BURO HAPPOLD

York Central

Specification for Ground Investigation

0052817-BHE-XX-XX-SP-CG-0001

0052817

1 August 2025

Revision P02

Revision	Description	Issued by	Date	Checked
P01	Draft for plot team comment	RH	11/07/2025	NS
P02	Issue for tender	NS	01/08/2025	NS

https://burohappold.sharepoint.com/sites/052817/Shared Documents/Ground Engineering/06 GI Specification & Planning/0052817-BHE-XX-XX-SP-CG-0001.docx

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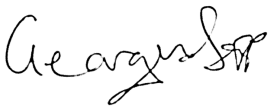
signature	**pp.** 
date	**01/08/2025**

Contents

1 Instructions to the Tenderer

Any queries regarding the Tender documents or other related matters are to be addressed to the following:

nina.sopp@burohappold.com

robin.hilderman@burohappold.com

All documents and information issued to the Contractor shall be treated as confidential.

1.1 Tender Return Documents

The following documents / information shall be included as a minimum in the Contractor's tender return which shall be deemed to include all requirements under this Specification:

- Copies of insurance Certificates as outlined in Section 1.2.3;
- Proposed programme of works including potential commencement date;
- Schedule of rates and bill of quantities in excel format;
- Offer letter detailing how the Contractor plans to undertake the works, including but not limited to: experience of proposed staff, proposed professional attendance for the duration of the site works, and options for best programme and price for the package of works.
- Proposed professional attendance for the duration of the site works;
- Draft Construction Phase Plan and RAMS;
- Mobilisation period;
- Capability statement with examples demonstrating delivery of similar magnitude investigations.
- Statement outlining alternative methods of boring (if alternatives to that specified are chosen); and
- Recent Safety and Environmental performance history.

Tender returns shall be on or before **15/08/2025**. The latest date for receipt of communication from a Tenderer in connection with the Tender shall be 1 working day before this date.

1.2 Investigation Particulars

1.2.1 CDM 2015

Role	Company	Contact Name	Company Address and Contact Email Address
Client	York Central Limited	Paul Middleton	Address: 1st & 2nd Floors, 61 Curzon Street, London, W1J 8PD Email: : paul.middleton@mclarengroup.com
Principal Designer	Buro Happold	Nigel Tapp	Address: 230 Lower Bristol Road, Bath, BA2 3DQ Email: nigel.tapp@burohappold.com
Principal Contractor	GI Contractor to be Principal Contractor		

1.2.2 Site Information

Highlighted cells are awaiting confirmation from McLaren.

Project Address / Location	York Central, Leeman Road, York
Site Access Information	To be agreed with McLaren, landowners and occupiers
Welfare	☐ Select box if available on site ☒ Select box if to be provided by GI contractor
Working Hours	08.00-18.00
Security (including stores, plant, equipment, exploratory holes, theft and vandalism etc.)	To be agreed with McLaren, landowners and occupiers
Services Survey	As-built survey to be provided by SISK

1.2.3 Minimum Insurance Levels Required for each and every occurrence

Professional Indemnity (£)	Assumed £10 million at this stage. GI contractors to provide copies of insurance certificates for Client consideration.
Employer's Liability (£)	Assumed £10 million at this stage. GI contractors to provide copies of insurance certificates for Client consideration.
Public Liability (£)	Assumed £10 million at this stage. GI contractors to provide copies of insurance certificates for Client consideration.
All Risk Insurance (£)	Assumed £10 million at this stage. GI contractors to provide copies of insurance certificates for Client consideration.

1.2.4 Liquidated Damages for Delay

Liquidated damages for delay (Clause 47 of ICC)	**Field work**	£ *TBC*	per day/week.	£ *TBC*	Limit of liability
	Remainder of investigation	£ *TBC*	per week		
	Total of liquidated damages shall not exceed £ *TBC*				

1.2.5 General

Preferred GI Commencement Date	ASAP
Name of Contract	York Central Phase 1C Ground Investigation

Specification	UK Specification for Ground Investigation, Second Edition, published by ICE Publishing in 2012, with information, amendments and additions as described in the Schedules
Standard Form of Contract	ICC Infrastructure Conditions of Contract, Ground Investigation Version 2, 2011
Maximum sum for the contractor to make changes without an instruction	*TBC*
3rd party warranties	3rd party warranties will be required.

1.3 Additional Information

The ground investigation shall not be sub-contracted without the Engineer's prior approval.

It is recommended that the tendering Contractors undertake a site visit to satisfy themselves of the existing ground conditions and access to the exploratory holes. A visit has been arranged for 5th August 2025.

The Contractor shall be required to make their own judgement as to the contamination status of the site for protection of workers, the general public and surrounding environment. The available information suggests that site soils and groundwater may be locally impacted by contamination. A preliminary classification of YELLOW has been assumed.

1.4 Time for Completion

Time for completion calculated from the Commencement Date (Clause 43) is shown in Table 1—1.

Table 1—1 Time for Completion

Section of Investigation (Clause 1 (1) (y))	**Details (Duration)**	**Completion time**
Section A	Field work as defined by Schedule 1 of the specification (fieldwork programme to be proposed by GI contractor).	Fieldwork programme to be proposed by GI contractor.
Section B	100% of the Laboratory Testing (maximum of 4 weeks) excluding any 10-day oedometer tests.	Maximum of 4 weeks from end of field work.
Section C	Post Fieldwork monitoring (6 weeks).	6 weeks from end of field work.
Section D	Draft Factual Report (1 week)	Maximum of 6 weeks from end of field work excluding 10 day oedometer test results but including all post field work monitoring undertaken to date.

Section of Investigation (Clause 1 (1) (y))	Details (Duration)	Completion time
Section E	Final Factual Report	Maximum of 8 weeks from end of field work which includes all post field work monitoring undertaken to date and the results of the 10 day oedometer tests.

2 SCHEDULE 1: Information and Site-Specific Requirements

2.1 Description of the Site

The York Central masterplan area is located to the west of York City Centre. The site encompasses about 46 hectares of land to the west of York Railway Station, south-east of Severus Bridge at Millenium Green and north of the Freight Avoiding Lines. At the time of writing, construction works comprising development of new roads, bridges and infrastructure (referred to as Infrastructure Package 2 [IP2]) are largely complete and across a significant proportion of the area, see outline on Figure 2-1.

Figure 2-1 Location of IP2 works relative to York Central masterplan boundary.

2.2 Proposed Development

The York Central masterplan envisages a mixed-use development that will be developed across several phases, with this Specification focussing on Phase 1C. Phase 1C comprises Plots C3 and C4, Plot D2, Plots E1 to E3, Plots F3 to F10, Plots K and L, and the Central Park, located within the redline boundary on Figure 2-2 below.

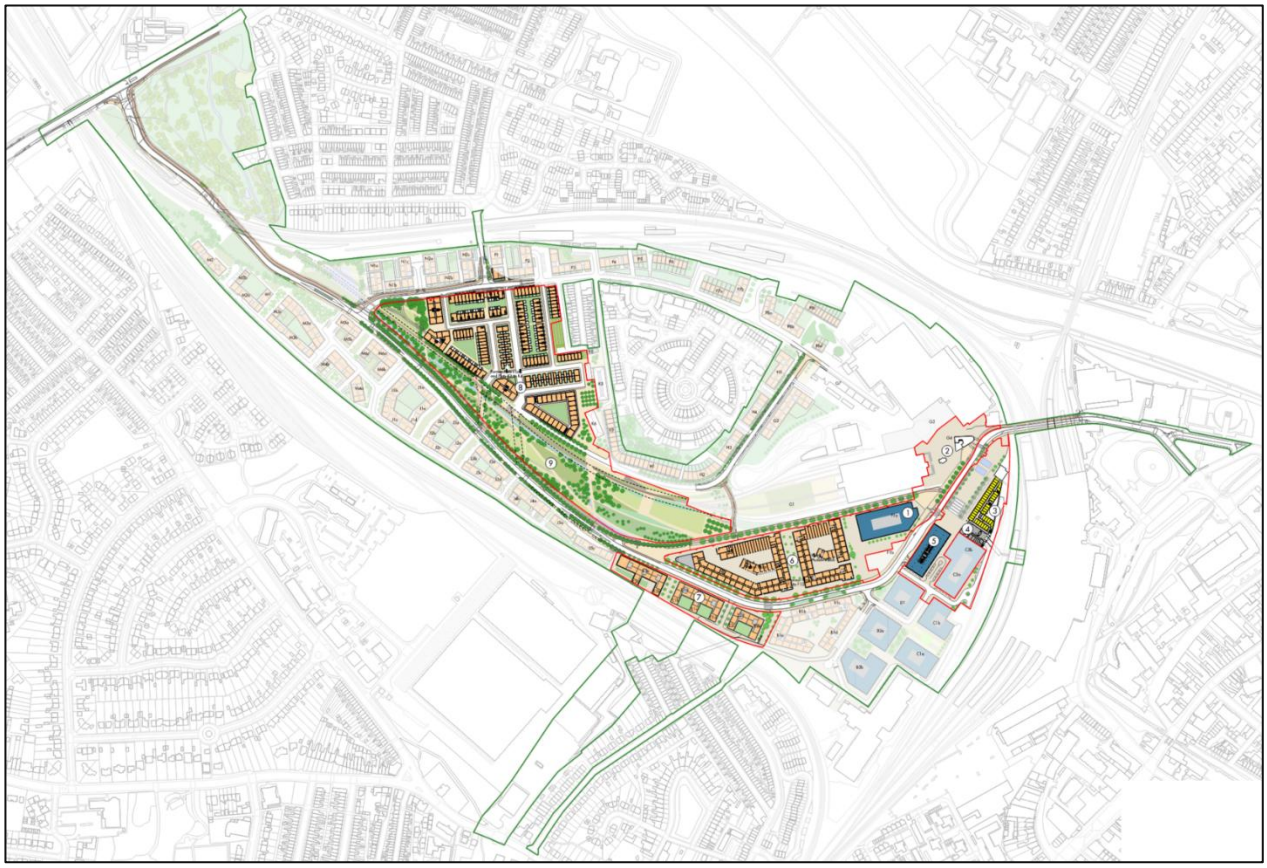


Figure 2-2 - Illustrative masterplan. Phase 1C indicated by redline.

2.3 Ground Conditions

Previous ground investigation has identified Made Ground across the Site with local variation in composition and thickness. This is typically between 0.3 and 2.0m thick, but locally between 2.0 and 4.0m thick. Made Ground is underlain by superficial deposits from several geological units. These include Alluvium, Alne Glaciolucustrine Formation, York Moraine Member and the Vale of York Formation, which all outcrop at surface or are present beneath Made Ground. The Hemingborough Glaciolacustine Formation is present at depth, above bedrock. Beneath the superficial deposits is bedrock of the Sherwood Sandstone Group, described as extremely weak to weak fine to medium grained sandstone – with the upper part sometimes weathered. The depth and elevation of the upper surface varied considerably throughout the site, varying between 12m bgl and 38.3m bgl.

2.4 Contamination Profile

Made Ground has been recorded across the site, which frequently includes anthropogenic components such as coal, ash, slag, clinker etc. Ground investigations have also recorded generally isolated areas of visual and olfactory evidence of contamination including: hydrocarbon / tar odours, hydrocarbon sheen, black staining, landfill materials and sewage odour within Made Ground. Hydrocarbon odour or sheen was also occasionally recorded in underlying natural soils. Fragments of ACM were also occasionally recorded. Occurrences of visual and olfactory evidence of contamination are shown on Drawing YC-BHE-XX-XX-DR-GE-0004.

2.4.1 Remediation

A Remediation Strategy, prepared by Tetra Tech in 2022, has been implemented as part of the IP2 works. Tetra Tech were responsible for the verification of remediation of identified sources of contamination (evidence of hydrocarbons and asbestos) and responding to instances where unexpected contamination was encountered. This has been documented in a Verification Report, published in December 2024, which also identified areas of known contamination which require further investigation / action.

