GEOTECHNICAL &
GEOENVIRONMENTAL CONSULTANCY

A PHENNA GROUP COMPANY

Barratt West London

Nestle, Hayes – Phase 6 – Block H

Geoenvironmental Interpretative Report and Remediation Method Statement

Revision 0

Ref. CGL-10526A-GEIR&RMS-0001-P00

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Providing Ground Solutions

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APPENDICES

1. INTRODUCTION

1.1 Terms of appointment

Card Geotechnics Limited (CGL) has been commissioned by Barratt West London to complete a ground investigation and prepare a Geoenvironmental Interpretative Report and Remediation Method Statement for the site known as Phase 6 (Block H) of the former Nestle Factory in Hayes.

As part of this appointment, a ground Investigation (GI) was undertaken by CGL on the 18th and 19th of March 2026, in line with the CGL quotation[1].

1.2 Report objectives

The purpose of this investigation is to evaluate the ground conditions in respect of contamination to allow design of an appropriate remediation strategy to fulfil the following pre-commencement planning condition (condition 16, application ref. 1331/AAP/2022/2553):

(i) *Each phase of the development hereby permitted (excluding demolition, site clearance and any necessary requirements for supplementary ground investigation works) shall not commence until a scheme to deal with identified unacceptable contamination has been submitted to and approved by the Local Planning Authority (LPA). All works which form part of the remediation scheme shall be completed before any part of the development is occupied or brought into use unless the LAP dispenses with any such requirement specifically in writing. The scheme shall include the following measures unless the LPA dispenses with any such requirements specifically and in writing.*

(ii) *If during remedial or development works contamination not addressed in the submitted remediation scheme is identified an addendum to the remediation scheme shall be agreed with the LPA prior to implementation; and*

(iii) *Upon completion of the approved remedial works, this condition will not be discharged until a comprehensive verification report has been submitted to and approved by the LPA. The report shall include the details of the final remediation works and their verification to show that the works for each phase have been carried out in full and in accordance with the approved methodology.*

(iv) *No contaminated soils or other materials shall be imported to the site. all imported soils for landscaping and/or engineering purposes shall be clean and free of contamination. Before any part of the development is occupied, all imported soils shall be independently tested for chemical contamination, and the factual results and interpretive reports of this testing shall be submitted to and approved in writing by the Local Planning Authority.*

REASON. To ensure that the risks from land contamination to future users of the land and neighbouring land are minimised, together with those to controlled waters, property and ecological systems and the development can

[1] Card Geotechnics Ltd. (17th Dec. 2025). Nestle Hayes Village – Block H – Proposal for Supplementary Geo-environmental Ground Investigation – Rev0. CGL/10526A.

be carried out safely without unacceptable risks to workers, neighbours and other offsite receptors in accordance with Policies DMEI 11 and DMEI 12 of the Hillingdon Local Plan: Part 2 (2020).

This report presents a ground model which has been used to evaluate the geoenvironmental hazards and constraints following the investigation of potential contaminant sources, and presents the following:

- A brief summary of the site history and geology on-site;
- Details of the ground conditions encountered on site during the recent CGL ground investigation and analysis and interpretation of the site and laboratory data;
- A review of findings of the ground investigation and results of the chemical testing and assessment to date and a source-pathway-receptor risk assessment based on the updated conceptual site model (CSM); and
- Recommendations to mitigate risks to the identified receptors, including future site users and new vegetation.

1.3 Sources of information

Phase 6 (Block H) forms part of a wider site. The wider site has been subject to a number of ground investigations and assessments by both CGL and others. The following reports have been produced by CGL for other phases of the wider development:

- Nestle Hayes – Phase 1C. Geoenvironmental and Geotechnical Interpretive Report – CGL (2020)[2];
- Nestle Hayes – Phase 5. Geoenvironmental and Geotechnical Interpretive Report – CGL (2021)[3];
- Nestle Hayes – Phase 4. Geoenvironmental and Geotechnical Interpretive Report – CGL (2022)[4];
- Nestle Hayes – Phase 4. Remediation Method Statement. CGL (2022)[5]
- Nestle Hayes – Phase 6 – Block H. Geotechnical Interpretative Report – CGL (2025)[6].

[2] Card Geotechnics Ltd (Nov. 2020). Nestle Hayes – Phase 1C. Geoenvironmental and Geotechnical Interpretative Report. CG/38249. Rev1.
[3] Card Geotechnics Ltd (Aug. 2021). Nestle Hayes – Phase 5. Geotechnical and Geoenvironmental Interpretative Report. CG/38249A. Rev1.
[4] Card Geotechnics Ltd (Feb. 2022). Nestle Hayes – Phase 4. Geotechnical and Geoenvironmental Interpretative Report. CG/38249B. Rev1
[5] Card Geotechnics Ltd. (Feb. 2022). Nestle Hayes – Phase 4. Remediation Method Statement. CG/38249B. Rev1.
[6] Card Geotechnics Ltd. (Nov. 2025). Nestle Hayes – Phase 6 – Block H. Geotechnical Interpretative Report. CGL/10526. Rev0.

2. SITE SETTING

2.1 Site location

The site in question forms part of the wider Nestle site, which is located off Nestle Avenue in Hayes, within the London Borough of Hillingdon. An approximate easting and northing for the centre of the site is 510039E, 179141N (National Grid Ref. TQ100791). A site location plan is presented as Plate 1.

Plate 1. Site location plan – red boundary is site

2.2 Site description

The site forms part of Phase 6, also referred to as Block H of the wider development at Nestle, Hayes (herein referred to as Block H only). Block H comprises a rectangular strip in the south-central area of the wider Nestle site.

The wider site is bounded to the south by Nestle Avenue, to the north by a Network Rail line and the Grand Union Canal, to the east by North Hyde electrical substation and to the west by Squirrels Trading Estate.

The wider site is the former Nestle production facility, which comprised production buildings, a raw material warehouse, product processing and packaging buildings, conventional boilers and waste coffee grounds combustion plant, amenities and car parking. The facility closed in 2014, and the site buildings have since been demolished, with the construction of residential blocks. Generally, the topography of the site is flat with a typical ground level of approximately 31mOD (Ordnance Datum).

2.3 Proposed development

It is CGL's understanding that the proposed development of Block H will involve the construction of a 6-storey residential block, with ground floor commercial space (planned to be a café) occupying the eastern portion of the block, and access to the upper-floor residential units occupying the western portion of the block. No basement or lower ground floor is proposed, with the exception of a temporary crane base during construction. Areas of ground-floor soft landscaping are planned surrounding Block H.

2.4 Previous reports

The wider Nestle factory site (of which Block H is part) has been subject to a number of ground investigations and assessments, with the following reports being produced for the site by others:

- Phase 1 Environmental Assessment – Geosyntec (2013)[7]
- Phase 2 Environmental Assessment – Geosyntec (2014)[8]
- Update on Groundwater Monitoring Results – Geosyntec (2014)[9]
- Geoenvironmental Investigation and Assessment – Capita (2014)[10]
- Desk Study and Ground Investigation – Hydrock (2017)[11]

A brief summary of the findings of these reports is provided in Section 2.10.

[7] Geosyntec (2013). Phase 1 Environmental Assessment of the Nestlé UK Facility in Hayes, Middlesex. September 2013. GCU0124020.
[8] Geosyntec (2014). Phase 2 Environmental Assessment of the Nestlé Site in Hayes, Middlesex (Final). June 2014. GCU0124024.
[9] Geosyntec (2014). Update on Groundwater Monitoring Results post September – 14 round. October 2014. GCU0124024.
[10] Capita (2014). Geoenvironmental Investigation and Assessment. Project Lightning. November 2014. CS-075666-PE-14-211-R
[11] Hydrock (2017). Desk Study and Ground Investigation. Former Nestle Factory, Hayes. April 2017. R/151867/002.

2.5 Historical development

The site was recorded as open agricultural land from 1868-69 until circa 1920, before construction of the Nestle factory buildings. Since the late 1930s, the wider site has operated as a coffee and chocolate manufacturing factory. Block H formed part of the amenities building for the factory complex[7].

2.6 Published geology

With reference to the British Geological Survey (BGS)[12] website, the site is underlain by the Lynch Hill Gravel Member; a sand and gravel deposit, which overlies the London Clay Formation; a clay, silt and sand deposit. Due to its industrial history, Made Ground is anticipated across the site.

2.7 Hydrogeology

The Lynch Hill Gravel Member is classified as a Principal aquifer, providing important base flow to nearby surface water features. Groundwater flow across the wider site has been determined to be to the south-east[6], towards the River Thames. The site does not lie within a groundwater Source Protection Zone (SPZ).

2.8 Hydrology

The nearest surface water body is the Grand Union Canal, located approximately 180m to the north of Block H and forming the boundary of the wider Nestle factory site. The River Crane lies approximately 200m east of the site, flows north to south and discharges into the River Thames, some 10km south-west of the site.

2.9 Radon

Following a review of the BGS GeoIndex resource by CGL and the current UK Health Security Agency (UKHSA) radon map, the site lies within an area where less than a 1% of homes are at or above the Action Level (200Bq m^{-3}). No basements are proposed within Block H. As per BRE 211 guidance[13] and the BGS User Guide on Radon Potential[14], radon protection measures are not required.

[12] British Geological Survey (BGS), www.bgs.ac.uk [Accessed November 2017]
[13] British Research Establishment (BRE). (2015). Radon. Guidance on protective measures for new buildings. 2023 edition. BRE 211.
[14] British Geological Survey (BGS). (2021). User Guide: Radon Potential for Great Britain. Open report OR/24/026.

2.10 Summary of previous reports for Block H

2.10.1 Geosyntec investigation (2013-2014)

2.10.1.1 Phase 1 Environmental Assessment

Geosyntec Consultants Limited (Geosyntec) first undertook a Phase 1 Environmental Assessment[7] of the wider Nestle site in 2013. The aim of the assessment was to identify the potential for contamination as a result of the site's historical and more recent uses. A number of potential contamination sources were identified, associated with the wider Nestle factory works including:

- General Made Ground across the site;
- Underground fuel lines, which were present between fuel tanks located along the northern boundary of the wider site;
- The site had a history of known fuel losses (a number of incidents occurred, including underground fuel line leaks and overfill of ground storage tanks). Remediation of impacted soils was undertaken following the overfilling of a fuel storage tank in 1998 which also impacted the Grand Union Canal.
- When the new boiler house was built in the mid-1990s, soils impacted with mercury were identified beneath the plant room directly south of the new boiler room. The source of the mercury was considered at the time to be mercury switches in the former boiler house, which used elemental mercury. The report for this incident was not found by Geosyntec;
- Hydrocarbons and chlorinated solvents were used in engineering workshops across the site; and
- The buildings across the wider site are known to have contained ACM. Ground may have been impacted by ACM due to damage, refurbishment or demolition works.

2.10.1.2 Phase 2 Environmental Assessment

Subsequent to the Phase 1 Environmental Assessment, Geosyntec undertook an intrusive investigation to assess whether soils across the Nestle site had been impacted by the land uses identified in the Phase 1 report, and to assess the groundwater quality within the underlying gravel aquifer.

The investigation comprised 34 shallow window sample boreholes to investigate the shallow soils across the site, and nine deeper rotary/percussive boreholes to allow for groundwater monitoring of the gravels, with associated laboratory testing of the soil and groundwater.

The ground investigation recorded the ground conditions as Made Ground between 1m and 4m thick, overlying clayey gravel/ gravelly clay (Langley Silt Member). These were found to overlay the granular Lynch Hill Gravel Member, which was found to be between 1.5m and 3m thick, with the London Clay beneath it. Groundwater was recorded at depths of between 0.6m bgl and 2.5m bgl.

Soil Contamination

Visual/olfactory evidence of hydrocarbon contamination was observed by Geosyntec in the Made Ground, associated with fuel lines between the tanks and the former and new boiler house approximately 175m north of Block H. Laboratory analysis confirmed the presence of total petroleum hydrocarbons (TPHs) and polycyclic aromatic hydrocarbons (PAHs) above the Generic Assessment Criteria (GAC) for a residential land use scenario, however, polychlorinated biphenyls (PCBs) were not detected. In addition, ACM was found in soils around the former and new boiler houses.

Although only low concentrations of both elemental mercury (associated with the boiler switches) and total mercury were recorded, with all results below the GAC, Geosyntec considered there to be a potential risk that globules of free elemental mercury may exist in the soil profile around the former boiler house area, which could be mobilised during redevelopment.

Elevated concentrations of arsenic, chromium VI and lead above the GAC were observed in the north of the wider site. The localised exceedances were thought to be associated with former hazardous chemical and waste storage compounds in those areas.

A localised area of PAH and lead contamination was also encountered in the southeast of the site, associated with slag present in the Made Ground in that area.

Groundwater Contamination

The shallow groundwater was not found to be impacted by TPH, however exceedances of PAH, mercury and nickel were observed in groundwater in the north of the site and were thought to be a result of the leaching of contaminants from the Made Ground in the area impacted by fuel leaks and the loss of elemental mercury from mercury switches to the ground. Concentrations of contaminants decreased over subsequent monitoring visits to acceptable levels and were not identified in downstream boreholes. The Geosyntec report states that there was no evidence for a shallow plume of contamination.

Ground Gas

Ground gas monitoring was undertaken by Geosyntec, and Gas Screening Values (GSVs) were calculated as outlined in CIRIA C665[15]. Based on the results, the risk from ground gas was considered to be 'very low' and no gas protection measures were recommended across the wider Nestle site.

2.10.2 Capita investigation (2014)

Capita Property and Infrastructure Limited (Capita) carried out an intrusive environmental investigation of the wider Nestle site in 2014 whilst the factory was operational. The investigation comprised the excavation of 13 boreholes up to 6m in depth, with associated laboratory soil and groundwater chemical testing and groundwater monitoring.

The ground conditions encountered during the Capita investigation correlate with the Geosyntec findings, with slight variations in thickness. Made Ground was encountered at the surface; 0.15m to 1.5m thick overlying a thin horizon identified by Capita as brickearth (brickearth was not encountered in all boreholes) between 0.1m and 1.6m thick. This material was found to overlie the Lynch Hill Gravel Member, which was found to be between 0.9 and 4.8m thick, generally thickening to the west, with the London Clay Formation beneath. Groundwater was encountered between 0.8m bgl and 2.8m bgl.

The Capita investigation also recorded hydrocarbon-impacted soils in shallow Made Ground around the former boiler house and fuel storage tanks, as well as a localised area of PAH and lead exceedance in the south-east of the site. ACM was also encountered in the north of the site and the south-east. Mercury concentrations were below mercury GACs and no 'globules' of elemental mercury were identified. No significant or unacceptable chemical impacts to the Lynch Hill Gravel aquifer were recorded; however, it was considered that localised volumes of contaminated water may be present in the Made Ground.

The Capita report provided recommendations for remediation based on a proposed residential land use scenario. Proposed measures included off-site disposal or remediation and re-use of TPH and/or PAH impacted soil, installation of a capping layer of imported topsoil in areas of soft landscaping and gardens and removal (by hand picking) of ACM in shallow soils.

The Capita report recommended that contaminated perched water within the Made Ground, if encountered, may require removal and treatment.

[15] CIRIA (2007). Assessing risks posed by hazardous ground gases to buildings, CIRIA Report C665, London

2.10.3 Hydrock desk study and ground investigation (2017)

In 2017, Hydrock undertook a Phase 1 and 2 desk study, ground investigation and risk assessment for the wider Nestle site on behalf of Barratt London. The Phase 1 desk study identified potential contamination from the following sources:

- Hydrocarbons associated with fuel storage tanks and underground fuel pipes in the wider site;
- Above-ground storage of chemical products in the north of the wider site;
- Polychlorinated biphenyls (PCBs) associated with the site sub-station in the southeast corner of the wider site;
- Mercury impacted soils around the former boiler house area;
- ACMs in site buildings;
- General Made Ground across the site;
- Ground gas from a historical landfill to the north, separated from the site by the Grand Union Canal; and
- Hydrocarbons from the railway line along the northern boundary.

