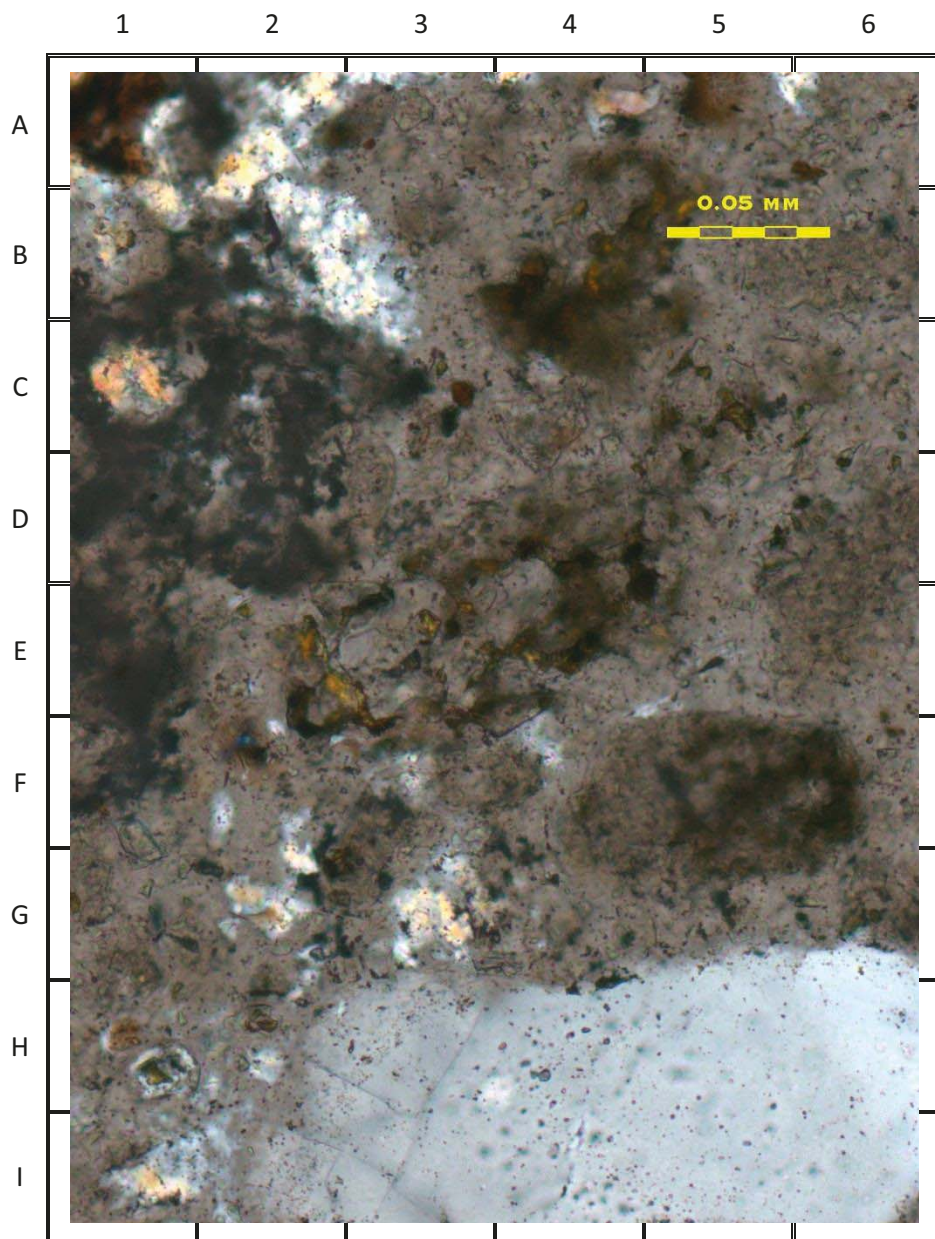


Figure C6

Sample F23112

Thin section, oblique polars: A partially hydrated Portland cement grain is visible in E3/4. Much of the field of view is occupied by Portland cement paste that is visible for example in C6 and G1/2. Portlandite crystals can be seen in A/B2. A quartz sand particle occurs in I4/5.



APPENDIX D – PETROGRAPHIC PROCEDURES AND GLOSSARY**LEVELS OF DETERIORATION**

COHERENT CONCRETE WITH NO MACROSCOPIC EVIDENCE OF DETERIORATION

1. Normal homogeneous concrete with few microcracks. Void content in keeping with the amount of paste. Paste structure in keeping with water/cement ratio. Portlandite abundance in keeping with water/cement ratio.
 2. Slight deterioration, possibly through slightly excess voidage, excess microcracking, uneven paste composition, low levels of alkali-aggregate reaction, drying shrinkage, low temperature curing, possibly slightly lean mixture.
 3. Moderately low deterioration, possibly with enhanced voidage, microcracking frequency fairly high, excessive paste porosity, evidence of leaching or other forms of secondary alteration, possible lean mixture.
-

COHERENT CONCRETE WITH MACROSCOPIC EVIDENCE OF DETERIORATION

4. Moderate deterioration, possibly with evident macrocracking or fine cracking, enhanced voidage, high frequencies of microcracking or fine cracks, evidence of significant leaching or other forms of secondary alteration, evidence of ettringite in cracks and voids, evidence of significant alkali-aggregate reaction with gel in cracks.
 5. Moderate deterioration, possibly with much fine cracking and some macrocracking, high frequency of microcracks, very high excess voidage, evidence of paste recrystallization, excessive porosity, carbonation highly penetrative, evidence of significant alkali-aggregate in some abundance.
 6. As for 5, but with enhanced level of deterioration but with concrete remaining intact.
-

CONCRETE LACKS COHERENCE AND IS FRIABLE OR READILY DECOMPOSED

7. Concrete shows deterioration and may be partly decomposed or friable. May be difficult to cut and to polish.
 8. As 7, but enhanced friability and tending to break into fragments. Loose aggregate particles, honeycombed.
 9. As 8, but enhanced deterioration. Much cracking and fragmentation.
 10. All cementitious value, coherence and strength lost.
-

1. Preliminary examination:

The samples are examined with the binocular microscope as received and their dimensions and main features are recorded. The features observed include the following.

- (a) The presence and position of reinforcement.
- (b) The extent to which reinforcement is corroded.
- (c) The nature of the external surfaces of the concrete.
- (d) The features and distribution of macro and fine cracks.
- (e) The distribution and size range and type of the aggregate.
- (f) The type and condition of the cement paste.
- (g) Any superficial evidence of deleterious processes affecting the concrete.

2. Polished surfaces:

A plate is cut, where possible, from each sample. This is typically about 20 mm thick and usually provides as large a section of the sample as is possible and typically has a polished surface area of $>100\text{cm}^2$. The plate is polished to give a high quality surface that can be examined with a high quality binocular microscope or even with the petrological microscope if necessary. The polished plate is used to assess the following.

- (a) The size, shape and distribution of coarse and fine aggregate.
- (b) The coherence, colour, and porosity of the cement paste.
- (c) The distribution, size, shape, and content of voids.
- (d) The composition of the concrete in terms of the volume proportions of coarse aggregate, fine aggregate, paste and void.
- (e) The distribution of fine cracks and microcracks. Often the surface is stained with a penetrative dye, so that these cracks can be seen. Microcrack frequency is measured along lines of traverse across the surface.
- (f) The relative abundance of rock types in the coarse aggregate is assessed.

3. Thin sections:

A thin section is prepared for each sample as appropriate. The section is usually made from a plate cut at right angles to the external surface of the concrete, so that the outer 70 mm or so of the concrete are included in the section. Sometimes it is more appropriate to make the section from inner parts of the concrete. This might be appropriate where specific problems are being investigated for example. The section normally measures about 50 x 70 mm.

In manufacturing the thin section a plate some 10 mm thick is cut from the sample. This is impregnated with a penetrative resin containing a yellow fluorescent dye. The resin penetrates into cracks, microcracks, and capillary pores in the sample. One side of the impregnated plate is then polished and the plate is mounted on to a glass slide. The surplus sample is then removed and the plate is ground and polished to give a final thickness of between 20 and 30 micrometres. At all stages the cutting and grinding is carried out using an oil based coolant in order to prevent further hydration of the cement and excessive heating of the section. The thin section is covered and then examined with a high quality Zeiss petrological photomicroscope.

The thin section supplies the following types of information:

- (a) Details of the rock types present in the coarse and fine aggregate and in particular structures seen within those rocks.
- (b) Details of the aggregate properties are measured such as the degree of strain in quartz.
- (c) The size, distribution and abundance of phases in the cement paste are assessed including, for example, the occurrence of calcium hydroxide and the amount of residual unhydrated clinker.
- (d) The presence of cement replacement phases such as slag or PFA can usually be recognised (though the amount of these phases cannot be judged accurately). The presence of high alumina cement can be detected and the type of cement clinker can often be assessed.
- (e) Any products of processes of deterioration of either the cement paste or the aggregate can be recognised.

4. Broken surfaces:

After the specially prepared surfaces and sections are completed, the remainder of the core is examined with the binocular microscope. In particular, the pieces are broken to produce fresh surfaces. These surfaces allow the contents of voids to be studied and the nature of aggregate surfaces or crack surfaces to be investigated.