2.5 Hydrogeology

The Alluvium around the former Holgate Beck channel alignment is classified as a Secondary A Aquifer. The other superficial deposits are classified as Secondary (Undifferentiated) Aquifers. The Sherwood Sandstone is classified as a Principal Aquifer. The site does not lie within any Source Protection Zones (SPZ). The nearest recorded groundwater abstraction license is >800m distant.

Groundwater monitoring has been completed as part of previous ground investigations. Water strikes recorded in Made Ground were considered likely to represent perched groundwater. During the 2021 ground investigation, resting groundwater levels were similar in all strata between around +8m AOD in the west and between +10m AOD and +11m AOD in the east, corresponding with groundwater depths between ground level and 2.5m bgl. The investigation recorded artesian or subartesian conditions in all strata. There was considered to be continuity between all strata and upward vertical groundwater flow (i.e. groundwater is migrating vertically upwards from sandstone to superficial deposits).

2.6 Hydrology

The York Central masterplan area is located to the south of a meander in the River Ouse. A tributary to the Ouse, Holgate Beck, is present in a below ground culvert through the site, which is being diverted as part of the IP2 works. The nearest surface water abstraction is located about 190m northwest, a historical licences for abstraction of potable water from the River Ouse.

2.7 Archaeology

The Site contains an archaeological landscape which has potential for significant prehistoric organic remains in deeper glacial undulations and potential significant prehistoric to Roman period archaeological features across the landscape in general. However, the large-scale topographic engineering from the expansion of the railways and associated industry from the mid-19th century has either buried or truncated this earlier landscape across a proportion of the area. The Client has employed a project archaeologist who will provide 'triage' during the ground investigation. This will include site supervision during ground investigation in areas of archaeological interest.

2.8 Unexploded Ordnance

The site is located in an area that experienced aerial bombardment during WWII. A Detailed UXO Risk Assessment completed by RMS UXO in May 2025 concluded that most of the site has a low risk with respect to UXO. Areas of medium risk are associated with open ground, approximate location of recorded Highly Explosive bomb strikes, areas of visible damage, and existing structures post-WWII. A plot specific UXO risk mitigation strategy is recommended, with varying mitigation measures. These include: UXO awareness briefing to all personnel conducting intrusive works;

presence on site of a UXO specialist; on-call EOD engineer; non-intrusive survey; and magnetometer surveys of borehole and pile locations.

2.9 Investigation Objectives

The ground investigation is required to:

- Determine the geological profile across the Site.
- Enable derivation of geotechnical parameters sufficient to inform foundation, earthworks and pavement design.
- Establish the location, nature and levels of foundations of existing structures.
- Determine the geometry of existing walls.
- Define the groundwater regime.
- Establish the potential for infiltration.
- Identify the physical and chemical characteristics of near surface soils and deeper geology.
- Determine the groundwater chemistry.
- Define the ground gas / vapour regime.
- Identify / delineate areas impacted by potential point sources of contamination.
- Enable chemical and geotechnical characterisation of stockpiled materials.

2.10 Scope of Works

The following scope of works are proposed:

General

- Establish the location of each exploratory hole in x, y, z to 0.1m accuracy.
- Logging of all exploratory holes.
- Liaison with the Client to obtain relevant permits (e.g., from Homes England, Network Rail).
- Provision of UXO mitigation measures across particular areas of the site (refer to Detailed UXO Risk Assessment).
- Liaison with project archaeologist.
- Clearance of below ground utilities / services using CAT and Genny and / or GPR survey.
- Hand-dug inspection pits to 1.2m bgl at each borehole, windowless sample and CPT location.
- Allowance for 10no. trial pits distributed across Phase 1C to enable sampling of stockpiled material (locations to be agreed with Engineer).
- Installation of standpipes / standpipe piezometers in selected exploratory holes.
- Allowance for 5no. falling head permeability tests in standpipes.
- Completion of soakaway tests in selected trial pits.
- Completion of CBRs in selected trial pits.
- Geotechnical testing of soils and rock.
- Geoenvironmental and geotechnical soil sampling from exploratory holes.
- Chemical analysis of soils, groundwater and ground gas / vapour.
- 6no. weekly return visits for monitoring of groundwater levels and monitoring ground gas / vapour in installations.
- 2no. rounds of groundwater sampling.

- Photographs of all exploratory holes, including spoil arisings, borehole covers, sides of trial pits and observation pits.
- 'Master' Factual Report in digital format. Additional Factual Reports containing information / data relevant to each Plot.
- Data in AGS 4 format. 'Master' AGS file, plus additional AGS files containing information / data relevant to each Plot for both draft and final data.
- Reinstatement of exploratory holes to existing condition.

Plot C

- 4no. cable percussion boreholes.
- 3no. cable percussion boreholes with rotary follow-on boreholes.
- 8no. cone penetration tests (CPTu)
- 12no. machine-dug trial pits.
- 3no. foundation observation pits.
- 3no. sets of 3no. horizontal cores through brick wall.

Plot D

- Details awaited – TBC by Roscoe.

Plot E

- 3no. cable percussion boreholes.
- 6no. cable percussion with rotary follow-on boreholes.
- 22no. cone penetration tests (CPTu)
- 10no. machine-dug trial pits.

Plot F

- 6no. cable percussion with rotary follow-on boreholes.
- 10no. trial pits.
- 12no. windowless samples.

Plot K

- 3no. cable percussion boreholes.
- 5no. cable percussion with rotary follow-on boreholes.
- 4no. dynamic cone penetration tests.
- 5no. machine-dug trial pits.
- 7no. windowless samples.
- 15no. foundation observation pits.

Plot L

- 3no. cable percussion boreholes.
- 6no. cable percussion with rotary follow-on boreholes.
- 7no. dynamic cone penetration tests.
- 5no. trial pits.
- 5no. windowless samples.

Central Park

- 4no. cable percussion boreholes.
- 5no. trial pits
- 10no. dynamic cone penetration tests.
- 3no. windowless samples.

Coal Drops

- 3no. dynamic cone penetration tests.
- 1no. trial pit.

Depths and remarks (such as exploratory hole positions requiring groundwater or gas monitoring installations) for the above scope of works are summarised in Schedule 2.

2.11 General Requirements

The Contractor is responsible for all aspects of:

- Taking appropriate precautions to locate as far as reasonably practicable any utilities or other services likely to be encountered. Services clearance shall cover a 5m radius around the proposed positions of exploratory holes.
- Taking reasonable measures to ensure that damage to underground and overhead services or existing building facilities and fixtures does not occur during the investigation.
- Health and Safety of the site workers and site users or visitors during the site investigation.
- Undertaking the ground investigation whilst fully adhering to the project's Ground Investigation Specification requirements.
- Clearing the working area of each exploratory position of all rubbish and spoil and the ground surface reinstated to its original condition unless otherwise instructed.
- Making good unavoidable damage to land or property in the vicinity of the exploratory hole and on access routes.
- Leaving the whole of the Site and any ancillary works in a clean and tidy condition.
- Liaising with the Client to obtain relevant permits (e.g., from land owners).
- Providing data to the Investigation Supervisor within 48 hours of completion of the exploratory hole.

The Contractor shall:

- Provide sufficient site management, superintendence, and Professional Attendance and shall detail in their tender the number, names and experience of all their proposed staff.
- Ensure that the site management and superintendence staff be contactable on a mobile phone at all times during the working day and shall report at an agreed time each day to the Engineer.
- Report issues immediately that may lead to claims.
- Ensure the appropriate boring / drilling techniques are priced and mobilised to site based on the anticipated ground conditions for the site.
- Dispose of all excess materials, arisings and water.
- Contact the Engineer before pulling off any borehole to confirm installation requirements.

The Contractor shall not change their method of working and should inform the Engineer before deviating from instructions.

All work shall be carried out in accordance with relevant quality management systems in the fieldwork, laboratory testing and reporting (BS EN ISO, UKAS and MCERTS).

The maximum period for boring or pitting through a hard stratum, hard material or an obstruction shall be 1 hour. After this time the Contractor should seek further instructions from the Engineer.

Trial pits, trenches and shafts shall be examined and described in accordance with BS EN ISO 14688-1:2018, BS EN ISO 14688-2:2018, BS EN ISO 14689:2018 and BS 5930:2015+A1:2020 by an experienced ground practitioner. Photographs shall clearly show details of the ground conditions in the trial pit or trench with any support in place, and contain a photographic board. The photographic board shall contain the

- project name
- trial pit or trench ID
- date
- depth
- a graduated scale
- a grey scale and a colour separation chart.

A minimum of two photographs shall be required: one to show the exposed faces in the pit or trench, and one showing the stockpile containing the arisings. The photographs shall be clear of any shadows of obstructions. The photographs are required to be taken in good lighting and to be fully clear.

Upon completion of the works the position of all exploratory holes shall be measured relative to OS National Grid and the elevation to Ordnance Datum. The recorded information is to include ground level, cover levels (if different i.e. raised cover) and levels of the top of installations (pipe). Borehole locations shall be surveyed giving a grid reference to within +/- 0.01 m horizontally and a level to within +/- 0.05 m vertically.

All tested and untested samples shall be kept for a period of 28 days after submission of the Final Factual Report. The samples shall not be disposed of unless approved by the Engineer. The Contractor shall dispose of all samples in accordance with the waste disposal regulations. Samples submitted to the geotechnical and/or geoenvironmental testing laboratory for analysis shall be disposed of 28 days after submission of the approved final report. The samples shall not be disposed of unless approved by the Investigation Supervisor. All cores are to be retained by the Contractor for a minimum period requested by the Investigation Supervisor (minimum period of 2 months following completion of the ground investigation fieldworks). The samples shall not be disposed of unless approved by the Investigation Supervisor.

2.12 Geotechnical Sampling

Table 2—1 Geotechnical sampling

INSPECTION PITS and HAND-EXCAVATED OBSERVATION PITS

Depth	Sampling Frequency
• Existing ground level to bottom of inspection pit	• **Disturbed** samples shall be taken every **0.5m** or at every change of strata whichever is more frequent
• Sampling shall start within 0.1m of existing ground level	• A representative **bulk** disturbed sample shall be taken of each mixed or granular stratum encountered.

BOREHOLES (including dynamic (multi-purpose rig) sampling)

Cohesive and Mixed Natural Strata or Fills

Depth	Sampling Frequency
• From base of inspection pit to 5m below existing ground level	• **Disturbed** samples at each change of stratum.
• From 5m below existing ground level to top of bedrock	• **Disturbed** samples at each change of stratum.
Depth	**Testing Frequency**
• From base of inspection pit to 5m below existing ground level	• Alternate **UT100** and **SPTs** at **0.5m centres** (the first SPT shall be undertaken at the bottom of the inspection pit)
• From 5m below existing ground level to top of bedrock	• Alternate **UT100** and **SPTs** at **1.0m** centres

Note 1: A small disturbed sample shall be taken and included in the rate for SPTs.

Note 2: Hand vane and hand penetrometer tests are not required in boreholes but may be used to assist the logger in the assessment of soil strength.

Granular Natural Strata of Fills

Depth	Sampling and Testing Frequency
• From base of inspection pit to 5m below existing ground level	• **SPTs** at **0.5m centres** (the first SPT shall be undertaken at the bottom of the inspection pit). • **Bulk** samples at **1.0m centres**
• From 5m below existing ground level to top of bedrock	• **SPTs** at **1.0m centres** • **Bulk** samples at **1.0m centres**

Note 1: A small disturbed sample shall be taken and included in the rate for SPTs.

Note 2: Hand vane and hand penetrometer tests are not required in boreholes but may be used to assist the logger in the assessment of soil strength.

Note 3: If cohesive material is encountered during the SPT, follow with a UT100 then repeat every 1.0m until granular material.

Bedrock

Depth	Sampling and Testing Frequency
• Top of bedrock to bottom of borehole	• **1 SPT** at top of rock.

Depth	Sampling and Testing Frequency
	• Core subsample to be taken at the rate of **1 sample per 1.5m** of core for the first 10m and then **1 sample per 3.0m**. Core sub-samples should also be taken at each change of strata.