In order to determine the risks associated with the hazards outlined above, an intrusive investigation was undertaken by Hydrock, comprising 12 window sample boreholes to a maximum depth of 2.45m bgl and 7 cable percussion boreholes to between 6m bgl and 25m bgl, with groundwater monitoring and associated soil and groundwater laboratory testing. It is noted that no additional gas monitoring was undertaken by Hydrock, though the data from the previous investigations were assessed within the Hydrock report.

Exceedances of chromium VI above the GAC were identified in the Made Ground across the site, with exceedances of lead identified in the north of the site. Hotspots of TPH and PAH were identified in the southwest. Asbestos was also identified in Made Ground across the site. No risk to controlled waters or a risk from ground gas was identified.

2.11 Preliminary conceptual site model

A preliminary conceptual site model (CSM) and risk assessment was constructed for Block H on the basis of the information presented above in accordance with Environment Agency Land Contamination Risk Management (LCRM) guidance[16] and is presented in Table 1.

Potential contamination sources:

- *Made Ground* / shallow soils – organic and inorganic contaminants such as TPH, PAH, metals and asbestos may be present within the Made Ground and shallow soils;
- *Groundwater* – given the historical use of the wider site, organic/inorganic contaminants such as TPH, PAH, metals, solvents etc. may be present within groundwater; and
- *Off-site sources* – sources of contamination on the wider factory site (e.g. fuel spills, mercury contamination etc.).

Potential migration pathways:

- *Direct and indirect contact/ingestion* – ingestion and dermal contact with contaminants at or near surface or deeper deposits exposed during excavation;
- *Inhalation* – inhalation of airborne particles, fibres, gases and vapours;
- *Root uptake* – uptake of bioavailable contaminants;
- *Permeable soils* – Made Ground and underlying soils may be sufficiently permeable to allow lateral and vertical migration of soluble contaminants, gases and vapours;
- *Groundwater* – groundwater may facilitate the lateral migration of contaminants to nearby surface water receptors; and
- *Drainage and service routes* – in addition to the permeable surround, drainage and service routes may facilitate lateral of contaminants in liquid or gaseous form.

Potential receptors:

- *Future site users* – the site is proposed for mixed use commercial and residential development;
- *Construction workers* – construction workers are likely to come into close contact with potentially contaminated soils and groundwater during earthworks and construction;
- *Neighbours* – the surrounding land uses include residential properties;
- *Buildings & Services* – services placed below ground will be in direct contact with potentially contaminated soils and groundwater;

[16] Environment Agency (June 2025). Land Contamination Risk Management.

- *Vegetation and plants* – soft landscaping areas are proposed as part of the redevelopment proposals;
- *Groundwater* – the Lynch Hill Gravel forms a Principal Aquifer beneath the site;
- *Surface water bodies* - the River Crane is approximately 200m to the east of the site and likely to be in hydraulic continuity with the Principal Aquifer. The Grand Union Canal is present approximately 180m to the north of the site but is understood to be lined/surrounded by impermeable clay.

Table 1. Preliminary qualitative risk assessment

Potential Source/Medium	*Potential Exposure Route*	*Potential Receptor*	*Severity*	*Probability*	*Risk Rating*	*Comments*
Made Ground / shallow soils (potentially comprising organic & inorganic contaminants such as TPH, PAHs, metals and asbestos	Direct and indirect ingestion of soil and dust, inhalation of gases, vapours, particulates and dermal contact.	Construction workers	Medium	Likely	Moderate	Construction workers are at risk given their close proximity to contaminated soils, dust and groundwater. However, these risks can be mitigated to acceptable levels through appropriate health and safety measures and personal protective equipment (PPE).
		Future site users	Medium	Likely	Moderate	Shallow soil contamination in the Made Ground is likely to be present. Future site users may be exposed in areas of proposed soft landscaping.
		Neighbours	Medium	Low	Moderate / Low	Neighbouring properties may be impacted by windblown dusts and vapours, particularly during below-ground excavation and construction works.
	Direct contact	Buildings & services	Medium	Low	Moderate / Low	Potable water supply pipes may be at risk from chemically aggressive ground and permeation of contaminants.
	Root uptake	Vegetation and plants	Mild	Likely	Low	Phytotoxic contaminants in existing shallow soils may impact plant growth.
	Vertical migration of soluble contaminants via permeable soils	Groundwater (Principal Aquifer)	Medium	Likely	Moderate	Leaching of contaminants from the Made Ground may impact the underlying Principal Aquifer.
		Surface waters	Medium	Low	Moderate / Low	Hydraulic connection between the groundwater and the Canal is considered to be limited. The River Crane is located to the east, and groundwater flow is to the southeast (i.e. cross hydraulic gradient).
Ground gases and vapours associated with the Made Ground.	Inhalation of gases and vapours	Construction workers	Medium	Low	Moderate / Low	Construction workers may be exposed to gases and vapours during construction, though this can be mitigated by

Potential Source/Medium	*Potential Exposure Route*	*Potential Receptor*	*Severity*	*Probability*	*Risk Rating*	*Comments*
						implementing safe working practices.
	Inhalation of gases and vapours. Migration of gases/vapours via permeable soils.	Future site users	Medium	Low	Moderate / Low	The Made Ground on site may act as a potential source of soil gas, posing a risk of asphyxiation. However, it is noted that investigations on the wider factory site have not identified a soil gas risk.
		Buildings and structures	Medium	Low	Moderate / Low	Gases and vapours from soils and groundwater may accumulate in buildings and infrastructure, posing an explosion and fire hazard. However, it is noted that investigations on the wider factory site have not identified a soil gas risk.
Organic / inorganic contaminants within groundwater.	Direct contact and ingestion of contaminated groundwater	Future site users	Medium	Unlikely	Low	Pathway is limited by hardstanding and depth of groundwater.
		Construction workers	Medium	Low	Moderate / Low	There is a potential for contact with groundwater during below ground works. Risks can be mitigated through appropriate health and safety measures & PPE.
	Inhalation of vapours	Future site users	Medium	Low	Moderate / Low	There is a potential for vapours from groundwater contamination to migrate into proposed structures.
	Lateral migration	Surface waters	Medium	Low	Moderate/ Low	Contaminants in groundwater may migrate to nearby surface water bodies. However, the risk to the Canal is considered to be low given it is unlikely to be in hydraulic continuity with groundwater.
Off-site sources (associated with the wider factory site)	Migration of contaminants from the wider site area to beneath Block H.	Future site users	Medium	Low	Moderate/ Low	The site's long historical use as a factory means that the wider groundwater quality may have been impacted including on other phases.
		Groundwater (Principal Aquifer)	Medium	Low	Moderate/ Low	Although site investigation works on the wider site identified elevated organic and metal contamination in the shallow groundwater, further monitoring found that the groundwater concentrations were noted to decrease over time.
		On-site buildings and structures	Medium	Low	Moderate/ Low	Migration of mobile and gaseous contaminants to beneath Block H from the wider site may occur via permeable soils and groundwater.

3. MARCH 2026 GROUND INVESTIGATION

3.1 Ground Investigation Overview

The Block H geoenvironmental ground investigation (GI) described herein was undertaken by CGL in accordance with BS EN 1997-2:2007 and BS 5930:2015+A1:2020. The aim of the GI was to understand the ground and groundwater conditions, to determine the nature and extent of any contamination, if present, on site and to refine and update the preliminary risk assessment. Factual findings of the ground investigation are provided in the following sections of this report. The GI took place on the 18th and 19th of March 2026, and comprised:

- 1 day of service clearance by a specialist contractor to mark out and survey the position of the proposed exploratory hole location and clear the proposed positions for buried services using Ground Penetrating Radar (GPR) and CAT and Genny tools;
- 5 No. Trial Pits (TP201 to TP205), excavated to the maximum reach of the mini digger present on site (approx. 2mbgl), to enable the collection of geoenvironmental samples for chemical analysis.

An Exploratory Hole Location Plan is included in Appendix A. The exploratory hole logs are provided in Appendix B and photographs of the intrusive works are provided in Appendix C. Table 2 below summarises the exploratory hole location details.

Table 21. Exploratory hole location details

Location ID	*Location Type*	*Easting (m)*	*Northing (m)*	*Ground Level (mOD)*	*Final Depth (m)*	*Final Level (mOD)*	*Comments*
TP201	TP	510047.81	179173.432	31.428	2.00	29.428	Terminated due to dense gravels / encountering the maximum reach of the mini digger
TP202	TP	510062.573	179162.887	31.442	2.20	29.242	
TP203	TP	510054.701	179152.678	31.525	2.40	29.125	
TP204	TP	510039.244	179159.838	31.612	2.20	29.412	
TP205	TP	510050.981	179164.86	31.476	2.20	29.276	

Prior to breaking ground, each exploratory hole was cleared for buried services by a specialist utility contractor. The exploratory hole locations were surveyed to obtain the easting, northing and ground levels.

3.2 Geoenvironmental Laboratory Testing

Representative soil samples were submitted to a laboratory for UKAS and MCERTS accredited chemical testing, where available. Of the samples scheduled for chemical testing, 8no. samples of the Made Ground, 3no. samples of the Langley Silt Member, and 2no. samples of the Lynch Gravel Member were tested for a suite of contaminants, including heavy metals, PAHs, TPHs, phenols, BTEX compounds, cyanide, soil organic matter, pH, sulphate, and asbestos.

Additionally, 3no. Made Ground Samples underwent Waste Acceptance Criteria (WAC) testing to inform potential classification for removal of material to landfill.

2no. water samples were also collected from within the trial pits and tested for a suite of contaminants, including dissolved heavy metals, PAHs, TPHs, phenols, BTEX compounds, cyanide, dissolved organic carbon (DOC), pH, calcium, ammonium, and sulphate.

The results of chemical laboratory testing are presented in Appendix D.

4. GROUND AND GROUNDWATER CONDITIONS

4.1 Ground Conditions

The exploratory holes encountered geology that was generally consistent with the ground conditions anticipated from previous investigations and BGS mapping. The ground investigation encountered hardstanding, overlying, in turn, Made Ground, Langley Silt Member and the Lynch Hill Gravel Member (see Table 3). The London Clay Formation was not encountered due to the depths of trial pit termination, but the top surface has been confirmed as 5.3 to 5.7 mbgl in the previous phase of works[6].

Table 3. Summary of geological stratigraphy and ground conditions

Stratum description	*Level of Top of Stratum (mbgl) [mOD]*	*Typical Thickness (m)*
Tarmac TP203 – Grey tiles (1cm thick) found present as a layer at the base of the tarmac hardstanding. **[HARDSTANDING]**	0.00 [31.5]	0.10
Brown slightly clayey gravelly SAND to sandy GRAVEL. Gravel is angular to subrounded, fine to coarse cobbles, of brick, flint, aggregate, porcelain, minor grass and roots **[MADE GROUND]**	0.10 [31.4]	0.40 to 0.70
Brown to orange-brown, slightly to very gravelly sandy to very sandy CLAY. Sand is fine to coarse. Gravel is angular to subrounded, fine to coarse, of flint. Minor black staining present in TP204 and TP205. **[LANGLEY SILT MEMBER]**	0.50 to 0.80 [30.9 to 30.6]	0.80 to 1.80
Orange-brown gravelly to very gravelly SAND to very sandy GRAVEL. Gravel is angular to subangular, fine to coarse, of flint. Sand is fine to coarse, predominantly coarse. **[LYNCH GRAVEL MEMBER]**	1.50 to 2.10 [30.0 to 29.4]	Base not proven

4.1.1 Made Ground

Made Ground was encountered in all exploratory holes with a proven thickness of 0.50m to 0.80m. The top depth of Made Ground was encountered beneath the hardstanding at 0.10mbgl (31.4 mOD). Made Ground was typically described as a brown slightly clayey gravelly sand to sandy gravel. The gravel comprised brick, flint, aggregate and porcelain. No visual or olfactory evidence of contamination was noted, although anthropogenic material such as brick and porcelain was common and a layer of tiles was encountered at the base of the tarmac in TP203.

4.1.2 Langley Silt Member

The Langley Silt Member was encountered in all exploratory holes except TP203. A proven thickness of 0.80m to 1.80m was encountered. Top depths of Langley Silt Member were recorded at 0.50mbgl to 0.80mbgl (30.90 to 30.60 mOD).

The Langley Silt Member was typically described as a brown to orange-brown slightly to very gravelly sandy to very sandy clay. Minor black staining was present in TP204 and TP205. This staining is considered to be natural. No visual or olfactory evidence of contamination was noted.

4.1.3 Lynch Hill Gravel Member

The Lynch Gravel Member was encountered in all exploratory holes between 1.50mbgl and 2.10m bgl (30.0 to 29.4mOD). The base of the stratum was not proven during this investigation.

The Lynch Gravel Member was typically described as an orange-brown, gravelly to very gravelly sand to very sandy gravel.

4.2 Groundwater

During this phase of investigation, 2no. samples of groundwater were collected for chemical analysis. Both samples were collected from the bucket of the mini digger after water pooled at the base of the trial pits (all pits were no-man-entry). Samples taken in this manner have the potential for loss of more volatile contaminants and are potentially subject to cross-contamination. They are, therefore, not considered to fully represent in-situ conditions. Nevertheless, they were obtained to provide a preliminary indication of groundwater conditions and to assist with environmental characterisation.

1no. water sample was taken from TP205, where water was observed to percolate from the Made Ground, along the top surface of the more cohesive Langley Silt Member (0.50mbgl), into the base of the trial pit and is considered to comprise perched water.

An additional water sample was taken from TP202, where the trial pit was wet at the base (2.20mbgl, 29.242mOD) upon encountering the Lynch Hill Gravel Member and, based on the depth, is likely to comprise water from within the shallow aquifer.

No groundwater monitoring standpipes have been installed within the footprint of Block H to date. CGL have therefore reviewed the following reports which provide an indication of the groundwater level across the site.

- Nestle Hayes – Phase 1C Geoenvironmental and Geotechnical Interpretive Report – CGL (2020)[2];

- Nestle Hayes – Phase 5 Geoenvironmental and Geotechnical Interpretive Report – CGL (2021)[3];
- Nestle Hayes – Phase 4 Geoenvironmental and Geotechnical Interpretive Report – CGL (2022)[4].

The Phase 1C 2020 ground investigation found the groundwater level within the Lynch Gravel member to range from 0.6mbgl and 1.1mbgl (30.40mOD and 29.90mOD). In Phase 5 (2021 ground investigation), the groundwater level ranged from 1mbgl and 3mbgl (30.2mOD and 28.28mOD) and in Phase 4 (2022 ground investigation) it was recorded between 29.7mOD and 28.7mOD.

The groundwater levels recorded within the Lynch Hill Gravel Member are generally consistent across the wider site, typically in the region of 29.5mOD to 30.0mOD. This is consistent with the recent CGL findings on Block H.

5. CONTAMINATION ASSESSMENT

5.1 Introduction

This section evaluates risks to potential receptors at the site from identified chemical contamination. Potential receptors have been determined with reference to the Part 2A regime and associated Defra guidance. As with the Part 2A regime, under the planning regime all receptors (humans, controlled waters, ecology, crops/livestock and buildings) should be considered if there is the potential for them to be adversely affected by exposure to contamination.

5.2 Soil Contamination

The results of the laboratory testing have been compared against generic assessment criteria (GAC) derived in-house by CGL for a 'residential – public open space' land use. These GACs assess the chronic risk from long-term exposure to quantify the risk to future site users.

The results of the contamination assessments provided in Appendix E indicate that there were no recorded exceedances of contaminants above the GAC for a 'residential – public open space' end land use.

7no. samples of Made Ground underwent testing for asbestos. Asbestos was not detected in any of the samples.

5.3 Ground Gas

To date, no ground gas monitoring standpipes have been installed within the footprint of Block H. *CL:AIRE Research Bulletin 17: A Pragmatic Approach to Ground Gas Risk Assessment*[17] has therefore been used to evaluate ground gas risk. This approach is justified for "Made Ground up to 5m depth with a low organic content." which is consistent with site conditions. The results of this assessment have been considered alongside the findings of previous monitoring across the wider site

Table 4 below outlines the calculations for a Characteristic Scenario value within Block H.