5. Composition:

Where the size of the sample is appropriate the composition of the sample can be measured using either the polished slice or the thin section, depending on the size of the sample and on details of the aggregate type and paste. The thin section is preferable, for example where large quantities of dust are present. The volume proportions are found by the method of point counting using a mechanical stage. The amount of coarse aggregate can also be assessed by this method if a distinction can be made between coarse and fine aggregate. The results obtained usually represent the sample reasonably, but may not represent the concrete.

6. Water/cement ratio:

The hydration processes of cement paste vary significantly with the original water/cement ratio. Concretes with a low water/cement ratio tend to leave substantial quantities of unhydrated cement clinker and to develop only limited amounts of coarsely crystalline calcium hydroxide. In particular, the extent to which calcium hydroxide is separated into layers on aggregate surfaces and occurs in voids and on void surfaces varies with the original water/cement ratio. The number and proportion of unhydrated cement clinker particles varies inversely with the original water/cement ratio. Comparison with standard concretes made with known water/cement ratios visually, and by measurement allows the water/cement ratio of the cement paste to be assessed directly. The standard error attached to the estimation of water/cement ratio by this means is considered to be approximately ± 0.1 for unaltered concrete of similar type that in the Sandberg Reference Concrete Collection. It should be noted that aggregate dust, the presence of admixtures and additives all contribute to uncertainty in the petrographic measurement of the water/cement ratio of the concrete.

7. Glossary:

The following is a short list of technical terms in common use in the petrographic examination of concrete³.

Alkali-aggregate reaction (AAR): This is a broad term encompassing both alkali carbonate reaction (ACR) and alkali silicate reaction and alkali-silica reaction (ASR). It refers to reactions between alkalies in usually derived from the cement in the cement paste and aggregate particles. Some forms of alkali-aggregate reaction such as ASR result in the formation of an alkali-silicate gel that is readily detectable in thin sections. Other forms of alkali-carbonate reaction such as ACR may not result gel formation.

Alkali carbonate reaction (ACR): This form of reaction is very rare in the UK and there is some debate over the precise mechanism of this reaction. Most documented cases of ACR involve argillaceous, dolomitic limestone. The reaction which is expansive is rarely associated with the formation of obvious gel deposits.

Alkali-silicate/silica reaction (ASR): This is by far the most common form of AAR and generally results from reactions between either microcrystalline, cryptocrystalline, or substantially strained quartz and associated microcrystalline quartz at grain margins and alkalies in cement paste. On rare occasions, ASR may result from the presence of highly reactive opaline silica in aggregate. Petrographic examination is the definitive method for the detection of this form of concrete deterioration. The reaction commonly results in the development of cracking that originates within reactive aggregate particles and continues into the surrounding paste and gel deposits are commonly associated with the occurrence of ASR.

Calcium aluminate cement (CAC): This is a general term that encompasses high alumina cement (HAC) as well as some of the more modern aluminate cements used in rapid setting concrete repair materials or some types of sprayed concretes and grouts.

Carbonation: Carbonation most commonly results from the exposure of concrete to atmospheric carbon dioxide and results in the conversion of portlandite to calcium carbonate and also affects some of the cement hydrate phases forming complex calcium silicate hydrate carbonate compounds. In damp conditions or in concrete exposed to moisture containing dissolved carbon dioxide, coarse-textured carbonation may develop and coarse crystals of calcium carbonate may develop within the cement paste. "Popcorn" calcite deposition (PCD) is one form of this type of carbonation.

Cracking: Cracks are classified using the following terms:

- **Macroscopic cracks:** These cracks are visible in the hand specimen or with the aid of a stereo binocular microscope and are typically >0.01mm wide.
- **Macrocrack:** These are cracks that are readily visible to the naked eye without the aid of a stereo binocular microscope and are typically >0.1mm wide.
- **Fine crack:** These are cracks that are only readily visible with a stereo binocular microscope or in thin section. Cracks of this type are typically between 0.01 and 0.10mm wide.
- **Microcracking:** These cracks cannot be detected with a stereo binocular microscope. They are typically <0.01mm wide and are most easily seen in petrographic thin sections containing fluorescent dye and by using fluorescent illumination.

Delayed ettringite formation (DEF): This term describes deleterious ettringite formation in concrete that has been cured at elevated temperatures, typically >65°C. Ettringite formation resulting from this process can be readily detected using thin sections and the ettringite tends to form in peripheral cracks around aggregate surfaces and sometimes within microcracks in the paste.

³ Applied Petrography Group. A code of practice for the petrographic examination of concrete (Author M A Eden), SR2, The Geological Society of London, London, 2010 (Available for download from <http://www.appliedpetrographygroup.com>).

Drying shrinkage cracking: Drying shrinkage microcracks tend to develop radially around the surfaces of fine aggregate particles in concrete. Fine cracks and macrocracks caused by drying shrinkage tend to be parallel-sided cracks and orientated perpendicular to concrete surfaces.

Ettringite: This is a very common calcium-alumino-sulphate mineral. It occurs in most concretes where moisture ingress has occurred. Ettringite formation may be deleterious in the case of DEF or sulphate attack where it can give rise to a deleterious expansion and distinctive forms of cracking but in most cases secondary ettringite formation is non-deleterious.

Fly ash (also known as PFA / pulverised fly ash): This material is a by-product of coal burning power stations and can be readily recognised in thin sections, where it is visible as spherical glass particles, some of which may be hollow. Hollow PFA particles may be referred to as cenospheres. PFA is also commonly associated with small quantities of graphite particles that appear black in thin section.

Fine crack: See section on cracking.

GGBS: Ground, granulated blast furnace slag. This material is commonly employed as a cement replacement material in concrete and can be easily recognised in thin section. The GGBS particles are typically angular and are composed almost entirely of glass.

High alumina cement (HAC): This is a form of cement manufactured from the fusion of limestone and bauxite. It is readily distinguishable in thin section from most other types of cement. Petrographic examination is the definitive method for the detection of carbonation in concrete containing HAC.

Macrocrack: See section on cracking.

Macroscopic: This is a general term referring to features that are visible to the naked eye or with the aid of a stereo microscope.

Microcrack: See section on cracking.

Microsilica: Well dispersed microsilica cannot be directly observed in thin sections. However, distinctive clots of undispersed microsilica are commonly present in concrete containing microsilica – even where most of the microsilica is well dispersed. Microsilica clots are isotropic, and tend to be spherical and are sometimes concentrically layered. They are typically <100µm in diameter.

PFA: See section on fly ash

Plastic shrinkage cracking: This form of cracking occurs in concrete prior to its hardening. It can be distinguished from many other forms of cracking in that it results in cracks that are generally restricted to the cement paste and are non-parallel sided. Cracks of this type typically appear on the concrete surface and commonly diminish in width rapidly with depth and the paste surrounding cracks of this type is commonly of locally high porosity reflecting the migration of moisture towards the cracks during the drying out of the concrete surfaces.

Porosity: This term is distinct from void content. It refers to microscopic pores within cement hydrates. Porosity is directly related to water/cement ratio, but is also strongly influenced by curing and many forms of concrete deterioration. Porosity is sometimes used as an indicator of water/cement ratio in hardened concrete.

Portland cement: Portland cement is the most common form of binder used in concrete and is manufactured from the burning of limestone and an alumino-silicate rock (clay or shale) at temperatures of up to 1500°C. There are many forms of Portland cement and it is commonly possible to distinguish sulphate-resisting and white Portland cement and ordinary Portland cement using petrographic thin sections.

Portlandite: Portlandite is calcium hydroxide and is one of the products formed during cement hydration. Portlandite is readily recognisable in thin sections and has a distinctively high birefringence that contrasts with the much lower birefringence of the hydrated cement phases.

Sulphate attack: This is a general term encompassing both conventional sulphate attack resulting in gypsum and ettringite formation, but also includes sulphate attack associated with thaumasite formation. Sulphate attack can be readily recognised in thin sections and commonly results in the development of surface-parallel cracks infilled with ettringite or thaumasite.

Thaumasite: This is a carbonate-sulphate calcium hydrate mineral with a complex composition. It is a common reaction product in concrete exposed to moisture containing both carbonate and sulphate ions. Thaumasite is most commonly encountered in concrete exposed to temperatures of $<4^{\circ}\text{C}$. Some forms of thaumasite can be readily distinguished from ettringite and have a high birefringence. However, some forms of thaumasite have a much lower birefringence and can be difficult to distinguish from ettringite without recourse to SEM micro-analysis.

Void: This describes empty spaces present in concrete that are typically greater than about 5 micrometres in diameter. It encompasses both entrained air voids (spherical voids typically $<1\text{mm}$ in diameter) as well as much larger entrapped air voids. It should be noted that it is possible for concrete to have a low porosity, but a high void content.

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Where test results are given, the results and our conclusions relate only to the samples tested and apply to the sample(s) as received, except where sampling has been conducted by Sandberg LLP.

Materials, samples and test specimens are retained for a period of 2 months from the issue of the final report.

Tests reported on sheets not bearing the UKAS mark in this report/certificate are not included in the UKAS accredited schedule for this laboratory.

Opinions and interpretations expressed herein are outside the scope for UKAS accreditation.