Note 1: When core recovery falls below 85%, prior to the next core run, an SPT shall be taken

TRIAL PITS

Depth	Sampling and Testing Frequency
• Existing ground level to bottom of pit • Sampling shall start within 0.1m of existing ground level	• **Disturbed** samples in cohesive material every **1.0m** or every change in strata. Hand vanes every 0.5m. • **Bulk** samples in granular material every **1.0m** or every change in strata. • Measurement of in situ density in granular material*. Hand shear vanes every 0.5m in cohesive material. • **1 large bulk** sample per location (the Contractor is responsible for ensuring large bulk samples are undertaken at a range of depths and strata across the site).

* See Table 11 of BS 5930:2015

DYNAMIC (WINDOWLESS) SAMPLES

Depth	Sampling and Testing Frequency
• From base of inspection pit to bottom of exploratory hole • Sampling shall start within 0.1m of existing ground level	• **Disturbed** and **bulk** samples in cohesive material every **1.0m** or every change in strata. • **Bulk** samples in granular material every **1.0m** or every change in strata. • **SPTs** at **1.0m centres** (the first SPT shall be undertaken at the bottom of the inspection pit)

Note 1: Hand vane and hand penetrometer tests are not required during dynamic sampling but may be used to assist the logger in the assessment of soil strength.

Note 2: If cohesive material is encountered during the SPT, follow with a U100 / U70 then repeat every 1.0m until granular material.

Note 3: Provision for waxing U samples should be made for all undisturbed samples taken in dynamic (window or windowless) samples and boreholes.

2.12.1 Open tube sampling

Open tube sampling should normally be carried out using thin wall samplers (UT100) to obtain undisturbed samples (UT100) in accordance with BS EN ISO 22475-1 and BS 5930.

In order to preserve the natural moisture content of the undisturbed sample the recommendations listed in BS5930 for the handling of undisturbed samples shall be followed. If the sample is very porous, a layer of waxed paper shall be placed over the end of the sample prior to waxing.

In the event of a UT100 refusal or failing, the hole is to be cleaned out and a U100 undertaken and a UT100 attempt at the next scheduled depth for an open tube sample based on the above sampling and testing frequency.

If undertaking the above results in two successive failures or refusals to UT100 sampling, the hole is to be cleaned out and a U100 undertaken. From then on U100 samples are to be undertaken for the remainder of the hole at the scheduled depths for open tube samples based on the above sampling and testing frequency.

Refusal or failure of UT100 sampling is defined as:

- Damage to the cutting shoe which is considered by the supervising geotechnical engineer to result in sample disturbance;
- The failure to recover a sample of sufficient length to facilitate the testing of 100mm diameter sample for undrained shear strength in triaxial apparatus, or
- Recovery of a sample which is considered, by the supervising engineer, to be disturbed.

2.12.2 Rock Core Sampling

Rotary drilling shall normally be carried out with diamond or tungsten carbide tipped bits. All bits, core barrels and casing shall normally confirm to BS4019: Part 3 or Part 4. Other equipment shall only be used with the approval of the Engineer.

A minimum core recovery of 95% is expected. The Contractor is required to make every endeavour to achieve this, adjusting the drilling technique as appropriate e.g., using a different drill bit, changing the flushing medium, increasing / decreasing rate of rotation and penetration etc. If these adjustments fail to consistently achieve in excess of 95% core recovery, the Engineer shall be informed and any revised procedures agreed upon. Failed to address any issue of inadequate core recovery whilst on site could result in payment not being made and a potential requirement to re-drill.

Unless otherwise stated a minimum core diameter of 100mm is required. The Contractor is responsible for selecting an appropriate diameter prior to commencing each borehole to ensure that this minimum requirement can be met. Subsequent to the completion of each drill run for the rotary coring, the recovered core shall be removed from the core barrel and treated as described below:

- Slightly angle the core liner to allow water from the drilling process to drain from the liner;
- Split the core liner immediately following draining and then take a full colour photograph of the exposed core;
- Identify suitable core sub samples of nominal length 200-400mm and undertake the following **immediately**;
- Wipe or scrape off all drilling fluid and debris from the core (to a depth of up to 5mm);
- Attach a label to the sub sample. Mark the top and bottom of the sample on the label or, if possible, on the sample itself;

- Wrap the sub sample in cling film, or similar approved material to retain moisture. This should be undertaken to ensure that as little air as possible is trapped between the sub sample and the wrapping. The completed wrapping should be both air and moisture tight;
- Wrap the sub sample in aluminium foil with the shiny side outwards to protect the sub sample from heat;
- Wrap the sub sample in hessian, muslin cloth or similar approved material to provide an adequate bond for the wax;
- Cover the sub sample in wax by either dipping the sub sample directly into the wax or applying with a paintbrush. The temperature of the wax should be in the range 60 to 70 degrees Celsius to ensure that the sub sample is not damaged;
- Place a label on the outer surface of the sub sample held in place with wax and/or heavy-duty tape. As for above the label should indicate the top and bottom of the sub sample;
- In granular soils, where an intact core sub sample cannot be obtained, the core sub sample should be placed and sealed in a plastic bag as a bulk sample.

2.13 Geoenvironmental Sampling

Table 2—2 Geoenvironmental sampling

Exploratory hole type	Sampling and in situ testing
Inspection Pits and Observation Pits and for Boreholes and Windowless Sample Holes	• The first contamination sample shall be taken just below the surface (0.1-0.2m bgl) or below the base of any hardstanding. • The second and subsequent samples shall be taken so as to be representative of each stratum found. The maximum sampling interval shall be 1m. The maximum depth of the second sample shall be 0.5m bgl except where the first sample cannot be taken from above this depth.
Trial Pits	• Where inspection pits are not undertaken: the first contamination sample shall be taken just below the surface (0.1 – 0.2m bgl) or below the base of the hard standing. The second sample shall be taken at 0.5mbgl. • Subsequent samples shall be taken at 1m intervals or at the change of strata type to a maximum depth of 5mbgl or top of Natural Ground (a total of 6 contamination samples per borehole / windowless sample hole). No contamination samples in natural ground are to be taken below 5mbgl (i.e. sampling continue if in Made Ground), unless instructed by the Engineer. • Samples taken from windowless samples will have to be taken across a depth range to achieve the volume of sample required, this depth range should be noted e.g. 1.5m – 1.65m.

Additional samples are to be collected where there is any evidence of contamination (i.e. staining, odours etc.) or on the instruction from the Engineer.

A calibrated Photo- or Flame- Ionisation Detector (PID or FID) meter shall be used to screen each sample of the Made Ground/Fills, Mixed Soils and upper part of the Natural Strata (particularly where there is visual or olfactory evidence of suspected Volatile Organic Compounds or hydrocarbon contamination).

Samples are to be taken in accordance with BS 10175: 2011+ A2:2017. At each sampling location, soil samples shall be taken into 2 x 1kg plastic tub for WAC testing, 2 x 250g amber glass jars and 2 x 60g volatiles vials. Samples are to be stored in accordance with protocols agreed with the Engineer within a cool box and will generally be collected each day from site by a courier provided by the analytical laboratory.

2.14 In situ Testing

2.14.1 Soakaways

Soakaway tests shall be undertaken at in accordance with the recommended practice given in BRE Digest 365. The depths of the tests are to be agreed with the Engineer based on the encountered strata, but are anticipated to be required within natural strata. For costing purposes a depth of 3m bgl can be assumed.

For costing purposes, the Contractor is advised to use a water supply known to them, and bring the water to site. The soakaway tests should be completed in accordance with BRE Digest 365, summarised below:

1. Excavate a soakage trial pit at the location, with minimum dimensions 1.5m deep, 0.3m wide and 1m long.
2. Side to be vertical, trimmed square.
3. If necessary to maintain stability the pit should be filled with granular material.
4. Measures the pit carefully before trials.
5. A water bowser may be required to provide water for the infiltration tests. The inflow of water should be rapid so that the pit can be filled to its maximum effective depth in a short time.
6. Fill the pit and record the water level and record time from filling at regular intervals, to clearly defined water level versus time. (For example, 7-10 recordings between full and empty).
7. Carry out test 3 times, on the same day, if possible, but is the tests takes too long then on consecutive days.
8. Submit a copy of all results.

2.14.2 Plate Load Tests

In situ CBRs shall be undertaken via plate load tests in selected trial pits, using a minimum plate diameter of 450mm at 0.5m depth below ground level.

2.14.3 Dynamic Cone Penetration Tests

At selected locations, Dynamic Cone Penetration (DCP) tests shall be undertaken as an alternative to in situ CBRs from existing ground level to c. 1m bgl, to inform road / hardstanding area design. The minimum output of DCP results shall be continuous CBR value vs depth.

2.14.4 Falling Head Permeability Tests

Falling head permeability tests may be required in borehole installations if infiltration rates cannot be determined via soakaway tests in accordance with BRE Digest 365. The requirement to undertake falling head permeability tests will be advised by the Engineer.

2.14.5 Cone Penetrometer Testing (CPTu)

The Engineer will be notified of any proposal to sub-contract the CPT aspects of the ground investigation at the tender stage.

Cone resistance, sleeve friction and pore pressure shall be electronically measured at intervals no greater than 20mm for the duration of all tests. Electronic records of each test shall be supplied to the Investigation Supervisor within 24 hours of the completion of the test.

Calibration of the CPT shall be based on the results of the site-specific laboratory test results. Cone resistance, sleeve fraction, pore pressure and fraction ratio shall be provided with the Factual Report. An interpretation of the soil type shall also be provided each test.

2.15 Foundation Observation Pits

Machine-excavated observation pits are required to confirm the dimensions of foundations to existing buildings, retaining walls and gable walls. The depth of the foundations is not known, however a depth of 3m bgl should be assumed at this stage. The Contractor shall proposed a method to ensure safe excavation. Minimum pit dimensions are to be no less than 1.0m (length) x 1.0m (width) to ensure safe and adequate space for exposure and inspection. Larger dimensions may be required depending on the actual size and geometry of the foundation. The Contractor shall make appropriate allowance for temporary support of excavations as considered necessary in accordance with current health and safety regulations. Personnel shall not enter observation pits. However, the Contractor shall allow for deeper observation pits such that the foundation founding level can be verified. The Engineer shall be contacted before any observation pit is backfilled to confirm whether sufficient information has been obtained.

The following information shall be recorded:

Depth	Dimensions, Observations & Survey Information
Existing ground level to bottom of foundation.	**Dimensions** • Dimensions of the exposure pit – including but not limited to width, length and depth. • Dimensions of structural elements – including but not limited to depth to top of foundation, width of foundation (from edge of brickwork / blockwork to edge of foundation), thickness of foundation and corresponding bottom of foundation depth, step geometry and dimensions (if applicable). **Observations** • Evidence of foundation defects, including but not limited to cracks, exposure of reinforcement, verticality (lack of), off-centred brick / blockwork. • Detailed logging of arisings and founding strata. **Survey information** • XYZ coordinates for top of foundation, edge of foundation and bottom of foundation. • Photographic record

2.16 Structural Cores

Horizontal structural cores are required through an existing brick wall to determine its geometry. It is anticipated that these will be undertaken towards the top, middle and bottom of the wall. Making good is required for all cores. The making good methodology is to be proposed by the Contractor and agreed with the Engineer during the tender period. The Contractor shall:

- Take a 100mm diameter core sample from suitable locations, to be agreed with the Engineer.
- Each core is to be carefully logged and stored.