[17] CL:AIRE (Nov. 2012). Research Bulletin 17 (RB17). A Pragmatic Approach to Ground Gas Risk Assessment. ISSN 2047-6450.

Table 4. Calculation of Characteristic Scenario after CL:AIRE Research Bulletin 1717.

Location	Sample	Depth (mbgl)	Soil Organic Matter (%)	Total Organic Carbon % (SOM/1.72)	Average Total Organic Carbon	Characteristic Situation
TP201	ES1	0.40	2.00	1.16 (1.2)[1]	1.17	Characteristic Scenario 2 (CS2) based on a limiting value of ≤1.0% TOC (see discussion below)
TP201	ES2	0.70	0.90	0.52		
TP204	ES1	0.30	2.90	1.69		
TP204	ES2	0.70	2.90	1.69		
TP203	ES1	0.50	1.20	0.70 (0.7)		
TP205	ES1	0.30	2.90	1.69		
	ES2	0.60	0.90	0.52		
TP202	ES1	0.30	2.40	1.40		

Note: TOC in brackets taken from WAC results

The site conforms to Characteristic Situation (CS) 2 on the basis of the soil analytical results, as the maximum recorded TOC was 1.69% which exceeds the limiting value of 1.0% in RB17. However, the average TOC value is only marginally in excess and the assessment has conservatively assumed that all of the TOC is degradable, which is unlikely to be the case for the Made Ground soils identified below the site. Close inspection of the logs does not indicate the presence of significant degradable material within the Made Ground which has been described as predominantly granular in nature, with no visual or odours evidence of contamination or organic material. It is further noted that less than 1m of Made Ground has been encountered during the ground investigation works and much of this material is likely to be stripped during site preparation works. With regards to the natural soils, the underlying Langley Silt and Lynch Hill Gravel deposits are not organic in nature and are not considered to pose a significant source of soil gas.

In addition, gas monitoring on other phases of the wider factory site has noted no significant gas risk, with conditions conforming to CS1, even where a greater thickness of Made Ground has been recorded.

In view of the above lines of evidence, it is considered that assigning a Characteristic Situation of CS1 is appropriate for Block H.

5.4 Buried Water Supply Pipes

The risk to buried water supply pipes has been assessed from the chemical laboratory testing, which has been compared against the UKWIR thresholds for water pipe supply. The results are outlined in Appendix E, which notes an exceedance of the criteria for various TPH fractions from samples within the Made Ground, as well as potentially aggressive pH conditions.

5.5 Plants and Vegetation

The risk to vegetation and plants from phytotoxic contaminants present within the Made Ground has been assessed from the 8no. Made Ground samples taken from Block H, and is presented within Table 5 below. Exceedances are noted for copper and zinc.

Table 5. Potential soil risk to vegetation and plants

Determinant	Assessment Criteria (mg/kg)	Measured range (mg/kg)	Measured range > Assessment Criteria? (Yes / No)
Copper[18]	135	22 - 140	Yes (TP203, ES1, 0.5mbgl, 140mg/kg)
Zinc[18]	200	57 - 410	Yes (TP203, ES1, 0.5mbgl, 410mg/kg TP204, ES1, 0.3mbgl, 210mg/kg TP204, ES2, 0.7mbgl, 210mg/kg)
Nickel[18]	75	18 - 23	No
Boron (water soluble)[19]	5	<2.5	No

5.6 Groundwater

The previous investigations undertaken for the wider site showed that, although an initial risk to controlled waters was noted as part of the Geosyntec investigation[9], continued monitoring showed measured contaminant concentrations decreased over time and that groundwater concentrations across the site no longer presented an unacceptable risk.

As part of the current investigation, 2no. grab samples of groundwater were collected for chemical analysis. One sample was taken from TP205, where water was observed to percolate out of the Made Ground (0.50mbgl) and the second was taken from TP202, where the trial pit was wet at the base (2.20mbg). This sample is considered to potentially represent groundwater within the Lynch Hill Gravel Member.

The results of the groundwater chemical testing were compared to Environmental Quality Standards (EQS) and Drinking Water Values (DWVs) as presented in Appendix E.

The sample taken from TP205 (Made Ground) noted exceedances of both EQS and DWV for certain PAHs, namely benzo[a]pyrene, benzo[b]fluoranthene, benzo[ghi]perylene, benzo[k]fluoranthene,

[18] BSI, (2015). *Specification for topsoil and requirements for use. BS 3882:2015*. Values taken for pH 6-7
[19] Limit for phytotoxic effect. Nable, Banuelos and Paul, (1997). *Boron Toxicity*. Plant and Soil, Volume 193, pp 181-198

indeno[1,2,3,-cd]pyrene, and some aromatic petroleum hydrocarbons (EC12 to C16). Additionally, there were exceedances for sulphate, anthracene and fluoranthene compared to the EQS.

The sample taken from TP202 (Lynch Gravel Member) showed exceedances of both EQS and DWV for benzo[a]pyrene, benzo[b]fluoranthene, benzo[ghi]perylene, benzo[k]fluoranthene, indeno[1,2,3,-cd]pyrene. Additionally, there were exceedances for sulphate, anthracene and fluoranthene compared to EQS. There was no exceedance for aromatic hydrocarbons.

5.7 Groundwater vapours

The risk of vapours from groundwater has been assessed by comparing the groundwater chemical laboratory results against the groundwater vapour GACs derived by the Society of Brownfield Risk Assessment (SoBRA)[20]. The assessment is presented in Appendix E.

The dissolved phase concentrations of volatile compounds were below the groundwater vapour GACs.

5.8 Updated CSM and risk assessment

An updated CSM and risk assessment has been produced based on the findings of the ground investigation and is presented in Table 6 below. The risk assessment methodology is included in Appendix F.

Table 6. Updated qualitative risk assessment.

Potential Source/Medium	*Potential Exposure Route*	*Potential Receptor*	*Severity*	*Probability*	*Risk Rating*	*Comments*
Made Ground / shallow soils	Direct and indirect ingestion of soil and dust, inhalation of gases, vapours, particulates and dermal contact.	Construction workers	Medium	Low	Moderate / Low	Generally, low concentrations of contaminants have been observed and asbestos has not been detected.
		Future site users	Medium	Unlikely	Low	No exceedances of the relevant GAC for chronic human health risk have been identified. Additionally, no asbestos has been detected in the shallow soils.
		Neighbours	Medium	Unlikely	Low	
	Direct contact	Buildings & services	Medium	Likely	Moderate	Elevated concentrations of petroleum hydrocarbons have been noted with respect to the assessment criteria for water supply pipes along with potentially aggressive pH conditions.
	Root uptake	Vegetation and plants	Mild	Low	Moderate / Low	Phytotoxic concentrations of copper and zinc have been

[20] Society of Brownfield Risk Assessment (2017) Development of Generic Assessment Criteria for Assessing Vapour Risks to Human Health from Volatile Contaminants in Groundwater. Version 1.0. February 2017.

Potential Source/Medium	*Potential Exposure Route*	*Potential Receptor*	*Severity*	*Probability*	*Risk Rating*	*Comments*
						noted in the shallow soil samples.
	Vertical migration of soluble contaminants via permeable soils	Groundwater (Principal Aquifer)	Medium	Unlikely	Low	There is a limited extent of Made Ground across the site and no visual or olfactory evidence of contamination has been identified.
		Surface waters	Medium	Unlikely	Low	Limited extent of Made Ground and no evidence of significant contamination noted in shallow soils. Reduced risk to Canal given the limited hydraulic connection to groundwater.
Ground gases and vapours associated with the Made Ground.	Inhalation of gases and vapours	Construction workers	Medium	Unlikely	Low	No sources of soil gas or vapour have been identified during the investigation.
	Inhalation of gases and vapours. Migration of gases/vapours via permeable soils.	Future site users	Medium	Unlikely	Low	No sources of soil gas or vapour have been identified during the investigation. TOC concentrations and MG thickness indicate a low risk from soil gas.
		Buildings and structures	Medium	Unlikely	Low	
Organic / inorganic contaminants within groundwater.	Direct contact and ingestion of contaminated groundwater	Future site users	Medium	Unlikely	Low	Pathway is limited by hardstanding and depth of groundwater.
		Construction workers	Medium	Low	Moderate / Low	There is a potential for contact with groundwater during below ground works. Risks can be mitigated through appropriate health and safety measures & PPE.
	Inhalation of vapours	Future site users	Medium	Unlikely	Low	No sources of vapour have been identified during the investigation. No exceedances of the groundwater vapour GACs have been identified.
	Lateral migration	Surface waters	Medium	Unlikely	Low	Significant groundwater contamination has not been identified during this investigation.
Off-site sources (associated with the wider factory site)	Migration of contaminants from the wider site area beneath Block H.	Future site users	Medium	Unlikely	Low	The previous investigations and the findings of this investigation do not indicate significant impact from the wider factory site.
		Groundwater (Principal Aquifer)	Medium	Unlikely	Low	
		On-site buildings and structures	Medium	Unlikely	Low	

In summary, the updated risk assessment further to the recent intrusive investigation has identified the following:

- A moderate risk to underground services from shallow soil contamination;
- A moderate/low risk has been identified for construction workers and new plants and vegetation as a result of shallow soil contamination;
- A moderate/low risk has is noted to construction workers from shallow groundwater contamination.

6. REMEDIATION RECOMMENDATIONS

6.1 Discovery strategy

It is recommended that a watching brief is maintained by the Contractor during all below-ground works. Should unexpected gross contamination be encountered (e.g., oily material or any material of an unusual odour or colour), the following discovery strategy is recommended:

1. Work to cease and the area to be made safe;

2. The Contractor shall assess the need for any immediate health and safety or environmental management controls to be implemented. Appropriate measures shall be taken to prevent the spread of contamination or exposure to site personnel and the environment, pending further assessment;

3. Notify the Geoenvironmental Engineer to attend site, inspect the findings and take samples as necessary;

4. Subject to the findings, the regulatory bodies (e.g. Local Authority, Environment Agency or Healty & Safety Executive) may need to be notified, particularly if the findings cannot be dealt with in accordance with the principles set out in this remediation strategy or require health, safety or environmental controls beyond those anticipated (e.g. if licensable work in relation to asbestos; a significant unidentified source is encountered (e.g. a buried tank); presence of unexploded ordnance etc.);

5. Samples will be obtained, as necessary, by the Geoenvironmental Engineer for subsequent laboratory analysis. Subject to findings, this may require delineation of the area in question or further monitoring;

6. Following an assessment of the risks posed, a strategy for remediation, including the protection of health, safety and the environment, shall be prepared; and

7. Detailed records, including photographs, duty of care records, daily record sheets etc. shall be maintained for verification purposes and will be incorporated into the final Verification Report.

6.2 Growth medium

On the basis of the available data, an engineered capping layer for the protection of human health is not required. However, phytotoxic contaminants have been identified in the shallow soil and given the proposals for landscaping, a suitable growth medium for plants will be required. The thickness of the

growth medium should be to the specification of the landscape architect but is anticipated to comat least 150mm thick.

Any soils imported as part of this growth medium should be accompanied by source certificates and pre-delivery laboratory testing. Following delivery to the site, additional testing should be undertaken at an appropriate frequency. Nominally, a minimum of one sample should be tested per 250m^3 for greenfield sources and one per 50m^3 for brownfield sources, with a minimum of three samples per material / source. However, the sample frequency may be reduced where sufficient pre-delivery source data is provided and where subsequent on-site inspection confirms suitable and homogeneous material has been supplied to site. Imported topsoil and subsoil should conform to the requirements of BS 3882:2015 and BS 8601:2013, respectively.

6.3 Imported earthworks material

Source certification should be provided for all imported earthworks materials to confirm that it is coming from a reputable source and comprises non-waste material. For recycled aggregate produced under the WRAP protocol this should include a copy of the Factory Production Control Manual. Additional post-delivery analysis and sampling should also be undertaken at a recommended minimum frequency of one sample per 500m^3.

6.4 Buried services

Standard polyethylene (PE) pipes are unlikely to be suitable for water supply pipes placed within the Made Ground and therefore barrier pipes may be required. Potentially aggressive pH conditions have also been identified. The water pipe specification should be confirmed with the local water supply company prior to the commencement of the development.

Given that the site lies within a wider former factory site, it is recommended that services trenches should incorporate low permeability clay baffles at the site boundary as a minimum to prevent migration of contaminants / gases from the wider site. These baffles should be at least 1m in length along the trench and must seal around the service.

6.5 Asbestos

While no ACMs were identified during this phase of works, asbestos has been recorded within the Made Ground in the wider site. As such, if visual pieces of ACM (including tiles/cement board) are encountered, it is recommended that an appropriately licensed contractor is appointed to segregate and remove such

visual fragments from the soil, in accordance with current regulations[21] and guidance[22, 23] under controlled conditions, and disposed of as hazardous waste.

6.6 Health and safety

All site works should be undertaken in accordance with guidelines prepared by the Health and Safety Executive (HSE, 1991)[24], CIRIA Report 132[25] and CIRIA C650[26]. All work should be carried out in accordance with the Contractor's Construction Health and Safety Plan.

During the redevelopment, precautions should be undertaken to minimise exposure of workers and the general public to potentially harmful substances. Attention should also be paid to restricting possible off-site nuisances such as dust and odour emissions. Such precautions should include, but not be limited to:

1. Personal hygiene, washing and changing procedures.

2. Adequate personal protective equipment, including disposable overalls, gloves and particulate filter masks/vapour respirators, where required.

3. Measures to avoid surface water ponding and positive collection and disposal of all on-site run off.

4. Regular cleaning of all site road, access roads and the public highway including dust suppression methods (e.g. water spraying), if necessary.

5. All waste haulage vehicles should be covered when leaving the site to minimise the release of airborne particulates.

6.7 Material Management

It should be noted that the management of construction waste should be carried out in accordance with the Waste (England and Wales) Regulations 2011. This places an emphasis on the waste hierarchy, which requires an avoidance of waste in the instance followed by recycling, reuse or reducing the volume that requires disposal after it has been generated.

[21] HSE. (2012). The Control of Asbestos Regulations.
[22] HSE. (2012). Managing and Working with Asbestos – Control of Asbestos Regulations – Approved code of practice and guidance.
[23] HSG247. (2006), Asbestos: The licenced contractors' guide.
[24] HSE (1991). Protection of Workers and the General Public during the development of contaminated land. Guidance Note HS(G)66, Health and Safety Executive, HMSO, 1991.
[25] CIRIA (1996). A guide for safe working on contaminated sites. Steeds JE, Shepherd E & Barry DL. CIRIA Report 132.
[26] CIRIA (2005). Environmental good practice – Site guide, 2nd Edition. CIRIA Report C650.

In order to minimise the volume of soil being disposed to landfill facilities, it is prudent to consider material management options prior to waste disposal. Screening of uncontaminated natural arisings may permit recycling/reuse of the material on site or for other sites under the WRAP[27] protocol (uncontaminated granular soils only) or the CL:AIRE[28] protocol and would lead to a reduction in disposal requirements.

If off-site disposal of excavated soils is unavoidable, the Contractor will be responsible for the appropriate classification of the waste.

All materials intended for off-site disposal should be transported and disposed in accordance with the Environmental Protection (Duty of Care) Regulations 1991 and the Landfill (England and Wales) Regulations 2002 (as amended). Waste legislation stipulates that hazardous and non-hazardous waste should be pre-treated prior to disposal. Pre-treatment can be undertaken either at the site of origin or may be carried out at a licensed off-site facility and can include selective segregation of soils conducted on site.

Soil samples were screened for asbestos during the ground investigation and no asbestos was identified in any of the samples. However, it is noted that due to previous phases of demolition and the long industrial site history, the presence of Asbestos Containing Materials (ACMs) within the Made Ground cannot be discounted and this should be considered during the discovery strategy (ref. Section 6.1). During earthworks, if any suspected ACMs are encountered these should be sampled and tested to confirm appropriate safe methods of working and suitable disposal routes.