End of report



15. CHEMICAL LABORATORY TEST RESULTS



2183

Final Report

Report No.:	21-40433-1		
Initial Date of Issue:	03-Dec-2021		
Client	Concept Consultants		
Client Address:	47 - 49 Brunel Road London W3 7XR		
Contact(s):	Ana Gonzalez Kasia Mazerant		
Project	21/3628 Haringey Civic Centre		
Quotation No.:	Q21-26013	Date Received:	18-Nov-2021
Order No.:	CL3334	Date Instructed:	29-Nov-2021
No. of Samples:	4		
Turnaround (Wkdays):	5	Results Due:	03-Dec-2021
Date Approved:	03-Dec-2021		

Approved By:



Details: Glynn Harvey, Technical Manager

Results - Soil

Project: 21/3628 Haringey Civic Centre

Client: Concept Consultants	Chemtest Job No.:				21-40433	21-40433	21-40433	21-40433
Quotation No.: Q21-26013	Chemtest Sample ID.:				1321978	1321980	1321981	1321982
	Sample Location:				BH04	BH04	BH05	BH05
	Sample Type:				SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.30	1.00	0.30	0.50
	Date Sampled:				16-Nov-2021	16-Nov-2021	16-Nov-2021	16-Nov-2021
	Asbestos Lab:				DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD				
ACM Type	U	2192		N/A	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	8.1	20	15	23
pH	U	2010		4.0	9.2	8.9	8.8	8.4
Boron (Hot Water Soluble)	U	2120	mg/kg	0.40	1.1	1.2	0.77	1.1
Cyanide (Total)	U	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Arsenic	U	2450	mg/kg	1.0	32	13	15	12
Cadmium	U	2450	mg/kg	0.10	< 0.10	0.10	0.11	< 0.10
Chromium	U	2450	mg/kg	1.0	30	39	19	49
Copper	U	2450	mg/kg	0.50	240	32	47	22
Mercury	U	2450	mg/kg	0.10	< 0.10	< 0.10	0.13	0.11
Nickel	U	2450	mg/kg	0.50	42	30	15	29
Lead	U	2450	mg/kg	0.50	310	45	460	52
Selenium	U	2450	mg/kg	0.20	< 0.20	0.25	< 0.20	0.24
Zinc	U	2450	mg/kg	0.50	210	67	120	62
Organic Matter	U	2625	%	0.40	5.2	1.4	0.69	0.52
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	U	2680	mg/kg	1.0	39	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	U	2680	mg/kg	1.0	74	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	U	2680	mg/kg	1.0	48	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	160	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	U	2680	mg/kg	1.0	4.1	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	U	2680	mg/kg	1.0	57	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	290	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	U	2680	mg/kg	1.0	1400	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	270	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	2000	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	2200	< 10	< 10	< 10
Naphthalene	U	2800	mg/kg	0.10	2.6	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	8.8	< 0.10	< 0.10	< 0.10
Acenaphthene	U	2800	mg/kg	0.10	11	< 0.10	< 0.10	< 0.10

Results - Soil

Project: 21/3628 Haringey Civic Centre

Client: Concept Consultants	Chemtest Job No.:				21-40433	21-40433	21-40433	21-40433
Quotation No.: Q21-26013	Chemtest Sample ID.:				1321978	1321980	1321981	1321982
	Sample Location:				BH04	BH04	BH05	BH05
	Sample Type:				SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.30	1.00	0.30	0.50
	Date Sampled:				16-Nov-2021	16-Nov-2021	16-Nov-2021	16-Nov-2021
	Asbestos Lab:				DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD				
Fluorene	U	2800	mg/kg	0.10	9.0	< 0.10	< 0.10	< 0.10
Phenanthrene	U	2800	mg/kg	0.10	72	0.60	0.85	0.20
Anthracene	U	2800	mg/kg	0.10	24	0.30	0.33	< 0.10
Fluoranthene	U	2800	mg/kg	0.10	130	1.5	2.7	0.41
Pyrene	U	2800	mg/kg	0.10	110	1.4	2.6	0.34
Benzo[a]anthracene	U	2800	mg/kg	0.10	66	0.83	1.5	0.19
Chrysene	U	2800	mg/kg	0.10	58	0.74	1.5	0.21
Benzo[b]fluoranthene	U	2800	mg/kg	0.10	87	1.4	2.7	< 0.10
Benzo[k]fluoranthene	U	2800	mg/kg	0.10	33	0.56	0.81	< 0.10
Benzo[a]pyrene	U	2800	mg/kg	0.10	71	1.3	2.1	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	2800	mg/kg	0.10	62	1.3	2.3	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	10	0.29	0.41	< 0.10
Benzo[g,h,i]perylene	U	2800	mg/kg	0.10	51	0.97	1.8	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	810	11	20	< 2.0

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenzo[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at the indicated laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container
- E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.com



Amended Report

Report No.:	21-41805-2		
Initial Date of Issue:	07-Dec-2021	Date of Re-Issue:	17-Dec-2021
Client	Concept Consultants		
Client Address:	Unit 8 Warple Mews Warple Way London W3 0RF		
Contact(s):	Ana Gonzalez Kasia Mazerant		
Project	21/3628 Haringey Civic Centre		
Quotation No.:	Q21-26013	Date Received:	29-Nov-2021
Order No.:	CL3340	Date Instructed:	29-Nov-2021
No. of Samples:	25		
Turnaround (Wkdays):	12	Results Due:	14-Dec-2021
Date Approved:	13-Dec-2021		
Approved By:			
Details:	Glynn Harvey, Technical Manager		

Results - Soil

Project: 21/3628 Haringey Civic Centre

Client: Concept Consultants	Chemtest Job No.:					21-41805	21-41805	21-41805	21-41805	21-41805	21-41805	21-41805	21-41805	21-41805
Quotation No.: Q21-26013	Chemtest Sample ID.:					1329105	1329106	1329107	1329108	1329109	1329110	1329111	1329112	1329113
	Sample Location:					WS06	WS06	BH03	BH03	BH06	BH06	WS05	WS05	WS04
	Sample Type:					SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):					0.30	0.70	0.00	0.60	0.00	0.60	0.30	0.60	0.00
	Bottom Depth (m):					0.50	0.90	0.50	1.20	0.50	1.00	0.45	1.00	0.50
	Date Sampled:					17-Nov-2021	17-Nov-2021	19-Nov-2021	19-Nov-2021	19-Nov-2021	19-Nov-2021	19-Nov-2021	19-Nov-2021	19-Nov-2021
	Asbestos Lab:					DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD										
ACM Type	U	2192		N/A	-	-	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	15	15	18	16	18	20	14	27	11	
pH	M	2010		4.0	8.0	8.3	8.3	8.2	8.3	8.4	8.4	8.3	8.7	
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	1.5	1.2	1.6	1.3	0.89	< 0.40	0.43	< 0.40	< 0.40	
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	
Arsenic	M	2450	mg/kg	1.0	15	18	23	14	20	25	18	11	17	
Cadmium	M	2450	mg/kg	0.10	0.20	0.32	0.48	0.21	0.39	0.15	< 0.10	< 0.10	0.28	
Chromium	M	2450	mg/kg	1.0	19	29	27	31	36	48	30	46	23	
Copper	M	2450	mg/kg	0.50	51	45	50	33	35	27	69	22	41	
Mercury	M	2450	mg/kg	0.10	1.4	0.86	0.44	0.57	0.25	0.13	0.12	< 0.10	0.40	
Nickel	M	2450	mg/kg	0.50	21	30	24	20	32	68	24	21	20	
Lead	M	2450	mg/kg	0.50	370	180	230	140	180	34	180	36	160	
Selenium	M	2450	mg/kg	0.20	< 0.20	0.62	0.35	0.56	0.57	5.1	< 0.20	< 0.20	0.36	
Zinc	M	2450	mg/kg	0.50	110	180	150	92	110	66	110	56	87	
Organic Matter	M	2625	%	0.40	4.0	3.1	6.9	2.9	3.5	1.0	1.2	1.0	5.7	
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	34	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	68	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	47	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	250	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	400	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	580	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	2400	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	6600	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	1300	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	11000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	11000	< 10	< 10	< 10	< 10	< 10	< 10	< 10	
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.14	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	0.30	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	