2.17 Geotechnical Laboratory Testing

The following geotechnical laboratory testing is required:

Plot C3 and C4

Number of tests required	Test Description
50	Liquid limit, plastic limit and plasticity index (4 point cone method) - Part 2:4.3, 5.3 and 5.4
50	Moisture Content - Part 2:3.2/BS EN ISO 17892-1
30	Particle size distribution - wet sieving - Part 2:9.2/BS EN ISO 17892-4
10	2.5kg rammer dry density vs moisture content compaction test with CBR at NMC
12	One-dimensional consolidation properties, test period 8 days - Part 5:3/BS EN ISO 17892-5
45 (soil) 4 (water)	BRE SD1 (suite D) on soil and water, results required: • pH, water soluble sulfate (mg/l), total sulphur (%), acid soluble sulfate (%); • where pH<5.5, additional parameters shall be tested: water soluble nitrate (mg/l), water soluble chloride (mg/l); • where water soluble sulfate >3000mg/l, additional parameter shall be tested: water soluble magnesium (mg/l).
18	Triaxial tests (UU – unconsolidated undrained)
6	Uniaxial compressive strength on rock specimen - ISRM 1979 (revised 2007)
18	Single measurement of point load strength on irregular rock lump or core sample (either axial or diametral test) - ISRM 1985 (revised 2007)

Plot E

Number of tests required	Test Description
40	Liquid limit, plastic limit and plasticity index (4 point cone method) - Part 2:4.3, 5.3 and 5.4
40	Moisture Content - Part 2:3.2/BS EN ISO 17892-1
10	Particle size distribution - wet sieving - Part 2:9.2/BS EN ISO 17892-4
5	2.5kg rammer dry density vs moisture content compaction test with CBR at NMC
6	One-dimensional consolidation properties, test period 8 days - Part 5:3/BS EN ISO 17892-5
10 (soil) 5 (water)	BRE SD1 (suite D) on soil and water, results required: • pH, water soluble sulfate (mg/l), total sulphur (%), acid soluble sulfate (%); • where pH<5.5, additional parameters shall be tested: water soluble nitrate (mg/l), water soluble chloride (mg/l); • where water soluble sulfate >3000mg/l, additional parameter shall be tested: water

Number of tests required	Test Description
	soluble magnesium (mg/l).
8	Triaxial tests (UU – unconsolidated undrained)
8	Uniaxial compressive strength on rock specimen - ISRM 1979 (revised 2007)
20	Single measurement of point load strength on irregular rock lump or core sample (either axial or diametral test) - ISRM 1985 (revised 2007)

Plot F

Quantum of analysis TBC by Hexa

Number of tests required	Test Description
TBC	Liquid limit, plastic limit and plasticity index (4 point cone method) - Part 2:4.3, 5.3 and 5.4
TBC	Moisture Content - Part 2:3.2/BS EN ISO 17892-1
TBC	Particle size distribution - wet sieving - Part 2:9.2/BS EN ISO 17892-4
TBC	Particle density
TBC	2.5kg rammer dry density vs moisture content compaction test with CBR at NMC
TBC	One-dimensional consolidation properties, test period 8 days - Part 5:3/BS EN ISO 17892-5
TBC	BRE SD1 (suite D) on soil and water, results required: • pH, water soluble sulfate (mg/l), total sulphur (%), acid soluble sulfate (%); • where pH<5.5, additional parameters shall be tested: water soluble nitrate (mg/l), water soluble chloride (mg/l); • where water soluble sulfate >3000mg/l, additional parameter shall be tested: water soluble magnesium (mg/l).
TBC	Undrained strength of a single 100mm diameter specimen in triaxial compression without the measurement of pore pressure - Part 7:8
TBC	Shear Box test
TBC	Uniaxial compressive strength on rock specimen - ISRM 1979 (revised 2007)

Plot K and L

Number of tests required	Test Description
30	Moisture Content - Part 2:3.2/BS EN ISO 17892-1
20	Liquid limit, plastic limit and plasticity index (4 point cone method) - Part 2:4.3, 5.3 and 5.4
25	Particle size distribution - wet sieving - Part 2:9.2/BS EN ISO 17892-4
20	Particle size distribution - Sedimentation by pipette - Part 2:9.4/BS EN ISO 17892-5
5	Organic Matter Content - Part 3:3

Number of tests required	Test Description
5	One-dimensional consolidation properties, test period 8 days - Part 5:3/BS EN ISO 17892-5
15	Undrained strength of a single 100mm diameter specimen in triaxial compression without the measurement of pore pressure - Part 7:8
30	Uniaxial compressive strength on rock specimen - ISRM 1979 (revised 2007)
50	Single measurement of point load strength on irregular rock lump or core sample (either axial or diametral test) - ISRM 1985 (revised 2007)
20 (soil) 16 (water)	BRE SD1 (suite D) on soil and water, results required: • pH, water soluble sulfate (mg/l), total sulphur (%), acid soluble sulfate (%); • where pH<5.5, additional parameters shall be tested: water soluble nitrate (mg/l), water soluble chloride (mg/l); • where water soluble sulfate >3000mg/l, additional parameter shall be tested: water soluble magnesium (mg/l).

Central Park

Number of tests required	Test Description
49	Moisture Content - Part 2:3.2/BS EN ISO 17892-1
49	Liquid limit, plastic limit and plasticity index (4 point cone method) - Part 2:4.3, 5.3 and 5.4
29	Particle size distribution - wet sieving - Part 2:9.2/BS EN ISO 17892-4
29	Particle size distribution - Sedimentation by pipette - Part 2:9.4/BS EN ISO 17892-5
19	Organic Matter Content - Part 3:3
29	4.5kg rammer dry density vs moisture content compaction test
15 (soil) 5 (water)	BRE SD1 (suite D) on soil and water, results required: • pH, water soluble sulfate (mg/l), total sulphur (%), acid soluble sulfate (%); • where pH<5.5, additional parameters shall be tested: water soluble nitrate (mg/l), water soluble chloride (mg/l); • where water soluble sulfate >3000mg/l, additional parameter shall be tested: water soluble magnesium (mg/l).

Coal Drops

Number of tests required	Test Description
1	Moisture Content - Part 2:3.2/BS EN ISO 17892-1

Number of tests required	Test Description
1	Liquid limit, plastic limit and plasticity index (4 point cone method) - Part 2:4.3, 5.3 and 5.4
1	Particle size distribution - wet sieving - Part 2:9.2/BS EN ISO 17892-4
1	Particle size distribution - Sedimentation by pipette - Part 2:9.4/BS EN ISO 17892-5
1	Organic Matter Content - Part 3:3
1	4.5kg rammer dry density vs moisture content compaction test
2 (soil)	BRE SD1 (suite D) on soil and water, results required: • pH, water soluble sulfate (mg/l), total sulphur (%), acid soluble sulfate (%); • where pH<5.5, additional parameters shall be tested: water soluble nitrate (mg/l), water soluble chloride (mg/l); • where water soluble sulfate >3000mg/l, additional parameter shall be tested: water soluble magnesium (mg/l).

2.18 Geoenvironmental Laboratory Testing

The following geoenvironmental laboratory testing is required:

Plot	Number of tests required	Test Description
Plot C	36	**Suite 1 – Made Ground** pH, Asbestos screen, CLEA metals suite, total cyanide, sulphate, total mercury, speciated PAHs, TPH CWG including BTEX, Soil Organic Matter.
Plot D	TBC	
Plot E	32	
Plot F	56	
Plot K	36	
Plot L	36	
Central Park	8	
Coal Drop	1	
Plot C	18	**Suite 2 – Natural Ground** pH, CLEA metals suite, total cyanide, sulphate, total mercury, speciated PAHs, TPH CWG including BTEX, Soil Organic Matter
Plot D	TBC	
Plot E	16	
Plot F	28	
Plot K	18	
Plot L	18	
Central Park	4	
Coal Drop	1	
Plot C	9	**Suite 3 – Waste analysis** Full WAC analysis
Plot D	TBC	

Plot	Number of tests required	Test Description
Plot E	8	
Plot F	14	
Plot K	9	
Plot L	9	
Central Park	2	
Coal Drop	1	
Plot C	9	**Soil other** SVOC, VOC, free cyanide, complex cyanide, phenols, asbestos quantification, glycols. Rates for each analysis should be provided.
Plot D	TBC	
Plot E	8	
Plot F	14	
Plot K	9	
Plot L	9	
Central Park	2	
Coal Drop	1	
Plot C	8	**Suite 4 - Groundwater analysis** pH, Hardness, CLEA metals suite, sulphate, total cyanide, speciated PAHs, TPH CWG including BTEX.
Plot D	TBC	
Plot E	10	
Plot F	12	
Plot K	16	
Plot L	16	
Central Park	4	
Coal Drop	0	
Plot C	4	**Groundwater other** SVOC, VOC, free cyanide, phenols, glycols
Plot D	TBC	
Plot E	5	
Plot F	6	
Plot K	8	
Plot L	8	
Central Park	2	
Coal Drop	0	
Plot C	9	**Suite 5 – Soil leachate analysis** CLEA metals suite, speciated PAHs.
Plot D	TBC	
Plot E	8	

Plot	Number of tests required	Test Description
Plot F	14	
Plot K	9	
Plot L	9	
Central Park	2	
Coal Drop	1	
Plot C	2	**Suite 6 – Ground gas** Oxygen, nitrogen, carbon dioxide, carbon monoxide, hydrogen, hydrogen sulfide, methane, helium
Plot D	TBC	
Plot E	2	
Plot F	2	
Plot K	2	
Plot L	2	
Central Park	0	
Coal Drop	0	
Plot C	2	**Suite 7 – Vapours** VOCs, total petroleum hydrocarbons C4-C12
Plot D	TBC	
Plot E	2	
Plot F	2	
Plot K	2	
Plot L	2	
Central Park	0	
Coal Drop	0	

3 SCHEDULE 2: Summary of Exploratory Holes

Hole Reference	Specified By	Hole Type	Estimated Scheduled Depth		Installation	Sampling and Testing Requirements	Objective and Rationale	Location	
			(m BGL)	(m AOD)				Easting	Northing
Plot C									
2025-C-BH01	Arup	Cable percussion borehole	20	-5	Ground gas installation in Made Ground. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by C&S designer to inform pile design, retaining wall design, and pavement build up.	459492.01	451769.88
2025-C-BH02	Arup	Cable percussion borehole	20	-5	Ground gas installation in Made Ground. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by C&S designer to inform pile design, retaining wall design, and pavement build up.	459513.73	451791.93
2025-C-BH03	Arup	Cable percussion borehole	20	-5	Dual 50mm groundwater and ground gas installation. Ground gas installation in Made Ground. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by C&S designer to inform pile design, retaining wall design, and pavement build up.	459495.83	451799.71
2025-C-BH04	Arup	Cable percussion with rotary cored follow on	30	-15	Dual 50mm groundwater and ground gas installation. Ground gas installation in Made Ground. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification. SPTs required in rock if recovery is <85%.	Positioned by C&S designer to inform pile design, retaining wall design, and pavement build up.	459463.26	451757.67
2025-C-BH05	Arup	Cable percussion with rotary cored follow on	30	-15	Dual 50mm groundwater and ground gas installation. Ground gas installation in Made Ground. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification. SPTs required in rock if recovery is <85%.	Positioned by C&S designer to inform pile design, retaining wall design, and pavement build up.	459497.43	451746.84
2025-C-BH06	Arup	Cable percussion with rotary cored follow on	30	-15	Dual 50mm groundwater and ground gas installation. Ground gas installation in Made Ground. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification. SPTs required in rock if recovery is <85%.	Positioned by C&S designer to inform pile design, retaining wall design, and pavement build up.	459522.88	451827.86
2025-C-BH07	Buro Happold	Cable percussion borehole	10		50mm groundwater installation to a maximum depth of 10m bgl. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by geoenvironmental engineer to determine masterplan-wide hydrogeological regime.	459513.70	451727.57
2025-C-CPT01	Arup	Cone Penetration Test (CPTu)	15 or refusal, whichever is deeper	-10	N/A	Cone resistance, sleeve friction and pore pressure shall be electronically measured.	Positioned by C&S designer to inform pile design and retaining wall design.	459516.55	451802.73
2025-C-CPT02	Arup	Cone Penetration Test (CPTu)	15 or refusal, whichever is deeper	-10	N/A	Cone resistance, sleeve friction and pore pressure shall be electronically measured.	Positioned by C&S designer to inform pile design and retaining wall design.	459493.47	451739.08
2025-C-CPT03	Arup	Cone Penetration Test (CPTu)	15 or refusal, whichever is deeper	-10	N/A	Cone resistance, sleeve friction and pore pressure shall be electronically measured.	Positioned by C&S designer to inform pile design and retaining wall design.	459504.87	451754.59
2025-C-CPT04	Arup	Cone Penetration Test (CPTu)	15 or refusal, whichever is deeper	-10	N/A	Cone resistance, sleeve friction and pore pressure shall be electronically measured.	Positioned by C&S designer to inform pile design and retaining wall design.	459476.88	451775.94
2025-C-CPT05	Arup	Cone Penetration Test (CPTu)	15 or refusal, whichever is deeper	-10	N/A	Cone resistance, sleeve friction and pore pressure shall be electronically measured.	Positioned by C&S designer to inform pile design and retaining wall design.	459509.63	451777.96