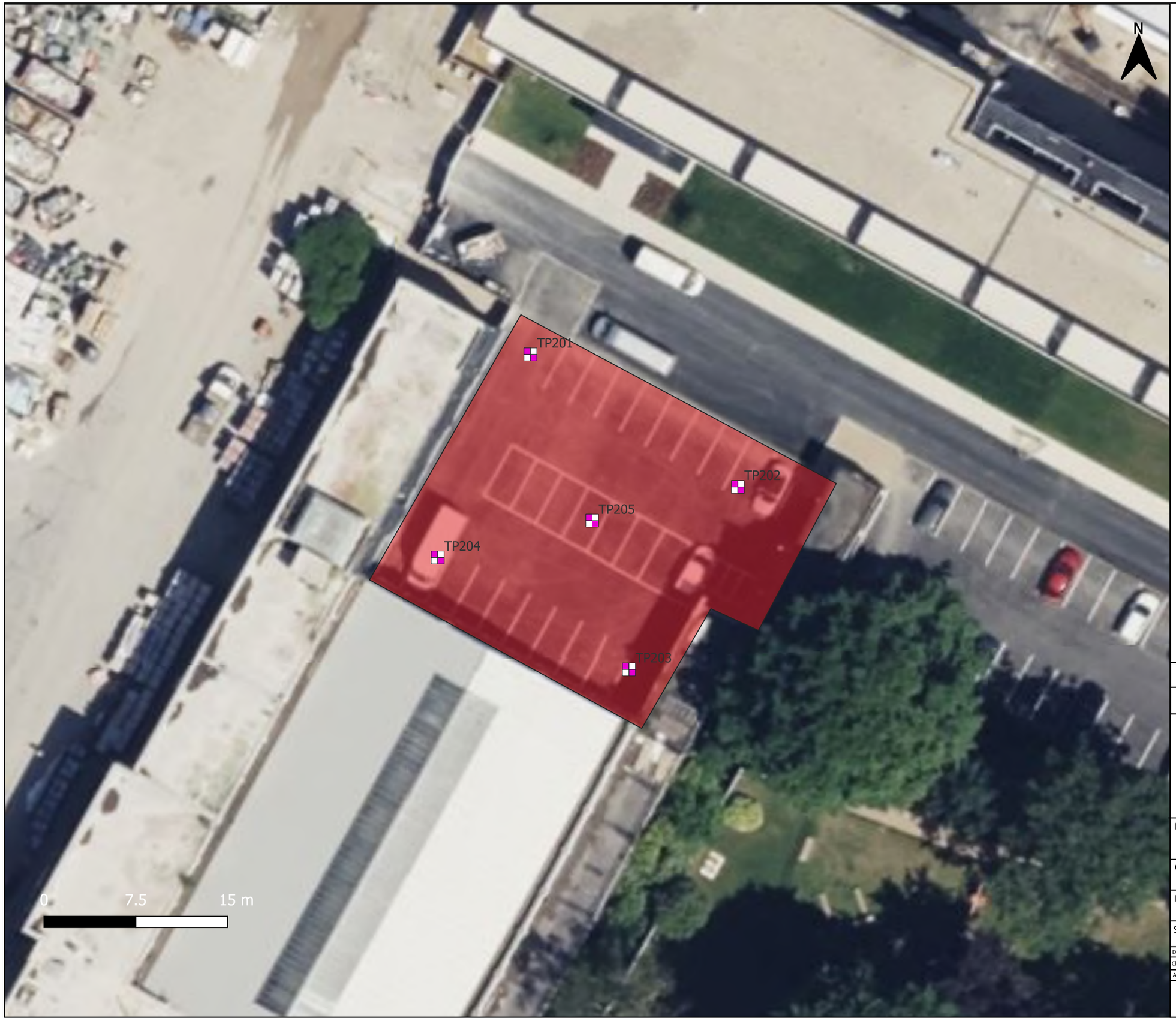
6.8 Verification plan

On completion of the works, a Verification Report will need to be prepared, detailing the works undertaken to address the risks that have been identified. A verification plan is outlined in Appendix G which sets out the documentation and responsibilities associated with each element of the remediation works.

[27] WRAP. (2013) The Quality Protocol. Aggregates from Inert Waste.
[28] CL:AIRE (2011). The Definition of Waste: Development Industry Code of Practice. Version 2.

APPENDIX A

Exploratory Hole Location Plan



KEY

- tp
- Site Boundary

Bing Aerial

Rev	Date	Comments
0	13/03/2026	NA

Card Geotechnics Ltd
12 Melcombe Place
London
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T:020 3096 7567

Project	Nestle Hayes Village - Block H
Client	Barratt London
Drawing title	Site Plan
Scale(s)	
Job no.	CGL/10526A
Drawn	SW 13/03/2026
Checked	JB 13/03/2026
Approved	MC 13/03/2026
Dwg No.	CGL/10526A-A1
Rev.	0

APPENDIX B

Exploratory Hole Logs

Project Title: Nestle Hayes Village - Block H - Environmental Trial Pitting		Status: **FINAL**	Location ID **TP201**
Client: Barratt West London			
Location Type: Trial pit/trench			
Coords: 510047.810E/179173.432N	Level: 31.428m		
		Final Depth:	**2.00 m**
Orientation: 0°	Inclination: 90°		
Date Start: 18/03/2026	Date End: 18/03/2026		

Card Geotechnics Limited,
The Jellicoe,
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London,
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Sheet 1 of 1

Method and Plant Used				Groundwater		
From (m)	To (m)	Type	Plant Used	Strike (m)	Time (min)	Rose To
0.00	2.00	TP	Mini Digger			

Samples & Tests			Water Level (m)	Legend	Strata Depth (m)	Level (m)	Strata Description	Inst/ Backfill	Depth (m)
Sample Depth (m)	Type/ Ref	Tests/Results							
					0.10	31.33	Tarmac hardstanding [MADE GROUND]		
0.40	ES 1						Brown slightly clayey sandy GRAVEL. Gravel is angular to subangular, fine to cobbles (up to 15cm), of flint, brick, and aggregate. Sand is fine to coarse. Localised nodules of brown clay. [MADE GROUND]		
0.70	ES 2				0.75	30.68			
							Brown very gravelly very sandy CLAY. Sand is fine to coarse. Gravel is angular to subrounded, fine to coarse, of flint. [LANGLEY SILT MEMBER]		
					1.50	29.93			
1.70	ES 3						Orange-brown very gravelly SAND. Sand is fine to coarse, predominantly coarse. Gravel is angular to subrounded, fine to coarse, of flint. [LYNCH HILL GRAVEL MEMBER]		
					2.00	29.43			
							EOH at 2.00m - Achieved maximum reach of digger.		

Notes:

1. Location scanned by specialist utilities contractor prior to commencing excavation.
2. Position terminated at maximum reach of mini-digger
3. No groundwater encountered.
4. Position not installed
5. Position backfilled with arisings upon completion
6. bgl- below ground level, EOH- end of hole, ES- environmental sample for chemical testing.

Soakaway Tests			
Test No.	Date	Duration (hh:mm)	Infiltration Rate

Pit Details			
Stability	Shoring	Length (m)	Width (m)
Stable	N/A - no man entry	2.00	0.50

Scale: 1:25

Logged By: JAK
Checked By: CSL
Approved By: DG

Section ID:

CGL Reference
CGL/10526A

Project Title: Nestle Hayes Village - Block H - Environmental Trial Pitting	Status:	Location ID
Client: Barratt West London	**FINAL**	**TP202**

Method and Plant Used				Groundwater		
From (m)	To (m)	Type	Plant Used	Strike (m)	Time (min)	Rose To
0.00	2.20	TP	Mini digger	2.20	-	-

Location Type: Trial pit/trench

Coords: 510062.573E/179162.887N Level: 31.442m

Final Depth: **2.20 m**

Orientation: 0° Inclination: 90°

Date Start: 19/03/2026 Date End: 19/03/2026

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Samples & Tests			Water Level (m)	Legend	Strata Depth (m)	Level (m)	Strata Description	Inst/ Backfill	Depth (m)
Sample Depth (m)	Type/ Ref	Tests/Results							
					0.10	31.34	Tarmac hardstanding [MADE GROUND]		
0.30	ES 1						Brown slightly clayey gravelly SAND. Sand is fine to coarse. Gravel is angular to subrounded, fine to coarse cobbles, of flint, brick and aggregate. [MADE GROUND]		
					0.50	30.94	*from 0.40 to 0.60m bgl - Concrete obstruction. Stepped from 0.4m to 0.5m. Appeared to be a relict foundation or pile cap. Trial pit was pulled back to the west to avoid obstruction.*		
0.60	ES 2						Brown to orange brown slighty gravelly very sandy CLAY. Sand is fine to coarse. Gravel is angular to subrounded, fine to coarse, of flint. [LANGLEY SILT MEMBER]		
1.00	ES 3						*0.50m bgl - Cast-iron redundant piping approx 14cm in diameter present within concrete obstruction, perpendicular to tarmac hardstanding.*		1
					2.10	29.34			
2.10	ES 4								
2.20	EW 1		▼		2.20	29.24	Orange-brown very sandy GRAVEL. Gravel is angular to subangular, fine to coarse, of flint. Sand is fine to coarse. [LYNCH HILL GRAVEL MEMBER]		2
							EOH at 2.20m - Achieved maximum reach of digger.		3
									4
									5

Notes:

1. Location scanned by specialist utilities contractor prior to commencing excavation.
2. Position terminated at maximum reach of mini-digger
3. Groundwater encountered at base of trial pit (wet at base).
4. Position not installed
5. Position backfilled with arisings upon completion
6. bgl- below ground level, EOH- end of hole, ES- environmental sample for chemical testing.

Soakaway Tests			
Test No.	Date	Duration (hh:mm)	Infiltration Rate

Pit Details			
Stability	Shoring	Length (m)	Width (m)
Stable	N/A - no man entry	2.00	0.50

Scale: 1:25

Logged By: JAK
Checked By: CSL
Approved By: DG

Section ID:

CGL Reference
CGL/10526A

Project Title: Nestle Hayes Village - Block H - Environmental Trial Pitting		Status: **FINAL**	Location ID **TP203**
Client: Barratt West London			
Location Type: Trial pit/trench			
Coords: 510054.701E/179152.678N	Level: 31.525m		
		Final Depth:	**2.40 m**
Orientation: 0°	Inclination: 90°		
Date Start: 18/03/2026	Date End: 18/03/2026		

Card Geotechnics Limited,
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Method and Plant Used				Groundwater		
From (m)	To (m)	Type	Plant Used	Strike (m)	Time (min)	Rose To
0.00	2.40	TP	Mini digger			

Samples & Tests			Water Level (m)	Legend	Strata Depth (m)	Level (m)	Strata Description	Inst/ Backfill	Depth (m)
Sample Depth (m)	Type/ Ref	Tests/Results							
					0.10	31.42	Tarmac hardstanding [MADE GROUND]		
0.50	ES 1				0.60	30.92	Brown to orange-brown slightly clayey gravelly SAND. Sand is fine to coarse. Gravel is angular to subrounded, fine to coarse cobbles, of flint, aggregate and minor brick. [MADE GROUND] *0.10m bgl - Grey Tiles (1cm thick) present at the base of tarmac hardstanding.*		
1.00	ES 2						Orange-brown slightly gravelly sandy CLAY. Sand is fine to coarse, mottled grey in places. Gravel is angular to subrounded, fine to coarse, of flint. [LANGLEY SILT MEMBER]		1
2.00	ES 3				2.40	29.12			2
							EOH at 2.40m - Achieved maximum reach of digger.		3
									4
									5

Notes:

1. Location scanned by specialist utilities contractor prior to commencing excavation.
2. Position terminated at maximum reach of mini-digger
3. No groundwater encountered.
4. Position not installed
5. Position backfilled with arisings upon completion
6. bgl- below ground level, EOH- end of hole, ES- environmental sample for chemical testing.

Soakaway Tests

Test No.	Date	Duration (hh:mm)	Infiltration Rate

Pit Details

Stability	Shoring	Length (m)	Width (m)
Stable	N/A - no man entry	2.00	0.50

Scale: 1:25

Logged By:	JAK
Checked By:	CSL
Approved By:	DG
Section ID:	

CGL Reference
CGL/10526A

Project Title: Nestle Hayes Village - Block H - Environmental Trial Pitting	Status:	Location ID
Client: Barratt West London	**FINAL**	**TP204**

Method and Plant Used				Groundwater		
From (m)	To (m)	Type	Plant Used	Strike (m)	Time (min)	Rose To
0.00	2.20	TP	Mini digger			

Location Type: Trial pit/trench

Coords: 510039.244E/179159.838N Level: 31.612m

Final Depth: **2.20 m**

Orientation: 0° Inclination: 90°

Date Start: 18/03/2026 Date End: 18/03/2026

Card Geotechnics Limited,
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Samples & Tests			Water Level (m)	Legend	Strata Depth (m)	Level (m)	Strata Description	Inst/ Backfill	Depth (m)
Sample Depth (m)	Type/ Ref	Tests/Results							
					0.10	31.51	Tarmac hardstanding [MADE GROUND]		
0.30	ES 1						Brown very sandy GRAVEL. Sand is fine to coarse. Gravel is angular to subrounded, fine to coarse cobbles, of brick, flint, aggregate and porcelain. [MADE GROUND]		
0.70	ES 2				0.80	30.81			
							Orange-brown to brown slightly gravelly sandy CLAY. Sand is fine to coarse. Gravel is angular to subrounded, fine to coarse, of flint. Minor black staining present throughout (natural). [LANGLEY SILT MEMBER]		1
1.50	ES 3				1.90	29.71			
2.10	ES 4				2.20	29.41	Orange-brown very sandy GRAVEL. Gravel is angular to subangular, fine to coarse, of flint. Sand is fine to coarse. [LYNCH HILL GRAVEL MEMBER]		2
							EOH at 2.20m - Achieved maximum reach of digger.		3
									4
									5

Notes:

1. Location scanned by specialist utilities contractor prior to commencing excavation.
2. Position terminated at maximum reach of mini-digger
3. No groundwater encountered.
4. Position not installed
5. Position backfilled with arisings upon completion
6. bgl- below ground level, EOH- end of hole, ES- environmental sample for chemical testing.

Soakaway Tests			
Test No.	Date	Duration (hh:mm)	Infiltration Rate

Pit Details			
Stability	Shoring	Length (m)	Width (m)
Stable	N/A - no man entry	2.00	0.50

Scale: 1:25

Logged By: JAK
Checked By: CSL
Approved By: DG

Section ID:

CGL Reference
CGL/10526A

Project Title: Nestle Hayes Village - Block H - Environmental Trial Pitting	Status:	Location ID
Client: Barratt West London	**FINAL**	**TP205**

Method and Plant Used				Groundwater		
From (m)	To (m)	Type	Plant Used	Strike (m)	Time (min)	Rose To
0.00	2.20	TP	Mini digger	0.50	-	-

Location Type: Trial pit/trench

Coords: 510050.981E/179164.860N Level: 31.476m

Final Depth: **2.20 m**

Orientation: 0° Inclination: 90°

Date Start: 19/03/2026 Date End: 19/03/2026

Card Geotechnics Limited,
The Jellicoe,
5 Beaconsfield Street,
King's Cross,
London,
N1C 4EW
www.cgl-uk.com

Samples & Tests			Water Level (m)	Legend	Strata Depth (m)	Level (m)	Strata Description	Inst/ Backfill	Depth (m)
Sample Depth (m)	Type/ Ref	Tests/Results							
					0.10	31.38	Tarmac hardstanding [MADE GROUND]		
0.30	ES 1						Brown to dark brown clayey gravelly SAND. Sand is fine to coarse. Gravel is fine to coarse cobbles, of flint, brick, aggregate and minor glass and roots. [MADE GROUND]		
0.50	EW 1		▼				*0.50m bgl - Very minor perched water. No visual or olfactory indication of contamination.*		
0.60	ES 2				0.65	30.83			
							Orange-brown to brown sandy gravelly CLAY. Gravel is angular to subrounded, fine to coarse, of flint. Sand is fine to coarse. Minor black staining present throughout (natural). [LANGLEY SILT MEMBER]		1
1.60	ES 3								
					2.00	29.48			2
2.10	ES 4				2.20	29.28	Orange-brown gravelly SAND. Sand is fine to coarse, predominantly coarse. Gravel is angular to subrounded, fine to coarse, of flint. [LYNCH HILL GRAVEL MEMBER]		
							EOH at 2.20m - Achieved maximum reach of digger.		3
									4
									5

Notes:

1. Location scanned by specialist utilities contractor prior to commencing excavation.
2. Position terminated at maximum reach of mini-digger
3. Perched groundwater encountered at 0.5mbgl.
4. Position not installed
5. Position backfilled with arisings upon completion
6. bgl- below ground level, EOH- end of hole, ES- environmental sample for chemical testing.