Results - Soil

Project: 21/3628 Haringey Civic Centre

Client: Concept Consultants	Chemtest Job No.:					21-41805	21-41805	21-41805	21-41805	21-41805	21-41805	21-41805	21-41805
Quotation No.: Q21-26013	Chemtest Sample ID.:					1329105	1329106	1329107	1329108	1329109	1329110	1329111	1329112
	Sample Location:					WS06	WS06	BH03	BH03	BH06	BH06	WS05	WS05
	Sample Type:					SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):					0.30	0.70	0.00	0.60	0.00	0.60	0.30	0.60
	Bottom Depth (m):					0.50	0.90	0.50	1.20	0.50	1.00	0.45	1.00
	Date Sampled:					17-Nov-2021	17-Nov-2021	19-Nov-2021	19-Nov-2021	19-Nov-2021	19-Nov-2021	19-Nov-2021	19-Nov-2021
	Asbestos Lab:					DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD									
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.17	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.11	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	0.34	1.9	1.6	< 0.10	0.46	< 0.10	1.8	< 0.10	0.38
Anthracene	M	2800	mg/kg	0.10	0.24	0.45	0.39	< 0.10	0.31	< 0.10	0.52	< 0.10	0.17
Fluoranthene	M	2800	mg/kg	0.10	1.1	4.4	4.9	0.95	2.0	0.16	4.4	0.46	1.2
Pyrene	M	2800	mg/kg	0.10	1.1	3.7	4.2	0.84	1.7	0.12	4.0	0.40	1.1
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.51	2.2	2.4	0.41	1.2	< 0.10	2.4	< 0.10	0.56
Chrysene	M	2800	mg/kg	0.10	0.62	2.3	2.5	0.46	1.0	< 0.10	2.3	< 0.10	0.58
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	1.1	3.1	3.5	0.71	1.7	< 0.10	3.4	< 0.10	0.95
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.38	1.0	1.1	0.35	0.94	< 0.10	1.3	< 0.10	0.43
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.91	2.0	2.8	0.59	1.2	< 0.10	2.4	< 0.10	0.71
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	1.0	1.7	2.5	0.62	2.7	< 0.10	2.5	< 0.10	0.57
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.20	0.29	0.21	0.19	2.7	< 0.10	0.63	< 0.10	0.27
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.82	1.3	2.2	0.46	1.9	< 0.10	2.0	< 0.10	0.60
Total Of 16 PAH's	N	2800	mg/kg	2.0	8.3	24	29	5.6	18	< 2.0	28	< 2.0	7.5
PCB 28	U	2815	mg/kg	0.010							< 0.010	< 0.010	
PCB 52	U	2815	mg/kg	0.010							< 0.010	< 0.010	
PCB 90+101	U	2815	mg/kg	0.010							< 0.010	< 0.010	
PCB 118	U	2815	mg/kg	0.010							< 0.010	< 0.010	
PCB 153	U	2815	mg/kg	0.010							< 0.010	< 0.010	
PCB 138	U	2815	mg/kg	0.010							< 0.010	< 0.010	
PCB 180	U	2815	mg/kg	0.010							< 0.010	< 0.010	
Total PCBs (7 Congeners)	U	2815	mg/kg	0.10							< 0.10	< 0.10	

Results - Soil

Project: 21/3628 Haringey Civic Centre

Client: Concept Consultants	Chemtest Job No.:				21-41805	21-41805	21-41805	21-41805	21-41805	21-41805	21-41805	21-41805	21-41805
Quotation No.: Q21-26013	Chemtest Sample ID.:				1329114	1329115	1329117	1329118	1329120	1329121	1329123	1329124	1329125
	Sample Location:				WS04	WS01	WS01	WS02	WS02B	WS02B	WS03	WS03	WS07
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.60	0.30	1.20	0.30	0.30	0.70	0.00	0.60	0.30
	Bottom Depth (m):				1.00						0.50	1.20	0.50
	Date Sampled:				19-Nov-2021	18-Nov-2021	18-Nov-2021	18-Nov-2021	18-Nov-2021	18-Nov-2021	19-Nov-2021	19-Nov-2021	17-Nov-2021
	Asbestos Lab:				DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD									
ACM Type	U	2192		N/A	-	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	23	15	19	14	4.6	19	18	20	9.6
pH	M	2010		4.0	9.1	8.9	8.6	8.4	8.4	8.1	8.4	8.3	8.3
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40	0.89	0.65	0.82	0.49	< 0.40	0.62	1.9	0.84
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Arsenic	M	2450	mg/kg	1.0	13	16	11	39	10	17	15	9.7	14
Cadmium	M	2450	mg/kg	0.10	0.19	0.24	0.18	0.66	0.20	0.16	0.24	0.18	0.19
Chromium	M	2450	mg/kg	1.0	48	24	49	33	41	44	25	40	25
Copper	M	2450	mg/kg	0.50	25	39	56	97	53	39	26	22	30
Mercury	M	2450	mg/kg	0.10	< 0.10	0.43	1.3	5.4	0.69	0.80	0.47	0.14	0.36
Nickel	M	2450	mg/kg	0.50	69	15	29	33	25	35	21	31	22
Lead	M	2450	mg/kg	0.50	20	160	240	670	270	150	400	34	380
Selenium	M	2450	mg/kg	0.20	0.49	0.64	0.24	0.85	0.20	0.69	0.25	0.31	0.23
Zinc	M	2450	mg/kg	0.50	65	240	160	380	160	100	180	72	130
Organic Matter	M	2625	%	0.40	0.69	15	14	15	9.7	4.1	1.9	1.2	2.8
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	26	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	140	< 1.0	17	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	170	< 5.0	17	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	74	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	180	75	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	120	1400	510	5.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	1100	2100	53	110	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	220	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	120	2800	2900	58	110	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	120	2800	3100	58	120	< 10	< 10
Naphthalene	M	2800	mg/kg	0.10	< 0.10	0.37	< 0.10	0.62	0.73	< 0.10	< 0.10	< 0.10	0.14
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	0.52	< 0.10	1.6	6.3	< 0.10	< 0.10	< 0.10	0.29

Results - Soil

Project: 21/3628 Haringey Civic Centre

Client: Concept Consultants	Chemtest Job No.:				21-41805	21-41805	21-41805	21-41805	21-41805	21-41805	21-41805	21-41805	21-41805
Quotation No.: Q21-26013	Chemtest Sample ID.:				1329114	1329115	1329117	1329118	1329120	1329121	1329123	1329124	1329125
	Sample Location:				WS04	WS01	WS01	WS02	WS02B	WS02B	WS03	WS03	WS07
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.60	0.30	1.20	0.30	0.30	0.70	0.00	0.60	0.30
	Bottom Depth (m):				1.00						0.50	1.20	0.50
	Date Sampled:				19-Nov-2021	18-Nov-2021	18-Nov-2021	18-Nov-2021	18-Nov-2021	18-Nov-2021	19-Nov-2021	19-Nov-2021	17-Nov-2021
	Asbestos Lab:				DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD									
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	0.49	< 0.10	0.88	1.1	< 0.10	< 0.10	< 0.10	0.34
Fluorene	M	2800	mg/kg	0.10	< 0.10	0.52	< 0.10	1.4	1.9	< 0.10	< 0.10	< 0.10	0.23
Phenanthrene	M	2800	mg/kg	0.10	< 0.10	7.0	< 0.10	16	36	< 0.10	< 0.10	< 0.10	2.8
Anthracene	M	2800	mg/kg	0.10	< 0.10	1.7	< 0.10	3.6	12	< 0.10	< 0.10	< 0.10	0.81
Fluoranthene	M	2800	mg/kg	0.10	< 0.10	13	< 0.10	24	96	2.4	1.6	0.27	5.7
Pyrene	M	2800	mg/kg	0.10	< 0.10	11	< 0.10	20	94	2.5	1.5	0.24	5.3
Benzo[a]anthracene	M	2800	mg/kg	0.10	< 0.10	6.1	< 0.10	11	48	1.4	1.1	0.13	3.1
Chrysene	M	2800	mg/kg	0.10	< 0.10	6.3	< 0.10	9.8	39	1.4	1.3	0.13	2.7
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10	8.2	< 0.10	13	56	2.1	< 0.10	0.27	4.5
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10	3.4	< 0.10	4.9	22	0.97	< 0.10	0.11	1.7
Benzo[a]pyrene	M	2800	mg/kg	0.10	< 0.10	6.5	< 0.10	10	47	1.7	< 0.10	0.16	3.7
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	4.8	< 0.10	7.3	34	< 0.10	< 0.10	< 0.10	2.9
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	1.0	< 0.10	1.4	7.6	< 0.10	< 0.10	< 0.10	0.50
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	4.3	< 0.10	6.1	30	< 0.10	< 0.10	< 0.10	2.6
Total Of 16 PAH's	N	2800	mg/kg	2.0	< 2.0	75	< 2.0	130	530	13	5.4	< 2.0	37
PCB 28	U	2815	mg/kg	0.010									
PCB 52	U	2815	mg/kg	0.010									
PCB 90+101	U	2815	mg/kg	0.010									
PCB 118	U	2815	mg/kg	0.010									
PCB 153	U	2815	mg/kg	0.010									
PCB 138	U	2815	mg/kg	0.010									
PCB 180	U	2815	mg/kg	0.010									
Total PCBs (7 Congeners)	U	2815	mg/kg	0.10									