Hole Reference	Specified By	Hole Type	Estimated Scheduled Depth		Installation	Sampling and Testing Requirements	Objective and Rationale	Location	
			(m BGL)	(m AOD)				Easting	Northing
2025-C-CPT06	Arup	Cone Penetration Test (CPTu)	15 or refusal, whichever is deeper	-10	N/A	Cone resistance, sleeve friction and pore pressure shall be electronically measured.	Positioned by C&S designer to inform pile design and retaining wall design.	459484.66	451790.83
2025-C-CPT07	Arup	Cone Penetration Test (CPTu)	15 or refusal, whichever is deeper	-10	N/A	Cone resistance, sleeve friction and pore pressure shall be electronically measured.	Positioned by C&S designer to inform pile design and retaining wall design.	459507.65	451809.82
2025-C-CPT08	Arup	Cone Penetration Test (CPTu)	15 or refusal, whichever is deeper	-10	N/A	Cone resistance, sleeve friction and pore pressure shall be electronically measured.	Positioned by C&S designer to inform pile design and retaining wall design.	459513.78	451831.02
2025-C-TP01	Arup	Machine-excavated trial pit	4.5	0.5	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment, material reuse and pavement buildup.	459469.86	451748.09
2025-C-TP02	Arup	Machine-excavated trial pit	4.5	0.5	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment, material reuse and pavement buildup.	459484.85	451740.69
2025-C-TP03	Arup	Machine-excavated trial pit	4.5	0.5	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment, material reuse and pavement buildup.	459504.59	451742.15
2025-C-TP04	Arup	Machine-excavated trial pit	4.5	0.5	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment, material reuse and pavement buildup.	459491.44	451785.9
2025-C-TP05	Arup	Machine-excavated trial pit	4.5	0.5	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment, material reuse and pavement buildup.	459513.99	451771.25
2025-C-TP06	Arup	Machine-excavated trial pit	4.5	0.5	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment, material reuse and pavement buildup.	459510.21	451840.06
2025-C-TP07	Arup	Machine-excavated trial pit	4.5	0.5	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment, material reuse and pavement buildup.	459508.06	451797.54
2025-C-TP08	Arup	Machine-excavated trial pit	4.5	0.5	N/A	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment, material reuse and pavement buildup.	459519.27	451809.32

Hole Reference	Specified By	Hole Type	Estimated Scheduled Depth		Installation	Sampling and Testing Requirements	Objective and Rationale	Location	
			(m BGL)	(m AOD)				Easting	Northing
						Hand shear vanes in cohesive material.			
2025-C-TP09	Arup	Machine-excavated trial pit	4.5	0.5	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment, material reuse and pavement buildup.	459508.72	451821.86
2025-C-TP10	Arup	Machine-excavated trial pit	2	11	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material. Soakaway test to be completed at base of trial pit.	Determine potential for infiltration of shallow strata.	459474.03	451764.80
2025-C-TP11	Arup	Machine-excavated trial pit	2	11	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material. Soakaway test to be completed at base of trial pit.	Determine potential for infiltration of shallow strata.	459506.29	451773.34
2025-C-TP12	Arup	Machine-excavated trial pit	2	11	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material. Soakaway test to be completed at base of trial pit.	Determine potential for infiltration of shallow strata.	459502.87	451827.81
2025-C-OP01	Arup	Observation Pit	1.2 (or base of foundation)	13.8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Description of foundation as required by specification.	Determine geometry of brick wall foundations.	459518.54 TBC with Engineer	451850.48 TBC with Engineer
2025-C-OP02	Arup	Observation Pit	1.2 (or base of foundation)	13.8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Description of foundation as required by specification.	Determine geometry of brick wall foundations.	459517.88 TBC with Engineer	451849.44 TBC with Engineer
2025-C-OP03	Arup	Observation Pit	1.2 (or base of foundation)	13.8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Description of foundation as required by specification.	Determine geometry of brick wall foundations.	459517.04 TBC with Engineer	451848.41 TBC with Engineer
2025-C-HC01	Arup	Horizontal Core	N/A	N/A	N/A	Set of 3no. horizontal cores through top, middle and bottom of brick wall.	Determine existing brick wall geometry.	459518.91 TBC with Engineer	451850.29 TBC with Engineer
2025-C-HC02	Arup	Horizontal Core	N/A	N/A	N/A	Set of 3no. horizontal cores through top, middle and bottom of brick wall.	Determine existing brick wall geometry.	459518.13	451849.32

Hole Reference	Specified By	Hole Type	Estimated Scheduled Depth		Installation	Sampling and Testing Requirements	Objective and Rationale	Location	
			(m BGL)	(m AOD)				Easting	Northing
								TBC with Engineer	TBC with Engineer
2025-C-HC03	Arup	Horizontal Core	N/A	N/A	N/A	Set of 3no. horizontal cores through top, middle and bottom of brick wall.	Determine existing brick wall geometry.	459517.31 TBC with Engineer	451848.20 TBC with Engineer

Hole Reference	Specified By	Hole Type	Estimated Scheduled Depth		Installation	Sampling and Testing Requirements	Objective and Rationale	Location	
			(m BGL)	(m AOD)				Easting	Northing
Plot E									
2025-E-BH01	Arup	Cable percussion borehole	20	-7	Dual 50mm groundwater and ground gas installation. Ground gas installation in Made Ground. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by C&S designer to inform pile design, shallow foundation design and retaining wall design.	458986.00	451712.24
2025-E-BH02	Arup	Cable percussion borehole	20	-7	N/A	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by C&S designer to inform pile design, shallow foundation design and retaining wall design.	459030.60	451707.31
2025-E-BH03	Arup	Cable percussion borehole	20	-7	Dual 50mm groundwater and ground gas installation. Ground gas installation in Made Ground. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by C&S designer to inform pile design, shallow foundation design and retaining wall design.	459044.88	451674.32
2025-E-BH04	Arup	Cable percussion with rotary cored follow on	30	-17	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. SPTs required in rock if recovery is <85%.	Positioned by C&S designer to inform pile design, shallow foundation design and retaining wall design.	459070.98	451662.10
2025-E-BH05	Arup	Cable percussion with rotary cored follow on	30	-17	Dual 50mm groundwater and ground gas installation. Ground gas installation in Made Ground. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification. SPTs required in rock if recovery is <85%.	Positioned by C&S designer to inform pile design, shallow foundation design and retaining wall design.	459105.30	451671.14
2025-E-BH06	Arup	Cable percussion with rotary cored follow on	30	-17	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. SPTs required in rock if recovery is <85%.	Positioned by C&S designer to inform pile design, shallow foundation design and retaining wall design.	459113.32	451640.72
2025-E-BH07	Arup	Cable percussion with rotary cored follow on	30	-17	Dual 50mm groundwater and ground gas installation. Ground gas installation in Made Ground. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification. SPTs required in rock if recovery is <85%.	Positioned by C&S designer to inform pile design, shallow foundation design and retaining wall design.	459143.94	451654.90
2025-E-BH08	Arup	Cable percussion with rotary cored follow on	30	-17	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. SPTs required in rock if recovery is <85%.	Positioned by C&S designer to inform pile design, shallow foundation design and retaining wall design.	459157.30	451618.01
2025-E-BH09	Arup	Cable percussion with rotary cored follow on	30	-17	Dual 50mm groundwater and ground gas installation. Ground gas installation in Made Ground. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification. SPTs required in rock if recovery is <85%.	Positioned by C&S designer to inform pile design, shallow foundation design and retaining wall design.	459192.03	451629.83
2025-E-CPT01	Arup	Cone Penetration Test (CPTu)	Refusal on rockhead (~20m bgl)	Refusal on rockhead (~-7m AOD)	N/A	Cone resistance, sleeve friction and pore pressure shall be electronically measured.	Positioned by C&S designer to inform pile design, shallow foundation design and retaining wall design.	458972.05	451711.32

Hole Reference	Specified By	Hole Type	Estimated Scheduled Depth		Installation	Sampling and Testing Requirements	Objective and Rationale	Location	
			(m BGL)	(m AOD)				Easting	Northing
2025-E-CPT02	Arup	Cone Penetration Test (CPTu)	Refusal on rockhead (~20m bgl)	Refusal on rockhead (~-7m AOD)		Cone resistance, sleeve friction and pore pressure shall be electronically measured.	Positioned by C&S designer to inform pile design, shallow foundation design and retaining wall design.	458987.36	451729.20
2025-E-CPT03	Arup	Cone Penetration Test (CPTu)	Refusal on rockhead (~20m bgl)	Refusal on rockhead (~-7m AOD)		Cone resistance, sleeve friction and pore pressure shall be electronically measured.	Positioned by C&S designer to inform pile design, shallow foundation design and retaining wall design.	459011.31	451717.12
2025-E-CPT04	Arup	Cone Penetration Test (CPTu)	Refusal on rockhead (~20m bgl)	Refusal on rockhead (~-7m AOD)	N/A	Cone resistance, sleeve friction and pore pressure shall be electronically measured.	Positioned by C&S designer to inform pile design, shallow foundation design and retaining wall design.	459020.61	451699.35
2025-E-CPT05	Arup	Cone Penetration Test (CPTu)	Refusal on rockhead (~20m bgl)	Refusal on rockhead (~-7m AOD)	N/A	Cone resistance, sleeve friction and pore pressure shall be electronically measured. Lightweight deflectometers at 0.5m in inspection pit.	Positioned by C&S designer to inform pile design, shallow foundation design and retaining wall design.	459005.35	451686.09
2025-E-CPT06	Arup	Cone Penetration Test (CPTu)	Refusal on rockhead (~20m bgl)	Refusal on rockhead (~-7m AOD)	N/A	Cone resistance, sleeve friction and pore pressure shall be electronically measured.	Positioned by C&S designer to inform pile design, shallow foundation design and retaining wall design.	459046.14	451699.65
2025-E-CPT07	Arup	Cone Penetration Test (CPTu)	Refusal on rockhead (~20m bgl)	Refusal on rockhead (~-7m AOD)	N/A	Cone resistance, sleeve friction and pore pressure shall be electronically measured. Lightweight deflectometers at 0.5m in inspection pit.	Positioned by C&S designer to inform pile design, shallow foundation design and retaining wall design.	459036.22	451672.63
2025-E-CPT08	Arup	Cone Penetration Test (CPTu)	Refusal on rockhead (~20m bgl)	Refusal on rockhead (~-7m AOD)	N/A	Cone resistance, sleeve friction and pore pressure shall be electronically measured.	Positioned by C&S designer to inform pile design, shallow foundation design and retaining wall design.	459076.20	451687.17
2025-E-CPT09	Arup	Cone Penetration Test (CPTu)	Refusal on rockhead (~20m bgl)	Refusal on rockhead (~-7m AOD)	N/A	Cone resistance, sleeve friction and pore pressure shall be electronically measured.	Positioned by C&S designer to inform pile design, shallow foundation design and retaining wall design.	459079.69	451672.58
2025-E-CPT10	Arup	Cone Penetration Test (CPTu)	Refusal on rockhead (~20m bgl)	Refusal on rockhead (~-7m AOD)	N/A	Cone resistance, sleeve friction and pore pressure shall be electronically measured. Lightweight deflectometers at 0.5m in inspection pit.	Positioned by C&S designer to inform pile design, shallow foundation design and retaining wall design.	459064.17	451660.35
2025-E-CPT11	Arup	Cone Penetration Test (CPTu)	Refusal on rockhead (~20m bgl)	Refusal on rockhead (~-7m AOD)	N/A	Cone resistance, sleeve friction and pore pressure shall be electronically measured.	Positioned by C&S designer to inform pile design, shallow foundation design and retaining wall design.	459097.57	451676.07
2025-E-CPT12	Arup	Cone Penetration Test (CPTu)	Refusal on rockhead (~20m bgl)	Refusal on rockhead (~-7m AOD)	N/A	Cone resistance, sleeve friction and pore pressure shall be electronically measured. Lightweight deflectometers at 0.5m in inspection pit.	Positioned by C&S designer to inform pile design, shallow foundation design and retaining wall design.	459086.27	451648.43
2025-E-CPT13	Arup	Cone Penetration Test (CPTu)	Refusal on rockhead (~20m bgl)	Refusal on rockhead (~-7m AOD)	N/A	Cone resistance, sleeve friction and pore pressure shall be electronically measured.	Positioned by C&S designer to inform pile design, shallow foundation design and retaining wall design.	459125.01	451665.18
2025-E-CPT14	Arup	Cone Penetration Test (CPTu)	Refusal on rockhead (~20m bgl)	Refusal on rockhead (~-7m AOD)	N/A	Cone resistance, sleeve friction and pore pressure shall be electronically measured.	Positioned by C&S designer to inform pile design, shallow foundation design and retaining wall design.	459116.12	451655.06