Soakaway Tests			
Test No.	Date	Duration (hh:mm)	Infiltration Rate

Pit Details			
Stability	Shoring	Length (m)	Width (m)
Stable	N/A - no man entry	2.00	0.50

Scale: 1:25

Logged By: JAK
Checked By: CSL
Approved By: DG

Section ID:

CGL Reference
CGL/10526A

APPENDIX C

Photo Sheet

PHOTO SHEET

Date	Job No	Made by	Checked by	Sheet No
18/03/2026 – 19/03/2026	CGL/10526A	JAK	CSL/DG	1

TP201 arisings (Made Ground)

TP201 arisings (Made Ground)

TP201 arisings (Lynch Gravel Member)

TP201 arisings (Made Ground)

TP201 arisings (Lynch Gravel Member)

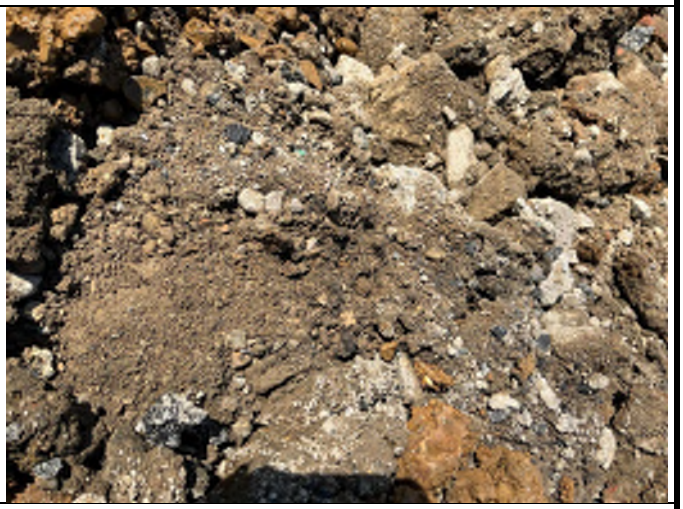
TP201 Trial Pit

Date	Job No	Made by	Checked by	Sheet No
18/03/2026 – 19/03/2026	CGL/10526A	JAK	CSL/DG	2

TP202 concrete obstruction, TP was pulled back to the west to avoid obstruction

TP202, 'Step' in concrete obstruction

TP202 relict cast-iron piping



TP202 arisings (Made Ground)

Date	Job No	Made by	Checked by	Sheet No
18/03/2026 – 19/03/2026	CGL/10526A	JAK	CSL/DG	3

TP202 complete trial pit

TP202 arisings (Langley Silt Member)

TP202 arisings (Langley Silt Member)

TP202 arisings (Lynch Gravel Member)

Date	Job No	Made by	Checked by	Sheet No
18/03/2026 – 19/03/2026	CGL/10526A	JAK	CSL/DG	4

TP203 tiling found immediately below hardstanding

TP203 Made Ground

TP203 breaking out of hardstanding

TP203 tiling fond immediately below hardstanding

Date	Job No	Made by	Checked by	Sheet No
18/03/2026 – 19/03/2026	CGL/10526A	JAK	CSL/DG	5

TP203 arisings (Langley Silt Member)

TP203 arisings (Langley Silt Member)

TP203 arisings (Langley Silt Member)

TP203 overview

Date	Job No	Made by	Checked by	Sheet No
18/03/2026 – 19/03/2026	CGL/10526A	JAK	CSL/DG	6

TP204 arisings (Made Ground)

TP204 arisings (Langley Silt Member)

TP204 arisings (Lynch Gravel Member)

TP204 overview

Date	Job No	Made by	Checked by	Sheet No
18/03/2026 – 19/03/2026	CGL/10526A	JAK	CSL/DG	7

TP205 arisings (Made Ground)

TP205 arisings (Made Ground)

TP205 arisings (Made Ground)

TP205 arisings (Langley Silt Member)

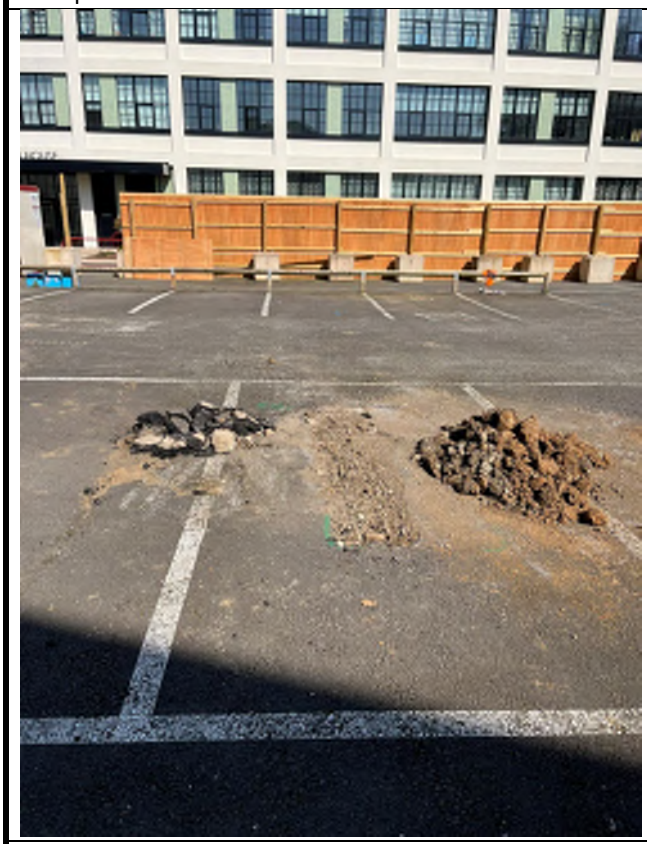
TP205 arisings (Langley Silt Member)

TP205 arisings (Lynch Gravel Member)

Date	Job No	Made by	Checked by	Sheet No
18/03/2026 – 19/03/2026	CGL/10526A	JAK	CSL/DG	8

Trial pit reinstatement

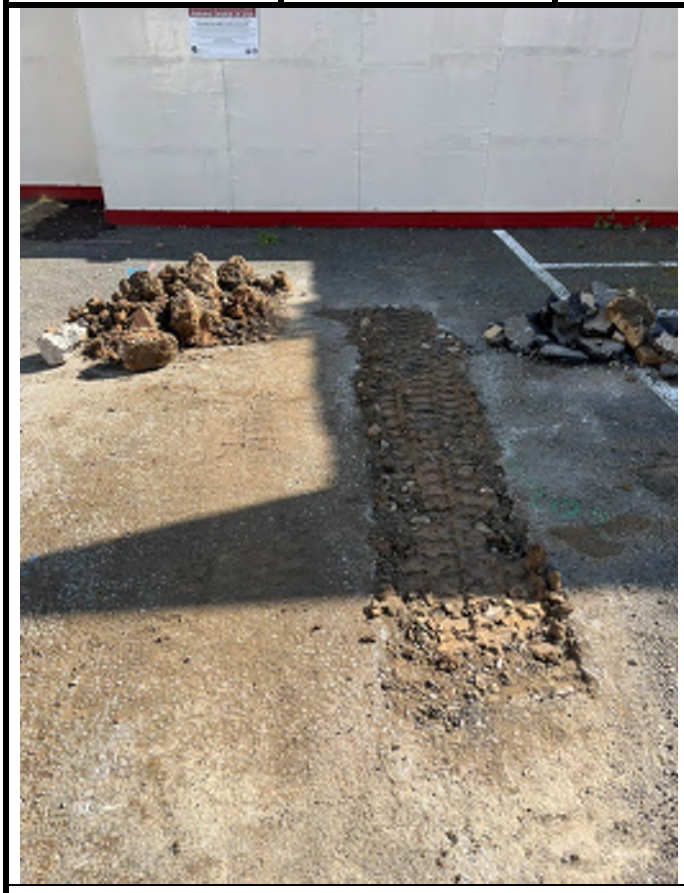
Trial pit reinstatement



Trial pit reinstatement

Trial pit reinstatement

Date	Job No	Made by	Checked by	Sheet No
18/03/2026 – 19/03/2026	CGL/10526A	JAK	CSL/DG	9



Trial pit reinstatement

Block H access for minidigger

APPENDIX D

Chemical Testing Results

Analytical Test Report	**E26/04010/CGL/26-12615- Amendment A**	**Tested on Behalf of**
Clients Project Reference	CGL/10526A Nestle Hayes	Card Geotechnics Limited
Clients Order Number	POP019291	5 Beaconsfield Street,
Sample(s) Analysed	15	London
Sample(s) received / instructed	24/03/2026 / 24/03/2026	
Sample(s) Tested	24/03/2026 to 02/04/2026	
Report issued	09/04/2026	N1C 4EW
Report issue number	2	

Signed

James Gane
Analytical Services Manager

Notes:

General

Amendment A 09/04/2026- Report amended to amend client sample type

This report shall not be reproduced except in full

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples were supplied by customer, results apply to the samples as received.

Samples will be retained for 14 days after issue of this report with the exception of the asbestos test portion which is held for 6 months unless otherwise requested.

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30˚C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Stone Content was determined in accordance with CTS method statement MS - CL - Sample Prep and refers to the percentage of stones retained on a 10mm BS test sieve.

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

Please note: Where further analysis is required, samples identified as containing asbestos are screened and tested on an as received basis. No correction is made for moisture content and other than the asbestos test(s) these results are not covered by our accreditation.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

U = UKAS Accreditation, M = MCERTS Accreditation, N = Unaccredited, SC = Subcontracted

DOC, Chloride, Sulphate : UKAS only covers the following water matrices: Surface Water and Groundwater

Total and Dissolved metals: UKAS only covers the following water matrices: Surface Water, Potable Water, Recreational Waters (Swimming Pool and Spas), Process Water (Closed Hot and Cold Water Systems and Groundwater

Anions (by IC), Ammonia, pH and Conductivity: UKAS only covers the following water matrices: Surface Water, Potable Water, Recreational Waters (Swimming Pool and Spas), Process Water (Closed Hot and Cold Water Systems) and Groundwater

Total Suspended Solids: UKAS only covers the following water matrices: Surface Water, Process Water (Closed Hot and Cold Water Systems), Recreational Waters (Swimming Pool and Spas) and Groundwater

E26/04010/CGL/26-12615- Amendment A

CGL/10526A Nestle Hayes

Analytical Test Results - ENV Analysis Solids

Lab Reference					740470	740471	740472
Client Sample ID					1	2	1
Client Sample Location					TP201	TP201	TP204
Client Sample Type					ES	ES	ES
Client Sample Number					-	-	-
Depth - Top (m)					0.4	0.9	0.3
Depth - Bottom (m)					0.4	0.9	0.3
Date of Sampling					18/03/2026	18/03/2026	18/03/2026
Time of Sampling					-	-	-
Sample Matrix					Sand	Clay	Sand
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Antimony	ICPMETS	mg/kg	3.5	N	5.0	< 3.5	5.8
Arsenic	ICPMETS	mg/kg	10	M	< 10	11	< 10
Barium	ICPMETS	mg/kg	2	M	150	74	200
Beryllium	ICPMETS	mg/kg	0.2	M	0.6	0.8	0.5
Boron (Water Soluble)	WSBORONS	mg/kg	2.5	N	< 2.5	< 2.5	< 2.5
Cadmium	ICPMETS	mg/kg	0.2	M	0.7	0.8	0.6
Chromium (III)	ICPMETS	mg/kg	1	N	16	17	15
Chromium (Total)	ICPMETS	mg/kg	1	U	17	18	16
Copper	ICPMETS	mg/kg	2	M	37	24	38
Lead	ICPMETS	mg/kg	1.5	M	110	33	120
Mercury	ICPMETS	mg/kg	2.5	U	< 2.5	< 2.5	< 2.5
Nickel	ICPMETS	mg/kg	1	M	20	23	19
Selenium	ICPMETS	mg/kg	8	N	< 8.0	< 8.0	< 8.0
Vanadium	ICPMETS	mg/kg	0.5	U	41	51	37
Zinc	ICPMETS	mg/kg	2	M	170	57	210
Total Phenols	SKALARPHS	mg/kg	1	M	< 1.0	< 1.0	< 1.0
Cyanide (Total)	SKALARCNS	mg/kg	1	M	< 1.0	< 1.0	< 1.0
Chromium (Hexavalent)	SKALARHCS	mg/kg	1	N	< 1.0	< 1.0	< 1.0
Acid Soluble Sulphate	ASSO4S	%	0.01	N	0.42	0.04	0.70
pH	PHS	pH units	1	M	11.1	9.0	11.0
SOM	TOCS	%	0.86	U	2.0	< 0.9	2.9
Asbestos	ASB	p/a	-	U	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Acenaphthene	PAHASRDS	mg/kg	0.02	M	< 0.20	< 0.02	0.23
Acenaphthylene	PAHASRDS	mg/kg	0.02	U	< 0.20	< 0.02	< 0.20
Anthracene	PAHASRDS	mg/kg	0.02	U	< 0.20	< 0.02	0.56
Benzo[a]anthracene	PAHASRDS	mg/kg	0.02	M	0.61	< 0.02	1.8
Benzo[a]pyrene	PAHASRDS	mg/kg	0.02	M	0.52	< 0.02	1.4
Benzo[b]fluoranthene	PAHASRDS	mg/kg	0.02	M	0.47	< 0.02	1.3
Benzo[ghi]perylene	PAHASRDS	mg/kg	0.02	M	0.41	< 0.02	0.87
Benzo[k]fluoranthene	PAHASRDS	mg/kg	0.02	M	< 0.20	< 0.02	0.64
Chrysene	PAHASRDS	mg/kg	0.02	M	0.50	< 0.02	1.3
Dibenzo[a,h]anthracene	PAHASRDS	mg/kg	0.02	M	< 0.20	< 0.02	0.24
Fluoranthene	PAHASRDS	mg/kg	0.02	M	1.3	< 0.02	2.7
Fluorene	PAHASRDS	mg/kg	0.02	M	< 0.20	< 0.02	0.23