Results - Soil

Project: 21/3628 Haringey Civic Centre

Client: Concept Consultants	Chemtest Job No.:					21-41805	21-41805	21-41805	21-41805	21-41805	21-41805	21-41805
Quotation No.: Q21-26013	Chemtest Sample ID.:					1329126	1329127	1329128	1329129	1329130	1329131	1329133
	Sample Location:					WS07	WS08	TP02	TP03	TP04	TP05	TP06
	Sample Type:					SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):					0.70	0.00	0.60	0.75	0.90	0.00	0.23
	Bottom Depth (m):					0.90	1.20	0.80	1.10	1.35	0.50	0.45
	Date Sampled:					17-Nov-2021	18-Nov-2021	19-Nov-2021	22-Nov-2021	22-Nov-2021	19-Nov-2021	17-Nov-2021
	Asbestos Lab:					DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD								
ACM Type	U	2192		N/A	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	14	19	19	3.9	8.2	84	14	
pH	M	2010		4.0	8.4	8.2	9.0	8.9	8.6	7.7	7.8	
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	0.98	0.70	0.99	0.60	0.50	0.81	0.62	
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	
Arsenic	M	2450	mg/kg	1.0	20	15	19	6.1	15	15	17	
Cadmium	M	2450	mg/kg	0.10	0.18	0.13	0.13	< 0.10	< 0.10	0.37	0.21	
Chromium	M	2450	mg/kg	1.0	37	36	37	16	29	27	23	
Copper	M	2450	mg/kg	0.50	39	26	25	6.6	16	42	31	
Mercury	M	2450	mg/kg	0.10	0.41	0.28	0.29	< 0.10	0.51	0.54	0.34	
Nickel	M	2450	mg/kg	0.50	31	31	38	12	22	23	20	
Lead	M	2450	mg/kg	0.50	170	240	100	16	280	300	120	
Selenium	M	2450	mg/kg	0.20	0.66	0.38	0.39	< 0.20	0.31	0.42	0.27	
Zinc	M	2450	mg/kg	0.50	85	79	69	23	58	130	90	
Organic Matter	M	2625	%	0.40	3.3	1.2	1.0	< 0.40	0.69	3.1	1.9	
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	130	110	120	< 1.0	< 1.0	
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	130	110	120	< 5.0	< 5.0	
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	130	110	120	< 10	< 10	
Naphthalene	M	2800	mg/kg	0.10	0.13	< 0.10	< 0.10	0.40	< 0.10	< 0.10	< 0.10	
Acenaphthylene	N	2800	mg/kg	0.10	0.15	< 0.10	< 0.10	0.16	< 0.10	< 0.10	< 0.10	

Results - Soil

Project: 21/3628 Haringey Civic Centre

Client: Concept Consultants	Chemtest Job No.:				21-41805	21-41805	21-41805	21-41805	21-41805	21-41805	21-41805
Quotation No.: Q21-26013	Chemtest Sample ID.:				1329126	1329127	1329128	1329129	1329130	1329131	1329133
	Sample Location:				WS07	WS08	TP02	TP03	TP04	TP05	TP06
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.70	0.00	0.60	0.75	0.90	0.00	0.23
	Bottom Depth (m):				0.90	1.20	0.80	1.10	1.35	0.50	0.45
	Date Sampled:				17-Nov-2021	18-Nov-2021	19-Nov-2021	22-Nov-2021	22-Nov-2021	19-Nov-2021	17-Nov-2021
	Asbestos Lab:				DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD							
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.33	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	0.12	< 0.10	< 0.10	0.14	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	1.0	0.48	0.24	6.1	< 0.10	< 0.10	< 0.10
Anthracene	M	2800	mg/kg	0.10	0.25	0.34	0.10	1.1	< 0.10	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	1.8	1.2	0.58	6.7	0.17	0.82	0.34
Pyrene	M	2800	mg/kg	0.10	1.6	0.99	0.51	5.7	0.19	0.77	0.29
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.89	0.55	0.27	3.2	0.12	0.47	0.22
Chrysene	M	2800	mg/kg	0.10	0.88	0.50	0.31	3.1	0.11	0.42	0.19
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	1.4	0.72	0.44	5.1	< 0.10	0.60	0.23
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.50	0.29	0.15	1.8	< 0.10	0.19	0.13
Benzo[a]pyrene	M	2800	mg/kg	0.10	1.2	0.53	0.38	4.1	< 0.10	0.50	0.18
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.95	0.41	< 0.10	3.4	< 0.10	0.38	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.18	< 0.10	< 0.10	0.65	< 0.10	0.12	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.85	0.36	< 0.10	3.1	< 0.10	0.33	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	12	6.4	3.0	45	< 2.0	4.6	< 2.0
PCB 28	U	2815	mg/kg	0.010							
PCB 52	U	2815	mg/kg	0.010							
PCB 90+101	U	2815	mg/kg	0.010							
PCB 118	U	2815	mg/kg	0.010							
PCB 153	U	2815	mg/kg	0.010							
PCB 138	U	2815	mg/kg	0.010							
PCB 180	U	2815	mg/kg	0.010							
Total PCBs (7 Congeners)	U	2815	mg/kg	0.10							

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenzo[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2815	Polychlorinated Biphenyls (PCB) ICES7Congeners in Soils by GC-MS	ICES7 PCB congeners	Acetone/Hexane extraction / GC-MS

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at the indicated laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container
- E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.com



2183

Final Report

Report No.:	21-41863-1		
Initial Date of Issue:	07-Dec-2021		
Client	Concept Consultants		
Client Address:	47 - 49 Brunel Road London W3 7XR		
Contact(s):	Ana Gonzalez Kasia Mazerant		
Project	21/3628 Haringey Civic Centre		
Quotation No.:	Q21-26013	Date Received:	29-Nov-2021
Order No.:	CL3347	Date Instructed:	01-Dec-2021
No. of Samples:	6		
Turnaround (Wkdays):	5	Results Due:	07-Dec-2021
Date Approved:	07-Dec-2021		

Approved By:



Details: Glynn Harvey, Technical Manager

Results - Soil

Project: 21/3628 Haringey Civic Centre

Client: Concept Consultants	Chemtest Job No.:					21-41863	21-41863	21-41863	21-41863	21-41863	21-41863
Quotation No.: Q21-26013	Chemtest Sample ID.:					1329345	1329349	1329350	1329351	1329353	1329354
	Sample Location:					WS06	WS03	WS09	WS09	WS10	WS10
	Sample Type:					SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):					2.00	2.00	1.55	1.25	1.40	2.20
	Bottom Depth (m):					2.20	2.20	1.90	1.45	1.60	2.50
	Date Sampled:					24-Nov-2021	25-Nov-2021	25-Nov-2021	25-Nov-2021	25-Nov-2021	25-Nov-2021
	Asbestos Lab:							COVENTRY	COVENTRY	COVENTRY	
Determinand	Accred.	SOP	Units	LOD							
ACM Type	U	2192		N/A				-	-	-	
Asbestos Identification	U	2192		N/A				No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	
Moisture	N	2030	%	0.020	4.8	3.7	1.1	2.3	2.5	4.5	
pH	U	2010		4.0	8.4	8.5	10.1	9.2	9.0	9.0	
Boron (Hot Water Soluble)	U	2120	mg/kg	0.40	< 0.40	< 0.40	0.47	0.90	< 0.40	0.55	
Cyanide (Total)	U	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	
Arsenic	U	2450	mg/kg	1.0	13	9.4	9.4	13	12	8.5	
Cadmium	U	2450	mg/kg	0.10	0.10	0.10	< 0.10	0.40	0.15	0.16	
Chromium	U	2450	mg/kg	1.0	47	56	16	30	34	43	
Copper	U	2450	mg/kg	0.50	45	59	62	150	80	53	
Mercury	U	2450	mg/kg	0.10	< 0.10	< 0.10	1.4	1.0	0.68	< 0.10	
Nickel	U	2450	mg/kg	0.50	43	46	17	26	29	36	
Lead	U	2450	mg/kg	0.50	32	20	86	230	280	21	
Selenium	U	2450	mg/kg	0.20	0.41	0.36	0.31	0.34	< 0.20	< 0.20	
Zinc	U	2450	mg/kg	0.50	71	78	39	130	92	53	
Organic Matter	U	2625	%	0.40			3.1	3.1	0.69		
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aliphatic TPH >C8-C10	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aliphatic TPH >C10-C12	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aliphatic TPH >C12-C16	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aliphatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aliphatic TPH >C21-C35	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	140	< 1.0	< 1.0	< 1.0	
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	140	< 5.0	< 5.0	< 5.0	
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aromatic TPH >C8-C10	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Aromatic TPH >C10-C12	U	2680	mg/kg	1.0	< 1.0	< 1.0	23	< 1.0	< 1.0	< 1.0	
Aromatic TPH >C12-C16	U	2680	mg/kg	1.0	< 1.0	< 1.0	450	< 1.0	< 1.0	< 1.0	
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	1300	< 1.0	< 1.0	< 1.0	
Aromatic TPH >C21-C35	U	2680	mg/kg	1.0	< 1.0	< 1.0	4000	< 1.0	< 1.0	< 1.0	
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	220	< 1.0	< 1.0	< 1.0	
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	5900	< 5.0	< 5.0	< 5.0	
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	6100	< 10	< 10	< 10	
Naphthalene	U	2800	mg/kg	0.10	< 0.10	< 0.10	4.6	0.37	< 0.10	< 0.10	
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	0.51	0.17	< 0.10	< 0.10	