Hole Reference	Specified By	Hole Type	Estimated Scheduled Depth		Installation	Sampling and Testing Requirements	Objective and Rationale	Location	
			(m BGL)	(m AOD)				Easting	Northing
2025-E-CPT15	Arup	Cone Penetration Test (CPTu)	Refusal on rockhead (~20m bgl)	Refusal on rockhead (~-7m AOD)	N/A	Cone resistance, sleeve friction and pore pressure shall be electronically measured. Lightweight deflectometers at 0.5m in inspection pit.	Positioned by C&S designer to inform pile design, shallow foundation design and retaining wall design.	459107.08	451636.56
2025-E-CPT16	Arup	Cone Penetration Test (CPTu)	Refusal on rockhead (~20m bgl)	Refusal on rockhead (~-7m AOD)	N/A	Cone resistance, sleeve friction and pore pressure shall be electronically measured. Lightweight deflectometers at 0.5m in inspection pit.	Positioned by C&S designer to inform pile design, shallow foundation design and retaining wall design.	459127.58	451625.82
2025-E-CPT17	Arup	Cone Penetration Test (CPTu)	Refusal on rockhead (~20m bgl)	Refusal on rockhead (~-7m AOD)	N/A	Cone resistance, sleeve friction and pore pressure shall be electronically measured.	Positioned by C&S designer to inform pile design, shallow foundation design and retaining wall design.	459149.15	451637.64
2025-E-CPT18	Arup	Cone Penetration Test (CPTu)	Refusal on rockhead (~20m bgl)	Refusal on rockhead (~-7m AOD)	N/A	Cone resistance, sleeve friction and pore pressure shall be electronically measured.	Positioned by C&S designer to inform pile design, shallow foundation design and retaining wall design.	459154.60	451652.85
2025-E-CPT19	Arup	Cone Penetration Test (CPTu)	Refusal on rockhead (~20m bgl)	Refusal on rockhead (~-7m AOD))	N/A	Cone resistance, sleeve friction and pore pressure shall be electronically measured. Lightweight deflectometers at 0.5m in inspection pit.	Positioned by C&S designer to inform pile design, shallow foundation design and retaining wall design.	459149.15	451618.68
2025-E-CPT20	Arup	Cone Penetration Test (CPTu)	Refusal on rockhead (~20m bgl)	Refusal on rockhead (~-7m AOD)	N/A	Cone resistance, sleeve friction and pore pressure shall be electronically measured.	Positioned by C&S designer to inform pile design, shallow foundation design and retaining wall design.	459175.61	451631.78
2025-E-CPT21	Arup	Cone Penetration Test (CPTu)	Refusal on rockhead (~20m bgl)	Refusal on rockhead (~-7m AOD)	N/A	Cone resistance, sleeve friction and pore pressure shall be electronically measured.	Positioned by C&S designer to inform pile design, shallow foundation design and retaining wall design.	459192.98	451636.61
2025-E-CPT22	Arup	Cone Penetration Test (CPTu)	Refusal on rockhead (~20m bgl)	Refusal on rockhead (~-7m AOD)	N/A	Cone resistance, sleeve friction and pore pressure shall be electronically measured. Lightweight deflectometers at 0.5m in inspection pit.	Positioned by C&S designer to inform pile design, shallow foundation design and retaining wall design.	459186.87	451616.37
2025-E-TP01	Arup	Machine-excavated trial pit	4.5	8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material. Allowance for analysis of gasworks determinands.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment, material reuse and pavement buildup.	458990.29	451705.25
2025-E-TP02	Arup	Machine-excavated trial pit	4.5	8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material. Allowance for analysis of gasworks determinands.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment, material reuse and pavement buildup.	459031.93	451685.83

Hole Reference	Specified By	Hole Type	Estimated Scheduled Depth		Installation	Sampling and Testing Requirements	Objective and Rationale	Location	
			(m BGL)	(m AOD)				Easting	Northing
2025-E-TP03	Arup	Machine-excavated trial pit	4.5	8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material. Allowance for analysis of gasworks determinands.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment, material reuse and pavement buildup.	459067.05	451687.79
2025-E-TP04	Arup	Machine-excavated trial pit	4.5	8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material. Allowance for analysis of gasworks determinands.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment, material reuse and pavement buildup.	459100.96	451663.84
2025-E-TP05	Arup	Machine-excavated trial pit	4.5	8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material. Allowance for analysis of gasworks determinands.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment, material reuse and pavement buildup.	459131.89	451651.46
2025-E-TP06	Arup	Machine-excavated trial pit	4.5	8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material. Allowance for analysis of gasworks determinands.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment, material reuse and pavement buildup.	459141.04	451621.05
2025-E-TP07	Arup / Buro Hppold	Machine-excavated trial pit	4.5	8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material. Allowance for analysis of gasworks determinands.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment, material reuse and pavement buildup. Visual / olfactory evidence of contamination recorded during previous GI.	459179.52	451639.186
2025-E-TP08	Arup	Machine-excavated trial pit	2	10	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material. Soakaway test to be completed at base of trial pit.	Determine potential for infiltration of shallow strata. Determine pavement build up.	458980.27	451705.65
2025-E-TP09	Arup	Machine-excavated trial pit	2	10	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material. Soakaway test to be completed at base of trial pit.	Determine potential for infiltration of shallow strata. Determine pavement build up.	459164.86	451629.83

Hole Reference	Specified By	Hole Type	Estimated Scheduled Depth		Installation	Sampling and Testing Requirements	Objective and Rationale	Location	
			(m BGL)	(m AOD)				Easting	Northing
2025-E-TP10	Arup	Machine-excavated trial pit	2	10	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material. Soakaway test to be completed at base of trial pit.	Determine potential for infiltration of shallow strata. Determine pavement build up.	459056.88	451664.87

Hole Reference	Specified By	Hole Type	Estimated Scheduled Depth		Installation	Sampling and Testing Requirements	Objective and Rationale	Location	
			(m BGL)	(m AOD)				Easting	Northing
Plot F									
2025-F-BH01	Hexa	Cable percussion with rotary follow on	30	-18	25mm groundwater installation. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification. SPTs required in rock if recovery is <90%.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment and general geotechnical design.	459088.17	451723.41
2025-F-BH02	Hexa	Cable percussion with rotary follow on	30	-18	25mm groundwater installation. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification. SPTs required in rock if recovery is <90%.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment and general geotechnical design.	459143.92	451696.06
2025-F-BH03	Hexa	Cable percussion with rotary follow on	30	-18	25mm groundwater installation. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification. SPTs required in rock if recovery is <90%.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment and general geotechnical design.	459203.73	451739.83
2025-F-BH04	Hexa	Cable percussion with rotary follow on	30	-18	25mm groundwater installation. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification. SPTs required in rock if recovery is <90%.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment and general geotechnical design.	459213.35	451690.58
2025-F-BH05	Hexa	Cable percussion with rotary follow on	30	-18	25mm groundwater installation. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification. SPTs required in rock if recovery is <90%.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment and general geotechnical design.	459281.51	451759.64
2025-F-BH06	Hexa	Cable percussion with rotary follow on	30	-18	25mm groundwater installation. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification. SPTs required in rock if recovery is <90%.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment and general geotechnical design.	459311.24	451708.18
2025-F-TP01	Hexa	Machine-excavated trial pit	4	8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment and general geotechnical design.	459092.46	451710.1
2025-F-TP02	Hexa	Machine-excavated trial pit	4	8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. CBR via plate load test at 0.5m bgl.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment and general geotechnical design.	459158.19	451711.88
2025-F-TP03	Hexa	Machine-excavated trial pit	4	8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. CBR via plate load test at 0.5m bgl.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment and general geotechnical design.	459164.4	451687.33
2025-F-TP04	Hexa	Machine-excavated trial pit	4	8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by C&S designer to enable shallow ground characterisation for	459184.51	451743

Hole Reference	Specified By	Hole Type	Estimated Scheduled Depth		Installation	Sampling and Testing Requirements	Objective and Rationale	Location	
			(m BGL)	(m AOD)				Easting	Northing
							contamination assessment and general geotechnical design.		
2025-F-TP05	Hexa	Machine-excavated trial pit	4	8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment and general geotechnical design.	459212.98	451717.05
2025-F-TP06	Hexa	Machine-excavated trial pit	4	8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. CBR via plate load test at 0.5m bgl.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment and general geotechnical design.	459235.23	451685.04
2025-F-TP07	Hexa	Machine-excavated trial pit	4	8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. CBR via plate load test at 0.5m bgl.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment and general geotechnical design.	459229.35	451755.65
2025-F-TP08	Hexa	Machine-excavated trial pit	4	8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment and general geotechnical design.	459255.21	451744.21
2025-F-TP09	Hexa	Machine-excavated trial pit	4	8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. CBR via plate load test at 0.5m bgl.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment and general geotechnical design.	459281.16	451735.85
2025-F-TP10	Hexa	Machine-excavated trial pit	4	8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment and general geotechnical design.	459289.07	451703.36
2025-F-WS01	Hexa	Window Sample	5	7	50mm ground gas installation. Ground gas installation in Made Ground.	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment and general geotechnical design.	459126.6	451727.24
2025-F-WS02	Hexa	Window Sample	5	7	50mm ground gas installation. Ground gas installation in Made Ground.	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment and general geotechnical design.	459115.73	451703.21
2025-F-WS03	Hexa	Window Sample	5	7	25mm groundwater installation. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment and general geotechnical design.	459168.08	451727.31
2025-F-WS04	Hexa	Window Sample	5	7	50mm ground gas installation. Ground gas installation in Made Ground.	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment and general geotechnical design.	459173.92	451701.88
2025-F-WS05	Hexa / Buro Happold	Window Sample	5	7	25mm groundwater installation. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment and general geotechnical design. Located in area of historical tank.	459180.98	451679.40

Hole Reference	Specified By	Hole Type	Estimated Scheduled Depth		Installation	Sampling and Testing Requirements	Objective and Rationale	Location	
			(m BGL)	(m AOD)				Easting	Northing
2025-F-WS06	Hexa	Window Sample	5	7	50mm ground gas installation. Ground gas installation in Made Ground.	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment and general geotechnical design.	459225.71	451707.94
2025-F-WS07	Hexa	Window Sample	5	7	N/A	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment and general geotechnical design.	459245.38	451750.97
2025-F-WS08	Hexa	Window Sample	5	7	25mm groundwater installation. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment and general geotechnical design.	459246.78	451724.13
2025-F-WS09	Hexa	Window Sample	5	7	25mm groundwater installation. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment and general geotechnical design.	459253.44	451694.08
2025-F-WS10	Hexa	Window Sample	5	7	25mm groundwater installation. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment and general geotechnical design.	459273.7	451723.58
2025-F-WS11	Hexa	Window Sample	5	7	50mm ground gas installation. Ground gas installation in Made Ground.	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment and general geotechnical design.	459293.07	451772.82
2025-F-WS12	Hexa	Window Sample	5	7	25mm groundwater installation. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by C&S designer to enable shallow ground characterisation for contamination assessment and general geotechnical design.	459293.07	451732.15