Date of Issue: 21.01.25
Issued by: J. Gane
Issue No: 1
Rev No: 9

Testing performed at
7-11 Harding Street, Leicester, LE1 4DH

UKAS TESTING 4161
MCERTS

E26/04010/CGL/26-12615- Amendment A

CGL/10526A Nestle Hayes

Analytical Test Results - ENV Analysis Solids

Lab Reference					740473	740474	740475
Client Sample ID					2	3	4
Client Sample Location					TP204	TP204	TP204
Client Sample Type					ES	ES	ES
Client Sample Number					-	-	-
Depth - Top (m)					0.7	1.5	2.1
Depth - Bottom (m)					0.7	1.5	2.1
Date of Sampling					18/03/2026	18/03/2026	18/03/2026
Time of Sampling					-	-	-
Sample Matrix					Sand	Clay	Sand
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Antimony	ICPMETS	mg/kg	3.5	N	5.3	< 3.5	< 3.5
Arsenic	ICPMETS	mg/kg	10	M	< 10	< 10	11
Barium	ICPMETS	mg/kg	2	M	200	67	73
Beryllium	ICPMETS	mg/kg	0.2	M	0.6	0.6	0.9
Boron (Water Soluble)	WSBORONS	mg/kg	2.5	N	< 2.5	< 2.5	< 2.5
Cadmium	ICPMETS	mg/kg	0.2	M	0.7	0.6	0.8
Chromium (III)	ICPMETS	mg/kg	1	N	16	11	12
Chromium (Total)	ICPMETS	mg/kg	1	U	17	12	13
Copper	ICPMETS	mg/kg	2	M	39	14	17
Lead	ICPMETS	mg/kg	1.5	M	120	23	24
Mercury	ICPMETS	mg/kg	2.5	U	< 2.5	< 2.5	< 2.5
Nickel	ICPMETS	mg/kg	1	M	19	18	20
Selenium	ICPMETS	mg/kg	8	N	< 8.0	< 8.0	< 8.0
Vanadium	ICPMETS	mg/kg	0.5	U	39	35	41
Zinc	ICPMETS	mg/kg	2	M	210	78	94
Total Phenols	SKALARPHS	mg/kg	1	M	< 1.0	< 1.0	< 1.0
Cyanide (Total)	SKALARCNS	mg/kg	1	M	< 1.0	< 1.0	< 1.0
Chromium (Hexavalent)	SKALARHCS	mg/kg	1	N	< 1.0	< 1.0	< 1.0
Acid Soluble Sulphate	ASSO4S	%	0.01	N	0.69	0.03	0.05
pH	PHS	pH units	1	M	10.9	8.6	8.6
SOM	TOCS	%	0.86	U	2.9	< 0.9	< 0.9
Asbestos	ASB	p/a	-	U	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Acenaphthene	PAHASRDS	mg/kg	0.02	M	0.10	< 0.02	< 0.02
Acenaphthylene	PAHASRDS	mg/kg	0.02	U	0.13	< 0.02	< 0.02
Anthracene	PAHASRDS	mg/kg	0.02	U	0.44	< 0.02	< 0.02
Benzo[a]anthracene	PAHASRDS	mg/kg	0.02	M	1.6	< 0.02	0.05
Benzo[a]pyrene	PAHASRDS	mg/kg	0.02	M	1.3	< 0.02	0.05
Benzo[b]fluoranthene	PAHASRDS	mg/kg	0.02	M	1.1	< 0.02	0.05
Benzo[ghi]perylene	PAHASRDS	mg/kg	0.02	M	0.78	< 0.02	0.04
Benzo[k]fluoranthene	PAHASRDS	mg/kg	0.02	M	0.55	< 0.02	0.02
Chrysene	PAHASRDS	mg/kg	0.02	M	1.2	< 0.02	0.04
Dibenzo[a,h]anthracene	PAHASRDS	mg/kg	0.02	M	0.19	< 0.02	< 0.02
Fluoranthene	PAHASRDS	mg/kg	0.02	M	2.7	< 0.02	0.11
Fluorene	PAHASRDS	mg/kg	0.02	M	0.12	< 0.02	< 0.02

Date of Issue: 21.01.25
Issued by: J. Gane
Issue No: 1
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Testing performed at
7-11 Harding Street, Leicester, LE1 4DH

4161

E26/04010/CGL/26-12615- Amendment A

CGL/10526A Nestle Hayes

Analytical Test Results - ENV Analysis Solids

Lab Reference					740476	740477	740478
Client Sample ID					1	3	1
Client Sample Location					TP203	TP203	TP205
Client Sample Type					ES	ES	ES
Client Sample Number					-	-	-
Depth - Top (m)					0.5	2	0.3
Depth - Bottom (m)					0.5	2	0.3
Date of Sampling					18/03/2026	18/03/2026	19/03/2026
Time of Sampling					-	-	-
Sample Matrix					Sand	Clay	Clay
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Antimony	ICPMETS	mg/kg	3.5	N	3.8	< 3.5	5.3
Arsenic	ICPMETS	mg/kg	10	M	12	17	12
Barium	ICPMETS	mg/kg	2	M	220	62	190
Beryllium	ICPMETS	mg/kg	0.2	M	0.8	1.4	0.8
Boron (Water Soluble)	WSBORONS	mg/kg	2.5	N	< 2.5	< 2.5	< 2.5
Cadmium	ICPMETS	mg/kg	0.2	M	0.8	1.0	0.9
Chromium (III)	ICPMETS	mg/kg	1	N	12	22	15
Chromium (Total)	ICPMETS	mg/kg	1	U	13	23	16
Copper	ICPMETS	mg/kg	2	M	140	15	47
Lead	ICPMETS	mg/kg	1.5	M	170	13	140
Mercury	ICPMETS	mg/kg	2.5	U	< 2.5	< 2.5	< 2.5
Nickel	ICPMETS	mg/kg	1	M	20	30	21
Selenium	ICPMETS	mg/kg	8	N	< 8.0	< 8.0	< 8.0
Vanadium	ICPMETS	mg/kg	0.5	U	40	61	44
Zinc	ICPMETS	mg/kg	2	M	410	53	190
Total Phenols	SKALARPHS	mg/kg	1	M	< 1.0	< 1.0	< 1.0
Cyanide (Total)	SKALARCNS	mg/kg	1	M	< 1.0	< 1.0	< 1.0
Chromium (Hexavalent)	SKALARHCS	mg/kg	1	N	< 1.0	< 1.0	< 1.0
Acid Soluble Sulphate	ASSO4S	%	0.01	N	0.15	0.02	0.15
pH	PHS	pH units	1	M	11.3	6.7	9.9
SOM	TOCS	%	0.86	U	1.2	< 0.9	2.9
Asbestos	ASB	p/a	-	U	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Acenaphthene	PAHASRDS	mg/kg	0.02	M	< 0.20	< 0.02	0.12
Acenaphthylene	PAHASRDS	mg/kg	0.02	U	< 0.20	< 0.02	0.10
Anthracene	PAHASRDS	mg/kg	0.02	U	0.67	< 0.02	0.49
Benzo[a]anthracene	PAHASRDS	mg/kg	0.02	M	1.3	< 0.02	1.5
Benzo[a]pyrene	PAHASRDS	mg/kg	0.02	M	1.1	< 0.02	1.2
Benzo[b]fluoranthene	PAHASRDS	mg/kg	0.02	M	0.90	< 0.02	1.1
Benzo[ghi]perylene	PAHASRDS	mg/kg	0.02	M	0.70	< 0.02	0.71
Benzo[k]fluoranthene	PAHASRDS	mg/kg	0.02	M	0.43	< 0.02	0.51
Chrysene	PAHASRDS	mg/kg	0.02	M	0.94	< 0.02	1.0
Dibenzo[a,h]anthracene	PAHASRDS	mg/kg	0.02	M	< 0.20	< 0.02	0.21
Fluoranthene	PAHASRDS	mg/kg	0.02	M	3.4	< 0.02	3.0
Fluorene	PAHASRDS	mg/kg	0.02	M	< 0.20	< 0.02	0.14

Date of Issue: 21.01.25
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Issue No: 1
Rev No: 9

Testing performed at
7-11 Harding Street, Leicester, LE1 4DH

UKAS TESTING 4161
MCERTS

E26/04010/CGL/26-12615- Amendment A

CGL/10526A Nestle Hayes

Analytical Test Results - ENV Analysis Solids

Lab Reference					740479	740480	740482
Client Sample ID					2	3	1
Client Sample Location					TP205	TP205	TP202
Client Sample Type					ES	ES	ES
Client Sample Number					-	-	-
Depth - Top (m)					0.6	1.6	0.3
Depth - Bottom (m)					0.6	1.6	0.3
Date of Sampling					19/03/2026	19/03/2026	19/03/2026
Time of Sampling					-	-	-
Sample Matrix					Clay	Clay	Sand
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Antimony	ICPMETS	mg/kg	3.5	N	< 3.5	< 3.5	4.1
Arsenic	ICPMETS	mg/kg	10	M	< 10	< 10	10
Barium	ICPMETS	mg/kg	2	M	99	90	170
Beryllium	ICPMETS	mg/kg	0.2	M	0.8	0.6	0.6
Boron (Water Soluble)	WSBORONS	mg/kg	2.5	N	< 2.5	< 2.5	< 2.5
Cadmium	ICPMETS	mg/kg	0.2	M	0.7	0.7	0.7
Chromium (III)	ICPMETS	mg/kg	1	N	13	11	13
Chromium (Total)	ICPMETS	mg/kg	1	U	14	12	14
Copper	ICPMETS	mg/kg	2	M	22	23	35
Lead	ICPMETS	mg/kg	1.5	M	50	61	480
Mercury	ICPMETS	mg/kg	2.5	U	< 2.5	< 2.5	< 2.5
Nickel	ICPMETS	mg/kg	1	M	21	19	18
Selenium	ICPMETS	mg/kg	8	N	< 8.0	< 8.0	< 8.0
Vanadium	ICPMETS	mg/kg	0.5	U	42	37	38
Zinc	ICPMETS	mg/kg	2	M	77	81	180
Total Phenols	SKALARPHS	mg/kg	1	M	< 1.0	< 1.0	< 1.0
Cyanide (Total)	SKALARCNS	mg/kg	1	M	< 1.0	< 1.0	< 1.0
Chromium (Hexavalent)	SKALARHCS	mg/kg	1	N	< 1.0	< 1.0	< 1.0
Acid Soluble Sulphate	ASSO4S	%	0.01	N	0.05	0.04	0.46
pH	PHS	pH units	1	M	8.3	8.4	10.2
SOM	TOCS	%	0.86	U	< 0.9	1.3	2.4
Asbestos	ASB	p/a	-	U	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Acenaphthene	PAHASRDS	mg/kg	0.02	M	0.04	< 0.02	< 0.20
Acenaphthylene	PAHASRDS	mg/kg	0.02	U	0.04	< 0.02	< 0.20
Anthracene	PAHASRDS	mg/kg	0.02	U	0.18	< 0.02	< 0.20
Benzo[a]anthracene	PAHASRDS	mg/kg	0.02	M	0.47	0.08	1.0
Benzo[a]pyrene	PAHASRDS	mg/kg	0.02	M	0.37	0.08	0.84
Benzo[b]fluoranthene	PAHASRDS	mg/kg	0.02	M	0.35	0.06	0.90
Benzo[ghi]perylene	PAHASRDS	mg/kg	0.02	M	0.20	0.05	0.67
Benzo[k]fluoranthene	PAHASRDS	mg/kg	0.02	M	0.16	0.02	0.41
Chrysene	PAHASRDS	mg/kg	0.02	M	0.31	0.07	0.72
Dibenzo[a,h]anthracene	PAHASRDS	mg/kg	0.02	M	0.03	< 0.02	< 0.20
Fluoranthene	PAHASRDS	mg/kg	0.02	M	1.1	0.13	1.5
Fluorene	PAHASRDS	mg/kg	0.02	M	0.03	< 0.02	< 0.20

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Testing performed at
7-11 Harding Street, Leicester, LE1 4DH

E26/04010/CGL/26-12615- Amendment A

CGL/10526A Nestle Hayes

Analytical Test Results - ENV Analysis Solids

Lab Reference					740483
Client Sample ID					4
Client Sample Location					TP202
Client Sample Type					ES
Client Sample Number					-
Depth - Top (m)					2.1
Depth - Bottom (m)					2.1
Date of Sampling					19/03/2026
Time of Sampling					-
Sample Matrix					Clay
Determinant	**Code**	**Units**	**LOD**	**Accreditation**	
Antimony	ICPMETS	mg/kg	3.5	N	< 3.5
Arsenic	ICPMETS	mg/kg	10	M	10
Barium	ICPMETS	mg/kg	2	M	100
Beryllium	ICPMETS	mg/kg	0.2	M	0.9
Boron (Water Soluble)	WSBORONS	mg/kg	2.5	N	< 2.5
Cadmium	ICPMETS	mg/kg	0.2	M	0.8
Chromium (III)	ICPMETS	mg/kg	1	N	14
Chromium (Total)	ICPMETS	mg/kg	1	U	15
Copper	ICPMETS	mg/kg	2	M	14
Lead	ICPMETS	mg/kg	1.5	M	33
Mercury	ICPMETS	mg/kg	2.5	U	< 2.5
Nickel	ICPMETS	mg/kg	1	M	24
Selenium	ICPMETS	mg/kg	8	N	< 8.0
Vanadium	ICPMETS	mg/kg	0.5	U	43
Zinc	ICPMETS	mg/kg	2	M	56
Total Phenols	SKALARPHS	mg/kg	1	M	< 1.0
Cyanide (Total)	SKALARCNS	mg/kg	1	M	< 1.0
Chromium (Hexavalent)	SKALARHCS	mg/kg	1	N	< 1.0
Acid Soluble Sulphate	ASSO4S	%	0.01	N	0.04
pH	PHS	pH units	1	M	8.6
SOM	TOCS	%	0.86	U	< 0.9
Asbestos	ASB	p/a	-	U	No Asbestos Detected
Acenaphthene	PAHASRDS	mg/kg	0.02	M	< 0.02
Acenaphthylene	PAHASRDS	mg/kg	0.02	U	< 0.02
Anthracene	PAHASRDS	mg/kg	0.02	U	< 0.02
Benzo[a]anthracene	PAHASRDS	mg/kg	0.02	M	0.03
Benzo[a]pyrene	PAHASRDS	mg/kg	0.02	M	0.02
Benzo[b]fluoranthene	PAHASRDS	mg/kg	0.02	M	0.02
Benzo[ghi]perylene	PAHASRDS	mg/kg	0.02	M	< 0.02
Benzo[k]fluoranthene	PAHASRDS	mg/kg	0.02	M	< 0.02
Chrysene	PAHASRDS	mg/kg	0.02	M	< 0.02
Dibenzo[a,h]anthracene	PAHASRDS	mg/kg	0.02	M	< 0.02
Fluoranthene	PAHASRDS	mg/kg	0.02	M	0.05
Fluorene	PAHASRDS	mg/kg	0.02	M	< 0.02

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Testing performed at
7-11 Harding Street, Leicester, LE1 4DH

E26/04010/CGL/26-12615- Amendment A

CGL/10526A Nestle Hayes

Analytical Test Results - ENV Analysis Solids

Lab Reference					740470	740471	740472
Client Sample ID					1	2	1
Client Sample Location					TP201	TP201	TP204
Client Sample Type					ES	ES	ES
Client Sample Number					-	-	-
Depth - Top (m)					0.4	0.9	0.3
Depth - Bottom (m)					0.4	0.9	0.3
Date of Sampling					18/03/2026	18/03/2026	18/03/2026
Time of Sampling					-	-	-
Sample Matrix					Sand	Clay	Sand
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Indeno[1,2,3,-cd]pyrene	PAHASRDS	mg/kg	0.02	M	0.29	< 0.02	0.75
Naphthalene	PAHASRDS	mg/kg	0.02	M	< 0.20	< 0.02	0.23
Phenanthrene	PAHASRDS	mg/kg	0.02	M	0.70	< 0.02	1.9
Pyrene	PAHASRDS	mg/kg	0.02	M	1.2	< 0.02	3.3
Total PAH (Sum of USEPA 16)	PAHASRDS	mg/kg	0.32	U	6.6	< 0.32	18
Coronene	PAHASRDS	mg/kg	0.02	N	< 0.20	< 0.02	< 0.20
Total PAH (Sum of 17)	PAHASRDS	mg/kg	0.34	N	6.8	< 0.34	18

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E26/04010/CGL/26-12615- Amendment A

CGL/10526A Nestle Hayes

Analytical Test Results - ENV Analysis Solids

Lab Reference					740473	740474	740475
Client Sample ID					2	3	4
Client Sample Location					TP204	TP204	TP204
Client Sample Type					ES	ES	ES
Client Sample Number					-	-	-
Depth - Top (m)					0.7	1.5	2.1
Depth - Bottom (m)					0.7	1.5	2.1
Date of Sampling					18/03/2026	18/03/2026	18/03/2026
Time of Sampling					-	-	-
Sample Matrix					Sand	Clay	Sand
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Indeno[1,2,3,-cd]pyrene	PAHASRDS	mg/kg	0.02	M	0.78	< 0.02	0.02
Naphthalene	PAHASRDS	mg/kg	0.02	M	0.06	< 0.02	< 0.02
Phenanthrene	PAHASRDS	mg/kg	0.02	M	1.5	< 0.02	0.05
Pyrene	PAHASRDS	mg/kg	0.02	M	2.7	< 0.02	0.11
Total PAH (Sum of USEPA 16)	PAHASRDS	mg/kg	0.32	U	15	< 0.32	0.57
Coronene	PAHASRDS	mg/kg	0.02	N	0.15	< 0.02	< 0.02
Total PAH (Sum of 17)	PAHASRDS	mg/kg	0.34	N	15	< 0.34	0.59