Results - Soil

Project: 21/3628 Haringey Civic Centre

Client: Concept Consultants	Chemtest Job No.:					21-41863	21-41863	21-41863	21-41863	21-41863	21-41863
Quotation No.: Q21-26013	Chemtest Sample ID.:					1329345	1329349	1329350	1329351	1329353	1329354
	Sample Location:					WS06	WS03	WS09	WS09	WS10	WS10
	Sample Type:					SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):					2.00	2.00	1.55	1.25	1.40	2.20
	Bottom Depth (m):					2.20	2.20	1.90	1.45	1.60	2.50
	Date Sampled:					24-Nov-2021	25-Nov-2021	25-Nov-2021	25-Nov-2021	25-Nov-2021	25-Nov-2021
	Asbestos Lab:							COVENTRY	COVENTRY	COVENTRY	
Determinand	Accred.	SOP	Units	LOD							
Acenaphthene	U	2800	mg/kg	0.10	< 0.10	< 0.10	14	1.1	< 0.10	< 0.10	
Fluorene	U	2800	mg/kg	0.10	< 0.10	< 0.10	10	0.79	< 0.10	< 0.10	
Phenanthrene	U	2800	mg/kg	0.10	0.41	< 0.10	99	10	3.3	0.62	
Anthracene	U	2800	mg/kg	0.10	0.36	< 0.10	30	2.5	0.83	0.37	
Fluoranthene	U	2800	mg/kg	0.10	0.94	< 0.10	110	13	5.8	1.2	
Pyrene	U	2800	mg/kg	0.10	0.95	< 0.10	92	10	4.9	1.1	
Benzo[a]anthracene	U	2800	mg/kg	0.10	0.98	< 0.10	55	5.3	2.6	0.95	
Chrysene	U	2800	mg/kg	0.10	0.89	< 0.10	45	4.7	2.6	0.91	
Benzo[b]fluoranthene	U	2800	mg/kg	0.10	1.1	< 0.10	59	5.8	3.4	0.90	
Benzo[k]fluoranthene	U	2800	mg/kg	0.10	0.90	< 0.10	24	2.4	1.2	0.54	
Benzo[a]pyrene	U	2800	mg/kg	0.10	1.0	< 0.10	50	5.2	2.7	0.74	
Indeno(1,2,3-c,d)Pyrene	U	2800	mg/kg	0.10	0.97	< 0.10	35	3.5	2.1	0.50	
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.97	< 0.10	6.7	0.53	0.56	0.35	
Benzo[g,h,i]perylene	U	2800	mg/kg	0.10	1.1	< 0.10	28	3.0	1.9	0.59	
Total Of 16 PAH's	N	2800	mg/kg	2.0	11	< 2.0	660	68	32	8.8	

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenzo[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
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SOP	Standard operating procedure
LOD	Limit of detection

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The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at the indicated laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container
- E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.com



2183

Final Report

Report No.:	21-42219-1		
Initial Date of Issue:	13-Dec-2021		
Client	Concept Consultants		
Client Address:	47 - 49 Brunel Road London W3 7XR		
Contact(s):	Ana Gonzalez Kasia Mazerant		
Project	21/3628 Haringey Civic Centre		
Quotation No.:	Q21-26013	Date Received:	01-Dec-2021
Order No.:	CL3360	Date Instructed:	07-Dec-2021
No. of Samples:	2		
Turnaround (Wkdays):	5	Results Due:	13-Dec-2021
Date Approved:	13-Dec-2021		
Approved By:			
Details:	Glynn Harvey, Technical Manager		

Results - Soil

Project: 21/3628 Haringey Civic Centre

Client: Concept Consultants	Chemtest Job No.: 21-42219					21-42219
Quotation No.: Q21-26013	Chemtest Sample ID.: 1330656					1330659
	Sample Location:					WS02B
	Sample Type:					SOIL
	Top Depth (m):					2.00
	Bottom Depth (m):					1.20
	Date Sampled:					29-Nov-2021
						30-Nov-2021
Determinand	Accred.	SOP	Units	LOD		
Moisture	N	2030	%	0.020	12	13
pH	U	2010		4.0	7.8	7.9
Boron (Hot Water Soluble)	U	2120	mg/kg	0.40	0.50	1.4
Cyanide (Total)	U	2300	mg/kg	0.50	< 0.50	< 0.50
Arsenic	U	2450	mg/kg	1.0	13	13
Cadmium	U	2450	mg/kg	0.10	< 0.10	< 0.10
Chromium	U	2450	mg/kg	1.0	43	43
Copper	U	2450	mg/kg	0.50	28	16
Mercury	U	2450	mg/kg	0.10	< 0.10	< 0.10
Nickel	U	2450	mg/kg	0.50	49	19
Lead	U	2450	mg/kg	0.50	16	26
Selenium	U	2450	mg/kg	0.20	0.80	0.56
Zinc	U	2450	mg/kg	0.50	82	91
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	U	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	U	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	U	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	U	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	U	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	U	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	U	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	U	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10
Naphthalene	U	2800	mg/kg	0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10
Acenaphthene	U	2800	mg/kg	0.10	< 0.10	< 0.10
Fluorene	U	2800	mg/kg	0.10	< 0.10	< 0.10
Phenanthrene	U	2800	mg/kg	0.10	< 0.10	< 0.10
Anthracene	U	2800	mg/kg	0.10	< 0.10	< 0.10
Fluoranthene	U	2800	mg/kg	0.10	< 0.10	0.21

Results - Soil

Project: 21/3628 Haringey Civic Centre

Client: Concept Consultants	Chemtest Job No.:				21-42219	21-42219
Quotation No.: Q21-26013	Chemtest Sample ID.:				1330656	1330659
	Sample Location:				WS02B	WS08
	Sample Type:				SOIL	SOIL
	Top Depth (m):				2.00	1.20
	Bottom Depth (m):				2.20	1.40
	Date Sampled:				29-Nov-2021	30-Nov-2021
Determinand	Accred.	SOP	Units	LOD		
Pyrene	U	2800	mg/kg	0.10	< 0.10	0.18
Benzo[a]anthracene	U	2800	mg/kg	0.10	< 0.10	0.11
Chrysene	U	2800	mg/kg	0.10	< 0.10	0.11
Benzo[b]fluoranthene	U	2800	mg/kg	0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	U	2800	mg/kg	0.10	< 0.10	< 0.10
Benzo[a]pyrene	U	2800	mg/kg	0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	2800	mg/kg	0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	U	2800	mg/kg	0.10	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	< 2.0	< 2.0

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenzo[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at the indicated laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container
- E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.com



2183

Final Report

Report No.:	21-43106-1		
Initial Date of Issue:	13-Dec-2021		
Client	Concept Consultants		
Client Address:	Unit D, Herald Way Binley Industrial Estate Coventry CV3 2RQ		
Contact(s):	Ana Gonzalez Kasia Mazerant		
Project	21/3628 Haringey Civic Centre		
Quotation No.:	Q21-26013	Date Received:	07-Dec-2021
Order No.:	CL3373	Date Instructed:	07-Dec-2021
No. of Samples:	2		
Turnaround (Wkdays):	5	Results Due:	13-Dec-2021
Date Approved:	13-Dec-2021		
Approved By:			
Details:	Glynn Harvey, Technical Manager		

Results - Soil

Project: 21/3628 Haringey Civic Centre

Client: Concept Consultants	Chemtest Job No.:				21-43106	21-43106
Quotation No.: Q21-26013	Chemtest Sample ID.:				1334886	1334887
	Sample Location:				BH01	BH01
	Sample Type:				SOIL	SOIL
	Top Depth (m):				0.15	0.50
	Bottom Depth (m):				0.30	1.00
	Date Sampled:				23-Nov-2021	23-Nov-2021
	Asbestos Lab:				NEW-ASB	NEW-ASB
Determinand	Accred.	SOP	Units	LOD		
ACM Type	U	2192		N/A	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	9.1	21
pH	U	2010		4.0	8.1	8.1
Boron (Hot Water Soluble)	U	2120	mg/kg	0.40	0.60	< 0.40
Cyanide (Total)	U	2300	mg/kg	0.50	< 0.50	< 0.50
Arsenic	U	2450	mg/kg	1.0	22	16
Cadmium	U	2450	mg/kg	0.10	0.73	0.14
Chromium	U	2450	mg/kg	1.0	15	82
Copper	U	2450	mg/kg	0.50	67	56
Mercury	U	2450	mg/kg	0.10	0.31	< 0.10
Nickel	U	2450	mg/kg	0.50	12	90
Lead	U	2450	mg/kg	0.50	150	30
Selenium	U	2450	mg/kg	0.20	< 0.20	0.41
Zinc	U	2450	mg/kg	0.50	140	110
Organic Matter	U	2625	%	0.40	3.6	1.0
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	U	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	U	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	U	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	U	2680	mg/kg	1.0	290	71
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	290	71
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	U	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	U	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	U	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	16	< 1.0
Aromatic TPH >C21-C35	U	2680	mg/kg	1.0	200	47
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	220	47
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	500	120
Naphthalene	U	2800	mg/kg	0.10	0.47	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	0.76	< 0.10

Results - Soil

Project: 21/3628 Haringey Civic Centre

Client: Concept Consultants	Chemtest Job No.:				21-43106	21-43106
Quotation No.: Q21-26013	Chemtest Sample ID.:				1334886	1334887
	Sample Location:				BH01	BH01
	Sample Type:				SOIL	SOIL
	Top Depth (m):				0.15	0.50
	Bottom Depth (m):				0.30	1.00
	Date Sampled:				23-Nov-2021	23-Nov-2021
	Asbestos Lab:				NEW-ASB	NEW-ASB
Determinand	Accred.	SOP	Units	LOD		
Acenaphthene	U	2800	mg/kg	0.10	0.23	< 0.10
Fluorene	U	2800	mg/kg	0.10	0.55	< 0.10
Phenanthrene	U	2800	mg/kg	0.10	3.7	0.22
Anthracene	U	2800	mg/kg	0.10	1.3	0.15
Fluoranthene	U	2800	mg/kg	0.10	10	1.1
Pyrene	U	2800	mg/kg	0.10	8.7	1.1
Benzo[a]anthracene	U	2800	mg/kg	0.10	5.0	1.5
Chrysene	U	2800	mg/kg	0.10	5.3	1.4
Benzo[b]fluoranthene	U	2800	mg/kg	0.10	7.0	1.4
Benzo[k]fluoranthene	U	2800	mg/kg	0.10	2.8	1.2
Benzo[a]pyrene	U	2800	mg/kg	0.10	5.6	1.2
Indeno(1,2,3-c,d)Pyrene	U	2800	mg/kg	0.10	5.1	1.2
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	1.2	1.1
Benzo[g,h,i]perylene	U	2800	mg/kg	0.10	4.6	1.3
Total Of 16 PAH's	N	2800	mg/kg	2.0	62	13