Hole Reference	Specified By	Hole Type	Estimated Scheduled Depth		Installation	Sampling and Testing Requirements	Objective and Rationale	Location	
			(m BGL)	(m AOD)				Easting	Northing
Plot K									
2025-K-BH01	CampbellReith	Cable percussion borehole with rotary follow on	25	-13	50mm groundwater installation to a maximum depth of 15m bgl. Ground gas installation in Made Ground. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification. SPTs required in rock if recovery is <85%.	Positioned by C&S designer to inform pile design, ground improvement and general geotechnical design.	458925.62	451998.41
2025-K-BH02	CampbellReith	Cable percussion borehole with rotary follow on	25	-13	50mm groundwater installation to a maximum depth of 15m bgl. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification. SPTs required in rock if recovery is <85%.	Positioned by C&S designer to inform pile design, ground improvement and general geotechnical design.	458919.32	451901.11
2025-K-BH03	CampbellReith	Cable percussion borehole with rotary follow on	20	-8	50mm groundwater installation to a maximum depth of 15m bgl. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification. SPTs required in rock if recovery is <85%.	Positioned by C&S designer to inform pile design, ground improvement and general geotechnical design.	458894.29	452074.19
2025-K-BH04	CampbellReith	Cable percussion borehole with rotary follow on	20	-8	50mm groundwater installation to a maximum depth of 10m bgl. Ground gas installation in Made Ground. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification. SPTs required in rock if recovery is <85%.	Positioned by C&S designer to inform pile design, ground improvement and general geotechnical design.	458880.12	451968.31
2025-K-BH05	CampbellReith	Cable percussion borehole	10	2	50mm groundwater installation to a maximum depth of 10m bgl. Ground gas installation in Made Ground. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by C&S designer to inform pile design, ground improvement and general geotechnical design.	458800.14	452006.11
2025-K-BH06	CampbellReith	Cable percussion borehole	10	2	50mm groundwater installation to a maximum depth of 10m bgl. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by C&S designer to inform pile design, ground improvement and general geotechnical design.	458872.94	451991.76
2025-K-BH07	CampbellReith	Cable percussion borehole	10	2	50mm groundwater installation to a maximum depth of 10m bgl. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by C&S designer to inform pile design, ground improvement and general geotechnical design.	458917.39	451946.61
2025-K-BH08	CampbellReith	Cable percussion borehole	10	2	50mm groundwater installation to a maximum depth of 10m bgl. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by geoenvironmental engineer to determine masterplan-wide hydrogeological regime. Located adjacent to Phoenix Boulevard development. Investigate potential for on / off-site migration of contamination.	458985.5	451896.5
2025-K-DCP01	CampbellReith	Dynamic Cone Penetration Test	1	11	N/A	Output of DCP results shall be continuous CBR value vs depth.	Inform design of road / hardstanding areas.	458888.39	452060.06
2025-K-DCP02	CampbellReith	Dynamic Cone Penetration Test	1	11	N/A	Output of DCP results shall be continuous CBR value vs depth.	Inform design of road / hardstanding areas.	458871.42	452003.83
2025-K-DCP03	CampbellReith	Dynamic Cone Penetration Test	1	11	N/A	Output of DCP results shall be continuous CBR value vs depth.	Inform design of road / hardstanding areas.	458935.85	451988.03
2025-K-DCP04	CampbellReith	Dynamic Cone Penetration Test	1	11	N/A	Output of DCP results shall be continuous CBR value vs depth.	Inform design of road / hardstanding areas.	458899.85	451957.14

Hole Reference	Specified By	Hole Type	Estimated Scheduled Depth		Installation	Sampling and Testing Requirements	Objective and Rationale	Location	
			(m BGL)	(m AOD)				Easting	Northing
2025-K-TP01	CampbellReith	Machine-excavated trial pit	4	8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material. Soakaway test to be completed – test level ~12.20m AOD	Determine potential for infiltration of shallow strata.	458866.54	452041.81
2025-K-TP02	CampbellReith	Machine-excavated trial pit	4	8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material. Soakaway test to be complete – test level ~12.30m AOD	Determine potential for infiltration of shallow strata.	458897.52	451984.51
2025-K-TP03	CampbellReith	Machine-excavated trial pit	4	8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material. Soakaway test to be completed – test level ~11.28m AOD	Determine potential for infiltration of shallow strata.	458885.93	451945.89
2025-K-TP04	CampbellReith	Machine-excavated trial pit	4	8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material. Soakaway test to be completed – test level ~10.36m AOD.	Determine potential for infiltration of shallow strata.	458939.54	451944.2
2025-K-TP05	CampbellReith	Machine-excavated trial pit	4	8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material. Soakaway test to be completed – test level ~9.64m AOD.	Determine potential for infiltration of shallow strata.	458932.8	451916.01
2025-K-WS01	CampbellReith	Window Sample	5	7	Ground gas installation in Made Ground. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification.	Provide site coverage.	458858.94	452083.81
2025-K-WS02	CampbellReith	Window Sample	5	7	N/A	Geoenvironmental and geotechnical testing required as outlined in specification.	Provide site coverage.	458878.54	452052.31
2025-K-WS03	CampbellReith	Window Sample	5	7	N/A	Geoenvironmental and geotechnical testing required as outlined in specification.	Provide site coverage.	458886.24	452027.46
2025-K-WS04	CampbellReith	Window Sample	5	7	Ground gas installation in Made Ground. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification.	Provide site coverage.	458921.13	451972.32
2025-K-WS05	CampbellReith	Window Sample	5	7	N/A	Geoenvironmental and geotechnical testing required as outlined in specification.	Provide site coverage.	458876.79	451922.11
2025-K-WS06	CampbellReith	Window Sample	5	7	N/A	Geoenvironmental and geotechnical testing required as outlined in specification.	Provide site coverage.	458946.79	451874.5

Hole Reference	Specified By	Hole Type	Estimated Scheduled Depth		Installation	Sampling and Testing Requirements	Objective and Rationale	Location	
			(m BGL)	(m AOD)				Easting	Northing
2025-K-WS07	CampbellReith	Window Sample	5	7	N/A	Geoenvironmental and geotechnical testing required as outlined in specification.	Establish shallow ground characterisation for contamination assessment. Targeting location of historical tank.	458955	451991.1
2025-K-OP01	CampbellReith	Foundation Observation Pit	3	9	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Description of foundation as required by specification.	Establish form and extent of foundations to existing retaining wall.	458891.19	452066.82
2025-K-OP02	CampbellReith	Foundation Observation Pit	3	9	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Description of foundation as required by specification.	Establish form and extent of foundations to existing retaining wall.	458894.82	452040.32
2025-K-OP03	CampbellReith	Foundation Observation Pit	3	9	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Description of foundation as required by specification.	Establish form and extent of foundations to existing retaining wall.	458897.9	452011.1
2025-K-OP04	CampbellReith	Foundation Observation Pit	3	9	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Description of foundation as required by specification.	Trial pit into front wall of building.	458929.65	451994.48
2025-K-OP05	CampbellReith	Foundation Observation Pit	3	9	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Description of foundation as required by specification.	Trial pit inside building to establish floor slab build up and form and extent of footing to rear wall which is retaining ground beyond.	458937.16	452007.03
2025-K-OP06	CampbellReith	Foundation Observation Pit	3	9	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Description of foundation as required by specification.	Trial pit to front and gable wall of property.	458961.24	452011.68
2025-K-OP07	CampbellReith	Foundation Observation Pit	3	9	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Description of foundation as required by specification.	Trial pit to front and gable wall of property.	458948.83	452003.91
2025-K-OP08	CampbellReith	Foundation Observation Pit	3	9	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Description of foundation as required by specification.	Trial pit to base of existing building to establish form and extent of foundations.	458945.81	451991.65
2025-K-OP09	CampbellReith	Foundation Observation Pit	3	9	N/A	Geoenvironmental and geotechnical testing required as outlined in specification.	Trial pit to base of existing building to establish form and extent of foundations.	458956.47	451985.66

Hole Reference	Specified By	Hole Type	Estimated Scheduled Depth		Installation	Sampling and Testing Requirements	Objective and Rationale	Location	
			(m BGL)	(m AOD)				Easting	Northing
						CampbellReith Description of foundation as required by specification.			
2025-K-OP10	CampbellReith	Foundation Observation Pit	3	9	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Description of foundation as required by specification.	Trial pit to base of existing building to establish form and extent of foundations.	458943.97	451975.57
2025-K-OP11	CampbellReith	Foundation Observation Pit	3	9	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Description of foundation as required by specification.	Trial pit to base of existing building to establish form and extent of foundations.	458949.22	451967.88
2025-K-OP12	CampbellReith	Foundation Observation Pit	3	9	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Description of foundation as required by specification.	Trial pit to base of existing building to establish form and extent of foundations.	458956.82	451957.57
2025-K-OP13	CampbellReith	Foundation Observation Pit	3	9	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Description of foundation as required by specification.	Trial pit to base of existing building to establish form and extent of foundations.	458959.24	451940.69
2025-K-OP14	CampbellReith	Foundation Observation Pit	3	9	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Description of foundation as required by specification.	Trial pit to base of existing building to establish form and extent of foundations.	458943.1	451923.23
2025-K-OP15	CampbellReith	Foundation Observation Pit	3	9	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Description of foundation as required by specification.	Trial pit to base of existing building to establish form and extent of foundations.	458947.99	451907.85

Hole Reference	Specified By	Hole Type	Estimated Scheduled Depth		Installation	Sampling and Testing Requirements	Objective and Rationale	Location	
			(m BGL)	(m AOD)				Easting	Northing
Plot L									
2025-L-BH01	CampbellReith	Cable percussion borehole with rotary follow on	25	-13	50mm groundwater installation to a maximum depth of 15m bgl. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification. SPTs required in rock if recovery is <85%.	Positioned by C&S designer to inform pile design, ground improvement and general geotechnical design.	458742.56	452026.24
2025-L-BH02	CampbellReith	Cable percussion borehole with rotary follow on	25	-13	50mm groundwater installation to a maximum depth of 15m bgl. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification. SPTs required in rock if recovery is <85%.	Positioned by C&S designer to inform pile design, ground improvement and general geotechnical design.	458854.56	452025.01
2025-L-BH03	CampbellReith	Cable percussion borehole with rotary follow on	20	-8	50mm groundwater installation to a maximum depth of 10m bgl. Ground gas installation in Made Ground. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification. SPTs required in rock if recovery is <85%.	Positioned by C&S designer to inform pile design, ground improvement and general geotechnical design.	458733.46	452063.69
2025-L-BH04	CampbellReith	Cable percussion borehole with rotary follow on	20	-8	50mm groundwater installation to a maximum depth of 10m bgl. Ground gas installation in Made Ground. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification. SPTs required in rock if recovery is <85%.	Positioned by C&S designer to inform pile design, ground improvement and general geotechnical design. Location of exceedance of commercial screening criteria for hydrocarbons, adjacent to IP2 works	458806.86	452074.04
2025-L-BH05	CampbellReith	Cable percussion borehole with rotary follow on	20	-8	50mm groundwater installation to a maximum depth of 10m bgl. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification. SPTs required in rock if recovery is <85%.	Positioned by C&S designer to inform pile design, ground improvement and general geotechnical design.	458795.24	452033.59
2025-L-BH06	CampbellReith	Cable percussion borehole with rotary follow on	20	-8	50mm groundwater installation to a maximum depth of 10m bgl. Ground gas installation in Made Ground. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification. SPTs required in rock if recovery is <85%.	Positioned by C&S designer to inform pile design, ground improvement and general geotechnical design. Area where previous investigation recorded visual / olfactory evidence of contamination (TP404), close to extent of IP2 works. Exploratory hole positioned within Plot L to delineate potential extent of contamination.	458838.8	451960.4
2025-L-BH07	CampbellReith	Cable percussion borehole	10	2	50mm groundwater installation to a maximum depth of 10m bgl. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by C&S designer to inform pile design, ground improvement and general geotechnical design.	458772.84	452051.96
2025-L-BH08	CampbellReith	Cable percussion borehole	10	2	50mm groundwater installation to a maximum depth of 10m bgl. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by C&S designer to inform pile design, ground improvement and general geotechnical design.	458852.99	452057.21
2025-L-BH09	CampbellReith	Cable percussion borehole	10	2	50mm groundwater installation to a maximum depth of 10m bgl. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned by C&S designer to inform pile design, ground improvement and general geotechnical design.	458800.14	452006.11
2025-L-DCP01	CampbellReith	Dynamic Cone Penetration Test	1	11	N/A	Output of DCP results shall be continuous CBR value vs depth.	Inform design of road / hardstanding areas.	458750.89	452073