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CGL/10526A Nestle Hayes

Analytical Test Results - ENV Analysis Solids

Lab Reference					740476	740477	740478
Client Sample ID					1	3	1
Client Sample Location					TP203	TP203	TP205
Client Sample Type					ES	ES	ES
Client Sample Number					-	-	-
Depth - Top (m)					0.5	2	0.3
Depth - Bottom (m)					0.5	2	0.3
Date of Sampling					18/03/2026	18/03/2026	19/03/2026
Time of Sampling					-	-	-
Sample Matrix					Sand	Clay	Clay
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Indeno[1,2,3,-cd]pyrene	PAHASRDS	mg/kg	0.02	M	0.53	< 0.02	0.78
Naphthalene	PAHASRDS	mg/kg	0.02	M	0.37	< 0.02	0.13
Phenanthrene	PAHASRDS	mg/kg	0.02	M	3.2	< 0.02	1.8
Pyrene	PAHASRDS	mg/kg	0.02	M	2.7	< 0.02	2.6
Total PAH (Sum of USEPA 16)	PAHASRDS	mg/kg	0.32	U	17	< 0.32	15
Coronene	PAHASRDS	mg/kg	0.02	N	< 0.20	< 0.02	0.14
Total PAH (Sum of 17)	PAHASRDS	mg/kg	0.34	N	17	< 0.34	15

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Testing performed at
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E26/04010/CGL/26-12615- Amendment A

CGL/10526A Nestle Hayes

Analytical Test Results - ENV Analysis Solids

Lab Reference					740479	740480	740482
Client Sample ID					2	3	1
Client Sample Location					TP205	TP205	TP202
Client Sample Type					ES	ES	ES
Client Sample Number					-	-	-
Depth - Top (m)					0.6	1.6	0.3
Depth - Bottom (m)					0.6	1.6	0.3
Date of Sampling					19/03/2026	19/03/2026	19/03/2026
Time of Sampling					-	-	-
Sample Matrix					Clay	Clay	Sand
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Indeno[1,2,3,-cd]pyrene	PAHASRDS	mg/kg	0.02	M	0.21	0.04	0.56
Naphthalene	PAHASRDS	mg/kg	0.02	M	< 0.02	< 0.02	< 0.20
Phenanthrene	PAHASRDS	mg/kg	0.02	M	0.75	0.06	0.57
Pyrene	PAHASRDS	mg/kg	0.02	M	0.88	0.15	1.8
Total PAH (Sum of USEPA 16)	PAHASRDS	mg/kg	0.32	U	5.1	0.79	9.4
Coronene	PAHASRDS	mg/kg	0.02	N	0.05	< 0.02	< 0.20
Total PAH (Sum of 17)	PAHASRDS	mg/kg	0.34	N	5.2	0.80	9.6

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Testing performed at
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E26/04010/CGL/26-12615- Amendment A

CGL/10526A Nestle Hayes

Analytical Test Results - ENV Analysis Solids

Lab Reference					740483
Client Sample ID					4
Client Sample Location					TP202
Client Sample Type					ES
Client Sample Number					-
Depth - Top (m)					2.1
Depth - Bottom (m)					2.1
Date of Sampling					19/03/2026
Time of Sampling					-
Sample Matrix					Clay
Determinant	**Code**	**Units**	**LOD**	**Accreditation**	
Indeno[1,2,3,-cd]pyrene	PAHASRDS	mg/kg	0.02	M	< 0.02
Naphthalene	PAHASRDS	mg/kg	0.02	M	< 0.02
Phenanthrene	PAHASRDS	mg/kg	0.02	M	< 0.02
Pyrene	PAHASRDS	mg/kg	0.02	M	0.05
Total PAH (Sum of USEPA 16)	PAHASRDS	mg/kg	0.32	U	0.41
Coronene	PAHASRDS	mg/kg	0.02	N	< 0.02
Total PAH (Sum of 17)	PAHASRDS	mg/kg	0.34	N	0.43

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CGL/10526A Nestle Hayes

Analytical Test Results - EPHVPHS

Lab Reference					740470	740471	740472
Client Sample ID					1	2	1
Client Sample Location					TP201	TP201	TP204
Client Sample Type					ES	ES	ES
Client Sample Number					-	-	-
Depth - Top (m)					0.4	0.9	0.3
Depth - Bottom (m)					0.4	0.9	0.3
Date of Sampling					18/03/2026	18/03/2026	18/03/2026
Time of Sampling					-	-	-
Sample Matrix					Sand	Clay	Sand
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Benzene	VPHS	mg/kg	0.01	M	< 0.01	< 0.01	< 0.01
Toluene	VPHS	mg/kg	0.01	M	< 0.01	< 0.01	< 0.01
Ethylbenzene	VPHS	mg/kg	0.01	M	< 0.01	< 0.01	< 0.01
m&p Xylene	VPHS	mg/kg	0.02	M	< 0.02	< 0.02	< 0.02
o-Xylene	VPHS	mg/kg	0.01	M	< 0.01	< 0.01	< 0.01
Methyl tert-butyl ether (MTBE)	VPHS	mg/kg	0.01	M	< 0.01	< 0.01	< 0.01
Aliphatic >C5 to C6 [5]	VPHS	mg/kg	0.06	M	< 0.06	< 0.06	< 0.06
Aliphatic >C6 to C8 [5]	VPHS	mg/kg	0.06	M	< 0.06	< 0.06	< 0.06
Aliphatic >C8 to C10 [5]	VPHS	mg/kg	0.06	M	< 0.06	< 0.06	< 0.06
Aliphatic >C10-C12 [13]	GCXGCS	mg/kg	1	M	1.1	< 1.0	< 1.0
Aliphatic >C12-C16 [13]	GCXGCS	mg/kg	1	M	7.2	< 1.0	5.0
Aliphatic >C16-C21 [13]	GCXGCS	mg/kg	1	M	21	1.2	19
Aliphatic >C21-C35 [13]	GCXGCS	mg/kg	2	M	54	2.6	58
Aliphatic >C35-C44 [13]	GCXGCS	mg/kg	5	N	14	< 5.0	16
Aromatic >C5 to C7 [6]	VPHS	mg/kg	0.01	M	< 0.01	< 0.01	< 0.01
Aromatic >C7 to C8 [6]	VPHS	mg/kg	0.01	M	< 0.01	< 0.01	< 0.01
Aromatic >C8 to C10 [6]	VPHS	mg/kg	0.06	M	< 0.06	< 0.06	< 0.06
Aromatic >C10-C12 [14]	GCXGCS	mg/kg	1	M	< 1.0	< 1.0	< 1.0
Aromatic >C12-C16 [14]	GCXGCS	mg/kg	1	M	< 1.0	< 1.0	< 1.0
Aromatic >C16-C21 [14]	GCXGCS	mg/kg	1	M	11	6.4	15
Aromatic >C21-C35 [14]	GCXGCS	mg/kg	2	M	65	< 2.0	85
Aromatic >C35-C44 [14]	GCXGCS	mg/kg	5	N	26	< 5.0	36
Total >C5-C35 (Ali/Aro) [10]	CWGS	mg/kg	10	M	160	< 10	180
Total >C5-C40 (Ali/Aro) [10]	CWGS	mg/kg	10	M	190	< 10	220

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E26/04010/CGL/26-12615- Amendment A

CGL/10526A Nestle Hayes

Analytical Test Results - EPHVPHS

Lab Reference					740473	740474	740475
Client Sample ID					2	3	4
Client Sample Location					TP204	TP204	TP204
Client Sample Type					ES	ES	ES
Client Sample Number					-	-	-
Depth - Top (m)					0.7	1.5	2.1
Depth - Bottom (m)					0.7	1.5	2.1
Date of Sampling					18/03/2026	18/03/2026	18/03/2026
Time of Sampling					-	-	-
Sample Matrix					Sand	Clay	Sand
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Benzene	VPHS	mg/kg	0.01	M	< 0.01	< 0.01	< 0.01
Toluene	VPHS	mg/kg	0.01	M	< 0.01	< 0.01	< 0.01
Ethylbenzene	VPHS	mg/kg	0.01	M	< 0.01	< 0.01	< 0.01
m&p Xylene	VPHS	mg/kg	0.02	M	< 0.02	< 0.02	< 0.02
o-Xylene	VPHS	mg/kg	0.01	M	< 0.01	< 0.01	< 0.01
Methyl tert-butyl ether (MTBE)	VPHS	mg/kg	0.01	M	< 0.01	< 0.01	< 0.01
Aliphatic >C5 to C6 [5]	VPHS	mg/kg	0.06	M	< 0.06	< 0.06	< 0.06
Aliphatic >C6 to C8 [5]	VPHS	mg/kg	0.06	M	< 0.06	< 0.06	< 0.06
Aliphatic >C8 to C10 [5]	VPHS	mg/kg	0.06	M	< 0.06	< 0.06	0.07
Aliphatic >C10-C12 [13]	GCXGCS	mg/kg	1	M	1.4	< 1.0	< 1.0
Aliphatic >C12-C16 [13]	GCXGCS	mg/kg	1	M	10	< 1.0	< 1.0
Aliphatic >C16-C21 [13]	GCXGCS	mg/kg	1	M	22	< 1.0	1.9
Aliphatic >C21-C35 [13]	GCXGCS	mg/kg	2	M	94	2.7	5.9
Aliphatic >C35-C44 [13]	GCXGCS	mg/kg	5	N	67	< 5.0	< 5.0
Aromatic >C5 to C7 [6]	VPHS	mg/kg	0.01	M	< 0.01	< 0.01	< 0.01
Aromatic >C7 to C8 [6]	VPHS	mg/kg	0.01	M	< 0.01	< 0.01	< 0.01
Aromatic >C8 to C10 [6]	VPHS	mg/kg	0.06	M	< 0.06	< 0.06	< 0.06
Aromatic >C10-C12 [14]	GCXGCS	mg/kg	1	M	< 1.0	< 1.0	< 1.0
Aromatic >C12-C16 [14]	GCXGCS	mg/kg	1	M	2.0	< 1.0	< 1.0
Aromatic >C16-C21 [14]	GCXGCS	mg/kg	1	M	18	6.6	5.1
Aromatic >C21-C35 [14]	GCXGCS	mg/kg	2	M	210	< 2.0	6.8
Aromatic >C35-C44 [14]	GCXGCS	mg/kg	5	N	110	< 5.0	< 5.0
Total >C5-C35 (Ali/Aro) [10]	CWGS	mg/kg	10	M	350	< 10	20
Total >C5-C40 (Ali/Aro) [10]	CWGS	mg/kg	10	M	480	< 10	25

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E26/04010/CGL/26-12615- Amendment A

CGL/10526A Nestle Hayes

Analytical Test Results - EPHVPHS

Lab Reference					740476	740477	740478
Client Sample ID					1	3	1
Client Sample Location					TP203	TP203	TP205
Client Sample Type					ES	ES	ES
Client Sample Number					-	-	-
Depth - Top (m)					0.5	2	0.3
Depth - Bottom (m)					0.5	2	0.3
Date of Sampling					18/03/2026	18/03/2026	19/03/2026
Time of Sampling					-	-	-
Sample Matrix					Sand	Clay	Clay
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Benzene	VPHS	mg/kg	0.01	M	< 0.01	< 0.01	< 0.01
Toluene	VPHS	mg/kg	0.01	M	< 0.01	< 0.01	< 0.01
Ethylbenzene	VPHS	mg/kg	0.01	M	< 0.01	< 0.01	0.01
m&p Xylene	VPHS	mg/kg	0.02	M	< 0.02	< 0.02	0.06
o-Xylene	VPHS	mg/kg	0.01	M	< 0.01	< 0.01	0.05
Methyl tert-butyl ether (MTBE)	VPHS	mg/kg	0.01	M	< 0.01	< 0.01	< 0.01
Aliphatic >C5 to C6 [5]	VPHS	mg/kg	0.06	M	< 0.06	< 0.06	< 0.06
Aliphatic >C6 to C8 [5]	VPHS	mg/kg	0.06	M	< 0.06	< 0.06	0.12
Aliphatic >C8 to C10 [5]	VPHS	mg/kg	0.06	M	< 0.06	< 0.06	1.9
Aliphatic >C10-C12 [13]	GCXGCS	mg/kg	1	M	1.2	< 1.0	38
Aliphatic >C12-C16 [13]	GCXGCS	mg/kg	1	M	6.9	< 1.0	210
Aliphatic >C16-C21 [13]	GCXGCS	mg/kg	1	M	9.2	< 1.0	250
Aliphatic >C21-C35 [13]	GCXGCS	mg/kg	2	M	10	< 2.0	91
Aliphatic >C35-C44 [13]	GCXGCS	mg/kg	5	N	7.1	< 5.0	21
Aromatic >C5 to C7 [6]	VPHS	mg/kg	0.01	M	< 0.01	< 0.01	< 0.01
Aromatic >C7 to C8 [6]	VPHS	mg/kg	0.01	M	< 0.01	< 0.01	< 0.01
Aromatic >C8 to C10 [6]	VPHS	mg/kg	0.06	M	< 0.06	< 0.06	1.1
Aromatic >C10-C12 [14]	GCXGCS	mg/kg	1	M	< 1.0	< 1.0	3.4
Aromatic >C12-C16 [14]	GCXGCS	mg/kg	1	M	2.3	< 1.0	52
Aromatic >C16-C21 [14]	GCXGCS	mg/kg	1	M	20	7.4	64
Aromatic >C21-C35 [14]	GCXGCS	mg/kg	2	M	53	< 2.0	110
Aromatic >C35-C44 [14]	GCXGCS	mg/kg	5	N	21	< 5.0	45
Total >C5-C35 (Ali/Aro) [10]	CWGS	mg/kg	10	M	100	< 10	820
Total >C5-C40 (Ali/Aro) [10]	CWGS	mg/kg	10	M	120	< 10	870

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E26/04010/CGL/26-12615- Amendment A

CGL/10526A Nestle Hayes

Analytical Test Results - EPHVPHS

Lab Reference					740479	740480	740482
Client Sample ID					2	3	1
Client Sample Location					TP205	TP205	TP202
Client Sample Type					ES	ES	ES
Client Sample Number					-	-	-
Depth - Top (m)					0.6	1.6	0.3
Depth - Bottom (m)					0.6	1.6	0.3
Date of Sampling					19/03/2026	19/03/2026	19/03/2026
Time of Sampling					-	-	-
Sample Matrix					Clay	Clay	Sand
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Benzene	VPHS	mg/kg	0.01	M	< 0.01	< 0.01	< 0.01
Toluene	VPHS	mg/kg	0.01	M	< 0.01	< 0.01	< 0.01
Ethylbenzene	VPHS	mg/kg	0.01	M	< 0.01	< 0.01	< 0.01
m&p Xylene	VPHS	mg/kg	0.02	M	< 0.02	< 0.02	< 0.02
o-Xylene	VPHS	mg/kg	0.01	M	< 0.01	< 0.01	< 0.01
Methyl tert-butyl ether (MTBE)	VPHS	mg/kg	0.01	M	< 0.01	< 0.01	< 0.01
Aliphatic >C5 to C6 [5]	VPHS	mg/kg	0.06	M	< 0.06	< 0.06	< 0.06
Aliphatic >C6 to C8 [5]	VPHS	mg/kg	0.06	M	< 0.06	< 0.06	< 0.06
Aliphatic >C8 to C10 [5]	VPHS	mg/kg	0.06	M	< 0.06	< 0.06	< 0.06
Aliphatic >C10-C12 [13]	GCXGCS	mg/kg	1	M	< 1.0	< 1.0	1.3
Aliphatic >C12-C16 [13]	GCXGCS	mg/kg	1	M	2.0	< 1.0	3.5
Aliphatic >C16-C21 [13]	GCXGCS	mg/kg	1	M	3.0	3.2	7.0
Aliphatic >C21-C35 [13]	GCXGCS	mg/kg	2	M	5.2	3.3	24
Aliphatic >C35-C44 [13]	GCXGCS	mg/kg	5	N	< 5.0	< 5.0	17
Aromatic >C5 to C7 [6]	VPHS	mg/kg	0.01	M	< 0.01	< 0.01	< 0.01
Aromatic >C7 to C8 [6]	VPHS	mg/kg	0.01	M	< 0.01	< 0.01	< 0.01
Aromatic >C8 to C10 [6]	VPHS	mg/kg	0.06	M	< 0.06	< 0.06	< 0.06
Aromatic >C10-C12 [14]	GCXGCS	mg/kg	1	M	< 1.0	< 1.0	< 1.0
Aromatic >C12-C16 [14]	GCXGCS	mg/kg	1	M	< 1.0	< 1.0	2.5
Aromatic >C16-C21 [14]	GCXGCS	mg/kg	1	M	5.9	8.8	20
Aromatic >C21-C35 [14]	GCXGCS	mg/kg	2	M	12	24	43
Aromatic >C35-C44 [14]	GCXGCS	mg/kg	5	N	< 5.0	< 5.0	27
Total >C5-C35 (Ali/Aro) [10]	CWGS	mg/kg	10	M	28	40	100
Total >C5-C40 (Ali/Aro) [10]	CWGS	mg/kg	10	M	31	40	130