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenzo[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS

Report Information

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<	"less than"
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SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at the indicated laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container
- E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.com



2183

Final Report

Report No.:	21-43102-1		
Initial Date of Issue:	13-Dec-2021		
Client	Concept Consultants		
Client Address:	Unit D, Herald Way Binley Industrial Estate Coventry CV3 2RQ		
Contact(s):	Ana Gonzalez Kasia Mazerant		
Project	21/3628 Haringey Civic Centre		
Quotation No.:	Q21-26013	Date Received:	07-Dec-2021
Order No.:	CL3373	Date Instructed:	07-Dec-2021
No. of Samples:	3		
Turnaround (Wkdays):	5	Results Due:	13-Dec-2021
Date Approved:	13-Dec-2021		
Approved By:			
Details:	Glynn Harvey, Technical Manager		

Results - Soil

Project: 21/3628 Haringey Civic Centre

Client: Concept Consultants	Chemtest Job No.:				21-43102	21-43102	21-43102
Quotation No.: Q21-26013	Chemtest Sample ID.:				1334866	1334867	1334868
	Sample Location:				BH02	BH02	BH02
	Sample Type:				SOIL	SOIL	SOIL
	Top Depth (m):				0.15	0.25	1.00
	Bottom Depth (m):				0.25	0.75	1.20
	Date Sampled:				24-Nov-2021	24-Nov-2021	24-Nov-2021
	Asbestos Lab:				DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD			
ACM Type	U	2192		N/A	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	3.8	19	21
pH	U	2010		4.0	7.9	7.4	7.5
Boron (Hot Water Soluble)	U	2120	mg/kg	0.40	< 0.40	1.5	0.59
Cyanide (Total)	U	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Arsenic	U	2450	mg/kg	1.0	17	19	10
Cadmium	U	2450	mg/kg	0.10	0.63	0.73	0.43
Chromium	U	2450	mg/kg	1.0	22	31	31
Copper	U	2450	mg/kg	0.50	68	60	27
Mercury	U	2450	mg/kg	0.10	0.12	0.16	0.11
Nickel	U	2450	mg/kg	0.50	30	29	25
Lead	U	2450	mg/kg	0.50	100	130	57
Selenium	U	2450	mg/kg	0.20	0.42	0.64	1.2
Zinc	U	2450	mg/kg	0.50	190	220	120
Organic Matter	U	2625	%	0.40	5.9	5.7	0.86
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	U	2680	mg/kg	1.0	< 1.0	13	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	13	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	16	< 1.0
Aromatic TPH >C21-C35	U	2680	mg/kg	1.0	< 1.0	220	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	240	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	250	< 10
Naphthalene	U	2800	mg/kg	0.10	< 0.10	0.48	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	1.1	< 0.10

Results - Soil

Project: 21/3628 Haringey Civic Centre

Client: Concept Consultants	Chemtest Job No.:				21-43102	21-43102	21-43102
Quotation No.: Q21-26013	Chemtest Sample ID.:				1334866	1334867	1334868
	Sample Location:				BH02	BH02	BH02
	Sample Type:				SOIL	SOIL	SOIL
	Top Depth (m):				0.15	0.25	1.00
	Bottom Depth (m):				0.25	0.75	1.20
	Date Sampled:				24-Nov-2021	24-Nov-2021	24-Nov-2021
	Asbestos Lab:				DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD			
Acenaphthene	U	2800	mg/kg	0.10	< 0.10	0.61	< 0.10
Fluorene	U	2800	mg/kg	0.10	< 0.10	0.65	< 0.10
Phenanthrene	U	2800	mg/kg	0.10	< 0.10	9.4	< 0.10
Anthracene	U	2800	mg/kg	0.10	< 0.10	2.8	< 0.10
Fluoranthene	U	2800	mg/kg	0.10	0.59	24	< 0.10
Pyrene	U	2800	mg/kg	0.10	0.51	20	< 0.10
Benzo[a]anthracene	U	2800	mg/kg	0.10	0.35	13	< 0.10
Chrysene	U	2800	mg/kg	0.10	0.37	13	< 0.10
Benzo[b]fluoranthene	U	2800	mg/kg	0.10	0.56	17	< 0.10
Benzo[k]fluoranthene	U	2800	mg/kg	0.10	0.19	6.5	< 0.10
Benzo[a]pyrene	U	2800	mg/kg	0.10	0.39	14	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	2800	mg/kg	0.10	0.41	11	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.14	2.3	< 0.10
Benzo[g,h,i]perylene	U	2800	mg/kg	0.10	0.44	9.0	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	4.0	140	< 2.0

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenzo[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS

Report Information

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SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at the indicated laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container
- E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.com



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Final Report

Report No.:	22-03127-1		
Initial Date of Issue:	04-Feb-2022		
Client	Concept Consultants		
Client Address:	47 - 49 Brunel Road London W3 7XR		
Contact(s):	Ana Gonzalez Kasia Mazerant		
Project	21/3628 Haringey Civil Centre		
Quotation No.:	Q21-26013	Date Received:	28-Jan-2022
Order No.:	CL3497	Date Instructed:	28-Jan-2022
No. of Samples:	3		
Turnaround (Wkdays):	5	Results Due:	03-Feb-2022
Date Approved:	04-Feb-2022		

Approved By:



Details: Stuart Henderson, Technical
Manager

Results - Water

Project: 21/3628 Haringey Civil Centre

Client: Concept Consultants	Chemtest Job No.:				22-03127	22-03127	22-03127
Quotation No.: Q21-26013	Chemtest Sample ID.:				1361225	1361226	1361227
Order No.: CL3497	Client Sample Ref.:				1A	1A	1A
	Sample Location:				BH01	BH02	BH04
	Sample Type:				WATER	WATER	WATER
	Date Sampled:				27-Jan-2022	27-Jan-2022	27-Jan-2022
Determinand	Accred.	SOP	Units	LOD			
pH	U	1010		N/A	8.1	8.2	8.0
Chloride	U	1220	mg/l	1.0			1800
Nitrate	U	1220	mg/l	0.50			< 0.50
Sulphur	N	1220	mg/l	1.0	870	630	1200
Sulphate	U	1220	mg/l	1.0	2600	1900	3700
Magnesium	U	1455	mg/l	0.20			680

Test Methods

SOP	Title	Parameters included	Method summary
1010	pH Value of Waters	pH	pH Meter
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.
1455	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).

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Amended Report

Report No.:	22-05078-2		
Initial Date of Issue:	17-Mar-2022	Date of Re-Issue:	17-Mar-2022
Client	Concept Consultants		
Client Address:	47 - 49 Brunel Road London W3 7XR		
Contact(s):	Ana Gonzalez Kasia Mazerant		
Project	21/3628 Harringey Civic Centre		
Quotation No.:	Q21-26013	Date Received:	11-Feb-2022
Order No.:		Date Instructed:	15-Feb-2022
No. of Samples:	4		
Turnaround (Wkdays):	5	Results Due:	21-Feb-2022
Date Approved:	17-Mar-2022	Subcon Results Due:	08-Mar-2022

Approved By:

Details: Stuart Henderson, Technical Manager

Results - Water

Project: 21/3628 Harringey Civic Centre

Client: Concept Consultants	Chemtest Job No.:				22-05078	22-05078
Quotation No.: Q21-26013	Chemtest Sample ID.:				1370155	1370157
	Sample Location:				BH02 (Shallow)	BH04
	Sample Type:				WATER	WATER
Determinand	Accred.	SOP	Units	LOD		
pH	U	1010		N/A	[A] 8.1	[A] 7.2
Sulphate	U	1220	mg/l	1.0	[A] 64	[A] 4100
Magnesium	U	1455	mg/l	0.20		[A] 770

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request. The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1370155			BH02 (Shallow)		A	Coloured Winchester 1000ml
1370155			BH02 (Shallow)		A	EPA Vial 40ml
1370155			BH02 (Shallow)		A	Plastic Bottle 1000ml
1370157			BH04		A	Coloured Winchester 1000ml
1370157			BH04		A	EPA Vial 40ml
1370157			BH04		A	Plastic Bottle 1000ml

Test Methods

SOP	Title	Parameters included	Method summary
1010	pH Value of Waters	pH	pH Meter
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.
1455	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).