Hole Reference	Specified By	Hole Type	Estimated Scheduled Depth		Installation	Sampling and Testing Requirements	Objective and Rationale	Location	
			(m BGL)	(m AOD)				Easting	Northing
2025-L-DCP02	CampbellReith	Dynamic Cone Penetration Test	1	11	N/A	Output of DCP results shall be continuous CBR value vs depth.	Inform design of road / hardstanding areas.	458835.34	452087.22
2025-L-DCP03	CampbellReith	Dynamic Cone Penetration Test	1	11	N/A	Output of DCP results shall be continuous CBR value vs depth.	Inform design of road / hardstanding areas.	458793.33	452047.75
2025-L-DCP04	CampbellReith	Dynamic Cone Penetration Test	1	11	N/A	Output of DCP results shall be continuous CBR value vs depth.	Inform design of road / hardstanding areas.	458799.06	451996.61
2025-L-DCP05	CampbellReith	Dynamic Cone Penetration Test	1	11	N/A	Output of DCP results shall be continuous CBR value vs depth.	Inform design of road / hardstanding areas.	458844.68	452014.86
2025-L-DCP06	CampbellReith	Dynamic Cone Penetration Test	1	11	N/A	Output of DCP results shall be continuous CBR value vs depth.	Inform design of road / hardstanding areas.	458850.41	451932.52
2025-L-DCP07	CampbellReith	Dynamic Cone Penetration Test	1	11	N/A	Output of DCP results shall be continuous CBR value vs depth.	Inform design of road / hardstanding areas.	458760.14	452018.82
2025-L-TP01	CampbellReith	Machine-excavated trial pit	3	9	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material. Soakaway test to be completed – test level ~10.67m AOD.	Determine potential for infiltration of shallow strata.	458713.16	452070.45
2025-L-TP02	CampbellReith	Machine-excavated trial pit	3	9	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material. Soakaway test to be completed – test level ~11.80m AOD.	Determine potential for infiltration of shallow strata.	458798.42	452070.46
2025-L-TP03	CampbellReith	Machine-excavated trial pit	3	9	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material. Soakaway test to be completed – test level ~ 10.96m AOD.	Determine potential for infiltration of shallow strata.	458746.35	452042.46
2025-L-TP04	CampbellReith	Machine-excavated trial pit	3	9	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material. Soakaway test to be completed – test level ~12.10m AOD	Determine potential for infiltration of shallow strata.	458817.09	452033.53
2025-L-TP05	CampbellReith	Machine-excavated trial pit	3	9	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material. Soakaway test to be completed – test level ~10.66m AOD.	Determine potential for infiltration of shallow strata.	458785.79	452016.61
2025-L-WS01	CampbellReith	Window Sample	5	7	N/A	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned for site coverage for geotechnical design.	458773.19	452077.86

Hole Reference	Specified By	Hole Type	Estimated Scheduled Depth		Installation	Sampling and Testing Requirements	Objective and Rationale	Location	
			(m BGL)	(m AOD)				Easting	Northing
2025-L-WS02	CampbellReith	Window Sample	5	7	N/A	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned for site coverage for geotechnical design.	458823.59	452062.11
2025-L-WS03	CampbellReith / Buro Happold	Window Sample	5	7	Ground gas installation in Made Ground.	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned for site coverage for geotechnical design. Investigate contamination remaining adjacent to IP2 works. Hydrocarbon recorded in soils during construction of temporary drainage. Previous excavation extended to 1.5m bgl.	458830.94	452016.7
2025-L-WS04	CampbellReith	Window Sample	5	7	Ground gas installation in Made Ground.	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned for site coverage for geotechnical design. Investigate contamination remaining adjacent to IP2 works. Hydrocarbon recorded in soils during construction of temporary drainage. Previous excavation extended to 1.5m bgl.	458777.04	451996.66
2025-L-WS05	CampbellReith / Buro Happold	Window Sample	5	7	N/A	Geoenvironmental and geotechnical testing required as outlined in specification.	Positioned for site coverage for geotechnical design. Investigate contamination remaining adjacent to IP2 works. Hydrocarbon recorded in soils during construction of temporary drainage. Previous excavation extended to 1.5m bgl.	458831.6	451994
2025-L-WS06	CampbellReith / Buro Happold	Window Sample	5	7	N/A	Geoenvironmental and geotechnical testing required as outlined in specification.	Location where visual / olfactory evidence of hydrocarbon contamination recorded historically.	458843.2	451952.4

Hole Reference	Specified By	Hole Type	Estimated Scheduled Depth		Installation	Sampling and Testing Requirements	Objective and Rationale	Location	
			(m BGL)	(m AOD)				Easting	Northing
Central Park									
2025-PARK-BH01	Buro Happold	Cable percussion borehole	15	-3	50mm groundwater installation. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification.	Verify shallow and deep ground conditions in Central Park. Enable groundwater monitoring to support understanding of site-wide hydrogeological regime and drainage design.	458653.41	452052.24
2025-PARK-BH02	Buro Happold	Cable percussion borehole	15	-3	50mm groundwater installation. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification.	Verify shallow and deep ground conditions in Central Park. Enable groundwater monitoring to support understanding of site-wide hydrogeological regime and drainage design. Investigate asbestos contamination remaining adjacent to IP2 works.	459005.44	451807.99
2025-PARK-BH03	Buro Happold	Cable percussion borehole	15	-3	50mm groundwater installation. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification.	Verify shallow and deep ground conditions in Central Park. Enable groundwater monitoring to support understanding of site-wide hydrogeological regime and drainage design.	459137.53	451766.85
2025-PARK-BH04	Buro Happold	Cable percussion borehole	15	-3	50mm groundwater installation. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification.	Verify shallow and deep ground conditions in Central Park. Enable groundwater monitoring to support understanding of site-wide hydrogeological regime and drainage design.	458812.86	451879.93
2025-PARK-TP01	Buro Happold	Machine-excavated trial pit	4	8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material. Soakaway test to be completed.	Verify shallow ground conditions in Central Park. Understand infiltration potential of shallow strata.	458712.82	452002.06
2025-PARK-TP02	Buro Happold	Machine-excavated trial pit	4	8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material. Soakaway test to be completed.	Verify shallow ground conditions in Central Park. Understand infiltration potential of shallow strata.	458788.82	451959.00
2025-PARK-TP03	Buro Happold	Machine-excavated trial pit	4	8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material. Soakaway test to be completed.	Verify shallow ground conditions in Central Park. Understand infiltration potential of shallow strata.	458907.66	451869.83
2025-PARK-TP04	Buro Happold	Machine-excavated trial pit	4	8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material. Soakaway test to be completed.	Verify shallow ground conditions in Central Park. Understand infiltration potential of shallow strata.	458923.05	451789.67

Hole Reference	Specified By	Hole Type	Estimated Scheduled Depth		Installation	Sampling and Testing Requirements	Objective and Rationale	Location	
			(m BGL)	(m AOD)				Easting	Northing
2025-PARK-TP05	Buro Happold	Machine-excavated trial pit	4	8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material. Soakaway test to be completed.	Verify shallow ground conditions in Central Park. Understand infiltration potential of shallow strata.	459039.63	451740.63
2025-PARK-DCP01	Buro Happold	Dynamic Cone Penetration Test	1	11	N/A	Output of DCP results shall be continuous CBR value vs depth.	Inform design of road / hardstanding areas.	458685.50	452034.89
2025-PARK-DCP02	Buro Happold	Dynamic Cone Penetration Test	1	11	N/A	Output of DCP results shall be continuous CBR value vs depth.	Inform design of road / hardstanding areas.	458726.21	451994.56
2025-PARK-DCP03	Buro Happold	Dynamic Cone Penetration Test	1	11	N/A	Output of DCP results shall be continuous CBR value vs depth.	Inform design of road / hardstanding areas.	458758.44	451962.94
2025-PARK-DCP04	Buro Happold	Dynamic Cone Penetration Test	1	11	N/A	Output of DCP results shall be continuous CBR value vs depth.	Inform design of road / hardstanding areas.	458794.34	451926.89
2025-PARK-DCP05	Buro Happold	Dynamic Cone Penetration Test	1	11	N/A	Output of DCP results shall be continuous CBR value vs depth.	Inform design of road / hardstanding areas.	458837.23	451902.18
2025-PARK-DCP06	Buro Happold	Dynamic Cone Penetration Test	1	11	N/A	Output of DCP results shall be continuous CBR value vs depth.	Inform design of road / hardstanding areas.	458854.51	451868.19
2025-PARK-DCP07	Buro Happold	Dynamic Cone Penetration Test	1	11	N/A	Output of DCP results shall be continuous CBR value vs depth.	Inform design of road / hardstanding areas.	458901.52	451831.28
2025-PARK-DCP08	Buro Happold	Dynamic Cone Penetration Test	1	11	N/A	Output of DCP results shall be continuous CBR value vs depth.	Inform design of road / hardstanding areas.	458942.27	451801.08
2025-PARK-DCP09	Buro Happold	Dynamic Cone Penetration Test	1	11	N/A	Output of DCP results shall be continuous CBR value vs depth.	Inform design of road / hardstanding areas.	459023.39	451782.77
2025-PARK-DCP010	Buro Happold	Dynamic Cone Penetration Test	1	11	N/A	Output of DCP results shall be continuous CBR value vs depth.	Inform design of road / hardstanding areas.	459094.90	451772.91
2025-PARK-WS01	Buro Happold	Windowless Sample	5	8	50mm groundwater installation. Installation details TBC by Engineer.	Geoenvironmental and geotechnical testing required as outlined in specification.	Historical tank location from 1891-1937	459056.64	451816.22
2025-PARK-WS02	Buro Happold	Windowless Sample	5	8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification.	Investigate asbestos contamination remaining adjacent to IP2 works.	458990.15	451824.18
2025-PARK-WS03	Buro Happold	Windowless Sample	5	8	N/A	Geoenvironmental and geotechnical testing required as outlined in specification.	Investigate asbestos contamination remaining adjacent to IP2 works.	458991.85	451800.88

Hole Reference	Specified By	Hole Type	Estimated Scheduled Depth		Installation	Sampling and Testing Requirements	Objective and Rationale	Location	
			(m BGL)	(m AOD)				Easting	Northing
Coal Drops									
2025-COAL-DCP01	Buro Happold	Dynamic Cone Penetration Test	1	11	N/A	Output of DCP results shall be continuous CBR value vs depth.	Inform design of road / hardstanding areas.	459511.15	451858.65
2025-COAL-DCP02	Buro Happold	Dynamic Cone Penetration Test	1	11	N/A	Output of DCP results shall be continuous CBR value vs depth.	Inform design of road / hardstanding areas.	459477.68	451824.13
2025-COAL-DCP03	Buro Happold	Dynamic Cone Penetration Test	1	11	N/A	Output of DCP results shall be continuous CBR value vs depth.	Inform design of road / hardstanding areas.	459464.99	451794.78
2025-COAL-TP01	Buro Happold	Machine-excavated trial pit	4	10	N/A	Geoenvironmental and geotechnical testing required as outlined in specification. Hand shear vanes in cohesive material. Soakaway test to be completed.	Verify shallow ground conditions. Understand infiltration potential of shallow strata.	459478.67	451813.75

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