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customerservices@chemtest.com

16. PHOTOGRAPHS

Project No	21/3628	Hole ID	BH01	    HEAD OFFICE: Unit 8 Waple Mews Waple Way London W3 9RF t: 0181 20 8811 2880 e: info@conceptconsultants.co.uk LABORATORY: 47-49 Brunel Road Old Oak Common Acton London W3 7XR t: 0181 20 8811 2880 e: lab@conceptconsultants.co.uk MIDLANDS OFFICE: Unit D Herford Way Birmm Industrial Estate Coventry CV3 2RQ t: 024 7708 7878 e: coventry@conceptconsultants.co.uk
Project Name	Haringey Civic Centre	Photograph No	001 & 002	
Client	Haringey Council	Date	December 2021	



Photograph No 001



Photograph No 002

Project No	21/3628	Hole ID	BH02	    HEAD OFFICE: Unit 8 Waple Mews Waple Way London W3 9RF +44(0) 20 8811 2800 LABORATORY: 47-49 Brunel Road Old Oak Common Acton London W3 7XR lab@conceptconsultants.co.uk +44(0) 20 8740 1553 MIDLANDS OFFICE: Unit D Herford Way Birley Industrial Estate Coventry CV3 2RQ coventry@conceptconsultants.co.uk +44(0) 24 7708 7070
Project Name	Haringey Civic Centre	Photograph No	003 & 004	
Client	Haringey Council	Date	December 2021	



Photograph No 003



Photograph No 004

Project No	21/3628	Hole ID	BH03	    HEAD OFFICE: Unit 8 Waple Mews Waple Way London W3 9RF +44(0) 20 8811 2800 LABORATORY: 47-49 Brunel Road Old Oak Common Acton London W3 7XR lab@conceptconsultants.co.uk +44(0) 20 8740 1553 MIDLANDS OFFICE: Unit D Herford Way Birley Industrial Estate Coventry CV3 2RQ coventry@conceptconsultants.co.uk +44(0) 24 7708 7070
Project Name	Haringey Civic Centre	Photograph No	005 & 006	
Client	Haringey Council	Date	December 2021	

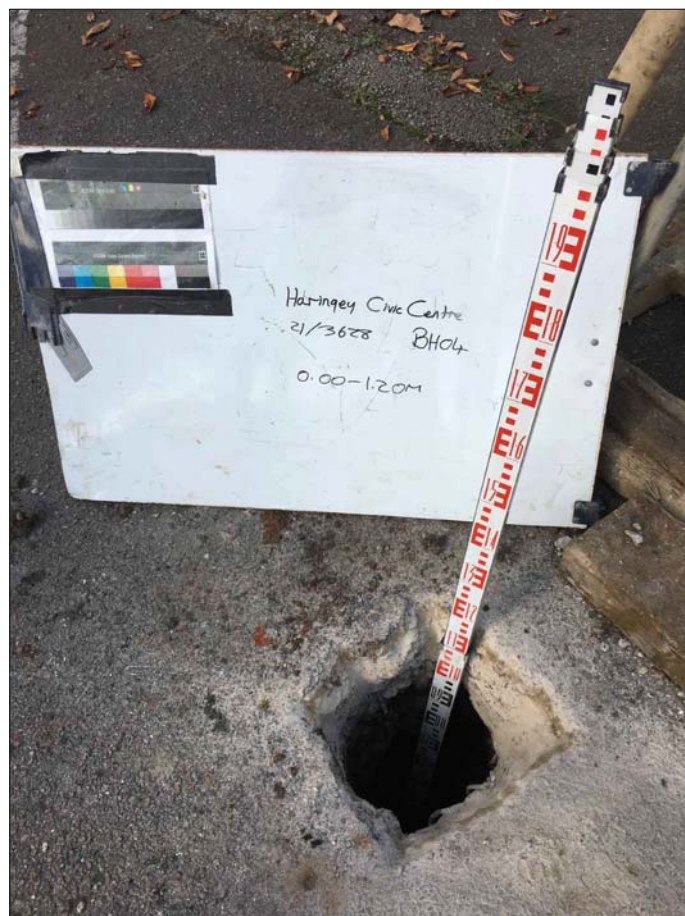


Photograph No 005



Photograph No 006

Project No	21/3628	Hole ID	BH04	    HEAD OFFICE: Unit 8 Waple Mews Waple Way London W3 9RF +44(0) 20 8811 2800 LABORATORY: 47-49 Brunel Road Old Oak Common Acton London W3 7XR lab@conceptconsultants.co.uk +44(0) 20 8740 1553 MIDLANDS OFFICE: Unit D Herford Way Birley Industrial Estate Coventry CV3 2RQ coventry@conceptconsultants.co.uk +44(0) 24 7708 7070
Project Name	Haringey Civic Centre	Photograph No	007 & 008	
Client	Haringey Council	Date	December 2021	



Photograph No 007



Photograph No 008

Project No	21/3628	Hole ID	BH05	    HEAD OFFICE: Unit 8 Waple Mews Waple Way London W3 9RF t: 020 8811 2800 e: info@conceptconsultants.co.uk LABORATORY: 47-49 Brunel Road Old Oak Common Acton London W3 7XR t: 020 8811 2800 e: lab@conceptconsultants.co.uk MIDLANDS OFFICE: Unit D Herford Way Birley Industrial Estate Coventry CV3 2RQ t: 024 7708 7070 e: coventry@conceptconsultants.co.uk
Project Name	Haringey Civic Centre	Photograph No	009 & 010	
Client	Haringey Council	Date	December 2021	



Photograph No 009



Photograph No 010

Project No	21/3628	Hole ID	BH06	    HEAD OFFICE: Unit 8 Waple Mews Waple Way London W3 9RF t: 020 8811 2800 e: info@conceptconsultants.co.uk LABORATORY: 47-49 Brunel Road Old Oak Common Acton London W3 7XR t: 020 8811 2800 e: lab@conceptconsultants.co.uk MIDLANDS OFFICE: Unit D Herford Way Birley Industrial Estate Coventry CV3 2RQ t: 024 7708 7070 e: coventry@conceptconsultants.co.uk
Project Name	Haringey Civic Centre	Photograph No	011 & 012	
Client	Haringey Council	Date	December 2021	



Photograph No 011



Photograph No 012

Project No	21/3628	Hole ID	WS01	 HEAD OFFICE: Unit 8 Waple Mews Waple Way London W3 9RF t: 020 8811 2800 e: info@conceptconsultants.co.uk LABORATORY: 47-49 Brunel Road Old Oak Common Acton London W3 7XR t: 020 8811 2800 e: lab@conceptconsultants.co.uk MIDLANDS OFFICE: Unit D Herd Way Binley Industrial Estate Coventry CV3 2RQ t: 024 7708 7070 e: coventry@conceptconsultants.co.uk
Project Name	Haringey Civic Centre	Photograph No	001 & 002	
Client	Haringey Council	Date	November 2021	



Photograph No 001



Photograph No 002

Project No	21/3628	Hole ID	WS01	    HEAD OFFICE: Unit 8 Waple Mews Waple Way London W3 9RF t: 020 8811 2800 e: info@conceptconsultants.co.uk LABORATORY: 47-49 Brunel Road Old Oak Common Acton London W3 7XR t: 020 8811 2800 e: lab@conceptconsultants.co.uk MIDLANDS OFFICE: Unit D Herford Way Birley Industrial Estate Coventry CV3 2RQ t: 02476 7670 e: coventry@conceptconsultants.co.uk
Project Name	Haringey Civic Centre	Photograph No	003 & 004	
Client	Haringey Council	Date	November 2021	



Photograph No 003



Photograph No 004

Project No	21/3628	Hole ID	WS01	     
Project Name	Haringey Civic Centre	Photograph No	005 & 006	
Client	Haringey Council	Date	November 2021	

HEAD OFFICE:
 Unit 8 Waple Mews
 Waple Way
 London W3 9RF
 t: 020 8811 2800
 e: info@conceptconsultants.co.uk

LABORATORY:
 47-49 Brunel Road
 Old Oak Common
 Acton London W3 7XR
 t: 020 8811 2800
 e: lab@conceptconsultants.co.uk

MIDLANDS OFFICE:
 Unit D Herford Way
 Birley Industrial Estate
 Coventry CV3 2RQ
 t: 02476 7670
 e: coventry@conceptconsultants.co.uk



Photograph No 005



Photograph No 006

Project No	21/3628	Hole ID	WS01	 RISQS AGS CHAS ISO 9001 ISO 14001 ISO 45001
Project Name	Haringey Civic Centre	Photograph No	007 & 008	
Client	Haringey Council	Date	November 2021	

HEAD OFFICE: Unit 8 Waple Mews, Waple Way, London W3 9RF, UK | Tel: +44(0) 20 8811 2800
 LABORATORY: 47-49 Brunel Road, Old Oak Common, Acton London W3 7XR, UK | Tel: +44(0) 20 8740 1553
 MIDLANDS OFFICE: Unit D Herd Way, Birley Industrial Estate, Coventry CV3 2RQ, UK | Tel: +44(0) 24 7708 7070



Photograph No 007



Photograph No 008

Project No	21/3628	Hole ID	WS02B	     HEAD OFFICE: Unit 8 Waple Mews Waple Way London W3 9RF t: 020 8811 2800 e: info@conceptconsultants.co.uk LABORATORY: 47-49 Brunel Road Old Oak Common Acton London W3 7XR t: 020 8811 2800 e: lab@conceptconsultants.co.uk MIDLANDS OFFICE: Unit D Herford Way Brimley Industrial Estate Coventry CV3 2RQ t: 024 7708 7070 e: coventry@conceptconsultants.co.uk
Project Name	Haringey Civic Centre	Photograph No	009 & 010	
Client	Haringey Council	Date	November 2021	



Photograph No 009



Photograph No 010