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7-11 Harding Street, Leicester, LE1 4DH

E26/04010/CGL/26-12615- Amendment A

CGL/10526A Nestle Hayes

Analytical Test Results - EPHVPHS

Lab Reference					740483
Client Sample ID					4
Client Sample Location					TP202
Client Sample Type					ES
Client Sample Number					-
Depth - Top (m)					2.1
Depth - Bottom (m)					2.1
Date of Sampling					19/03/2026
Time of Sampling					-
Sample Matrix					Clay
Determinant	**Code**	**Units**	**LOD**	**Accreditation**	
Benzene	VPHS	mg/kg	0.01	M	< 0.01
Toluene	VPHS	mg/kg	0.01	M	< 0.01
Ethylbenzene	VPHS	mg/kg	0.01	M	< 0.01
m&p Xylene	VPHS	mg/kg	0.02	M	< 0.02
o-Xylene	VPHS	mg/kg	0.01	M	< 0.01
Methyl tert-butyl ether (MTBE)	VPHS	mg/kg	0.01	M	< 0.01
Aliphatic >C5 to C6 [5]	VPHS	mg/kg	0.06	M	< 0.06
Aliphatic >C6 to C8 [5]	VPHS	mg/kg	0.06	M	0.16
Aliphatic >C8 to C10 [5]	VPHS	mg/kg	0.06	M	< 0.06
Aliphatic >C10-C12 [13]	GCXGCS	mg/kg	1	M	< 1.0
Aliphatic >C12-C16 [13]	GCXGCS	mg/kg	1	M	< 1.0
Aliphatic >C16-C21 [13]	GCXGCS	mg/kg	1	M	1.1
Aliphatic >C21-C35 [13]	GCXGCS	mg/kg	2	M	3.9
Aliphatic >C35-C44 [13]	GCXGCS	mg/kg	5	N	< 5.0
Aromatic >C5 to C7 [6]	VPHS	mg/kg	0.01	M	< 0.01
Aromatic >C7 to C8 [6]	VPHS	mg/kg	0.01	M	< 0.01
Aromatic >C8 to C10 [6]	VPHS	mg/kg	0.06	M	< 0.06
Aromatic >C10-C12 [14]	GCXGCS	mg/kg	1	M	< 1.0
Aromatic >C12-C16 [14]	GCXGCS	mg/kg	1	M	< 1.0
Aromatic >C16-C21 [14]	GCXGCS	mg/kg	1	M	6.4
Aromatic >C21-C35 [14]	GCXGCS	mg/kg	2	M	3.7
Aromatic >C35-C44 [14]	GCXGCS	mg/kg	5	N	< 5.0
Total >C5-C35 (Ali/Aro) [10]	CWGS	mg/kg	10	M	15
Total >C5-C40 (Ali/Aro) [10]	CWGS	mg/kg	10	M	15

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UKAS TESTING 4161

E26/04010/CGL/26-12615- Amendment A

CGL/10526A Nestle Hayes

Certificate Of Analysis - WAC Suite

Lab Reference	**740470**
Client Sample ID	1
Client Sample Location	TP201
Client Sample Type	ES
Client Sample Number	-
Depth - Top (m)	0.4
Depth - Bottom (m)	0.4
Date of Sampling	18/03/2026
Time of Sampling	-
Sample Description	Made Ground- brown slightly clayey gravelly silty sand with occasional brick fragments bituminous ma
Sample Matrix	Sand
Moisture Content (%)	13
Stone content (%)	36

			Determined Result	**Inert Waste Landfill**	**Stable non reactive hazardous waste in a non hazardous landfill**	**Hazardous Waste Landfill**
Solid Analysis						
Total Organic Carbon	%	MCERTS	1.2	3.0	5.0	6.0
Loss on Ignition	%	UKAS	5.8	-	-	10.0
BTEX	mg/kg	MCERTS	< 0.06	6.00	-	-
PCB's (7 Congeners)	mg/kg	MCERTS	< 0.025	1.00	-	-
Mineral Oil (>C10 to C40) [EH_CU_1D_Total]	mg/kg	MCERTS	260	500	-	-
PAH	mg/kg	u	6.8	100	-	-
pH	units	MCERTS	11.1	-	> 6	-
Eluate Analysis						
Arsenic	mg/kg	UKAS	0.04	0.50	2	25
Barium	mg/kg	UKAS	0.13	20	100	300
Cadmium	mg/kg	UKAS	< 0.0025	0.04	1	5
Chromium (total)	mg/kg	UKAS	0.03	0.5	10	70
Copper	mg/kg	UKAS	0.18	2.0	50	100
Mercury	mg/kg	UKAS	0.001	0.01	0.2	2
Molybdenum	mg/kg	UKAS	0.03	0.5	10.0	30
Nickel	mg/kg	UKAS	< 0.075	0.4	10.0	40
Lead	mg/kg	UKAS	< 0.035	0.5	10.0	50
Antimony	mg/kg	UKAS	0.10	0.06	0.7	5
Selenium	mg/kg	UKAS	0.01	0.1	0.5	7
Zinc	mg/kg	u	< 0.25	4	50	200
Chloride	mg/kg	UKAS	12	800	15000	25000
Fluoride	mg/kg	u	2	10	150	500
Sulphate (as SO_4)	mg/kg	UKAS	360	1000	20000	50000
Total Dissolved Solids	mg/kg	u	2200	4000	60000	100000
Phenol Index	mg/kg	u	< 1.0	1	-	-
Dissolved Organic Carbon	mg/kg	UKAS	48.0	500	800	1000

CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

E26/04010/CGL/26-12615- Amendment A

CGL/10526A Nestle Hayes

Certificate Of Analysis - WAC Suite

Lab Reference	**740476**
Client Sample ID	1
Client Sample Location	TP203
Client Sample Type	ES
Client Sample Number	-
Depth - Top (m)	0.5
Depth - Bottom (m)	0.5
Date of Sampling	18/03/2026
Time of Sampling	-
Sample Description	Brown gravelly silty sand
Sample Matrix	Sand
Moisture Content (%)	11
Stone content (%)	14

			Determined Result	**Inert Waste Landfill**	**Stable non reactive hazardous waste in a non hazardous landfill**	**Hazardous Waste Landfill**
Solid Analysis						
Total Organic Carbon	%	MCERTS	0.7	3.0	5.0	6.0
Loss on Ignition	%	UKAS	3.6	-	-	10.0
BTEX	mg/kg	MCERTS	< 0.06	6.00	-	-
PCB's (7 Congeners)	mg/kg	MCERTS	< 0.025	1.00	-	-
Mineral Oil (>C10 to C40) [EH_CU_1D_Total]	mg/kg	MCERTS	200	500	-	-
PAH	mg/kg	u	17	100	-	-
pH	units	MCERTS	11.3	-	> 6	-
Eluate Analysis						
Arsenic	mg/kg	UKAS	0.05	0.50	2	25
Barium	mg/kg	UKAS	0.11	20	100	300
Cadmium	mg/kg	UKAS	< 0.0025	0.04	1	5
Chromium (total)	mg/kg	UKAS	0.12	0.5	10	70
Copper	mg/kg	UKAS	0.82	2.0	50	100
Mercury	mg/kg	UKAS	< 0.00050	0.01	0.2	2
Molybdenum	mg/kg	UKAS	0.03	0.5	10.0	30
Nickel	mg/kg	UKAS	< 0.075	0.4	10.0	40
Lead	mg/kg	UKAS	< 0.035	0.5	10.0	50
Antimony	mg/kg	UKAS	< 0.050	0.06	0.7	5
Selenium	mg/kg	UKAS	0.01	0.1	0.5	7
Zinc	mg/kg	u	< 0.25	4	50	200
Chloride	mg/kg	UKAS	2	800	15000	25000
Fluoride	mg/kg	u	2	10	150	500
Sulphate (as SO_4)	mg/kg	UKAS	77	1000	20000	50000
Total Dissolved Solids	mg/kg	u	3800	4000	60000	100000
Phenol Index	mg/kg	u	< 1.0	1	-	-
Dissolved Organic Carbon	mg/kg	UKAS	36.0	500	800	1000

CONSTRUCTION TESTING SOLUTIONS
A PHENNA GROUP COMPANY

E26/04010/CGL/26-12615- Amendment A

CGL/10526A Nestle Hayes

Certificate Of Analysis - WAC Suite

Lab Reference	**740478**
Client Sample ID	1
Client Sample Location	TP205
Client Sample Type	ES
Client Sample Number	-
Depth - Top (m)	0.3
Depth - Bottom (m)	0.3
Date of Sampling	19/03/2026
Time of Sampling	-
Sample Description	Made Ground- greyish brown sandy gravelly silty clay with occasional bituminous material
Sample Matrix	Clay
Moisture Content (%)	15
Stone content (%)	20

			Determined Result	**Inert Waste Landfill**	**Stable non reactive hazardous waste in a non hazardous landfill**	**Hazardous Waste Landfill**
Solid Analysis						
Total Organic Carbon	%	MCERTS	1.7	3.0	5.0	6.0
Loss on Ignition	%	UKAS	5.1	-	-	10.0
BTEX	mg/kg	MCERTS	0.1	6.00	-	-
PCB's (7 Congeners)	mg/kg	MCERTS	< 0.250	1.00	-	-
Mineral Oil (>C10 to C40) [EH_CU_1D_Total]	mg/kg	MCERTS	940	500	-	-
PAH	mg/kg	u	15	100	-	-
pH	units	MCERTS	9.9	-	> 6	-
Eluate Analysis						
Arsenic	mg/kg	UKAS	0.17	0.50	2	25
Barium	mg/kg	UKAS	0.08	20	100	300
Cadmium	mg/kg	UKAS	< 0.0025	0.04	1	5
Chromium (total)	mg/kg	UKAS	0.02	0.5	10	70
Copper	mg/kg	UKAS	0.18	2.0	50	100
Mercury	mg/kg	UKAS	0.003	0.01	0.2	2
Molybdenum	mg/kg	UKAS	0.07	0.5	10.0	30
Nickel	mg/kg	UKAS	< 0.075	0.4	10.0	40
Lead	mg/kg	UKAS	0.08	0.5	10.0	50
Antimony	mg/kg	UKAS	0.19	0.06	0.7	5
Selenium	mg/kg	UKAS	0.04	0.1	0.5	7
Zinc	mg/kg	u	< 0.25	4	50	200
Chloride	mg/kg	UKAS	43	800	15000	25000
Fluoride	mg/kg	u	3	10	150	500
Sulphate (as SO_4)	mg/kg	UKAS	210	1000	20000	50000
Total Dissolved Solids	mg/kg	u	1600	4000	60000	100000
Phenol Index	mg/kg	u	< 1.0	1	-	-
Dissolved Organic Carbon	mg/kg	UKAS	150.0	500	800	1000

E26/04010/CGL/26-12615- Amendment A

CGL/10526A Nestle Hayes

Analytical Test Results - ENV Water Suite

Lab Reference					740481	740484
Client Sample ID					1	1
Client Sample Location					TP205	TP202
Client Sample Type					EW	EW
Client Sample Number					-	-
Depth - Top (m)					0.5	2.2
Depth - Bottom (m)					0.5	2.2
Date of Sampling					19/03/2026	19/03/2026
Time of Sampling					-	-
Sample Matrix					-	-
Determinant	**Code**	**Units**	**LOD**	**Accreditation**		
Antimony (Dissolved)	ICP-MS DMW	ug/L	4	U	< 4.0	< 4.0
Arsenic (Dissolved)	ICP-MS DMW	ug/L	0.2	U	2.68	0.95
Barium (Dissolved)	ICP-MS DMW	ug/L	0.5	U	18.0	20.6
Beryllium (Dissolved)	ICP-MS DMW	ug/L	0.5	U	< 0.50	< 0.50
Boron (Dissolved)	ICP-MS DMW	ug/L	12	U	68	69
Cadmium (Dissolved)	ICP-MS DMW	ug/L	0.2	U	< 0.20	< 0.20
Calcium (Dissolved)	ICP-MS DMW	mg/L	0.06	U	78.0	64.3
Chromium (Dissolved)	ICP-MS DMW	ug/L	0.2	U	1.31	2.76
Copper (Dissolved)	ICP-MS DMW	ug/L	0.3	U	4.51	1.71
Lead (Dissolved)	ICP-MS DMW	ug/L	0.5	U	< 0.50	< 0.50
Mercury (Dissolved)	ICP-MS DMW	ug/L	0.05	U	< 0.050	< 0.050
Nickel (Dissolved)	ICP-MS DMW	ug/L	0.5	U	2.64	0.82
Selenium (Dissolved)	ICP-MS DMW	ug/L	0.5	U	1.02	2.68
Vanadium (Dissolved)	ICP-MS DMW	ug/L	0.2	U	1.08	0.46
Zinc (Dissolved)	ICP-MS DMW	ug/L	2	N	< 2.0	< 2.0
Hardness as CaCO3	ICP-MS DMW	mg/L	0.04	N	195	161
Ammonium (as N)	ANIONSWB	mgN/L	0.8	U	< 0.80	< 0.80
Cyanide (Total - Water)	SKALARCNW	ug/L	1	N	< 5.0	< 5.0
DOC	TOCW	mg/L	2	U	9.3	3.9
pH	PHW	pH units	1	U	8.3	8.2
Sulphate	ANIONSWA	mg/L	10	U	120	82
Acenaphthene	PAHSPMEW	ug/L	0.01	N	1.02	0.06
Acenaphthylene	PAHSPMEW	ug/L	0.01	N	1.58	0.47
Anthracene	PAHSPMEW	ug/L	0.01	N	1.69	0.42
Benzo[a]anthracene	PAHSPMEW	ug/L	0.01	N	5.34	1.23
Benzo[a]pyrene	PAHSPMEW	ug/L	0.01	N	7.85	2.02
Benzo[b]fluoranthene	PAHSPMEW	ug/L	0.01	N	6.81	2.24
Benzo[ghi]perylene	PAHSPMEW	ug/L	0.01	N	5.21	1.24
Benzo[k]fluoranthene	PAHSPMEW	ug/L	0.01	N	2.52	0.87
Chrysene	PAHSPMEW	ug/L	0.01	N	5.77	1.64
Dibenzo[a,h]anthracene	PAHSPMEW	ug/L	0.01	N	1.93	0.42
Fluoranthene	PAHSPMEW	ug/L	0.01	N	11.1	2.89
Fluorene	PAHSPMEW	ug/L	0.01	N	0.77	0.11
Indeno[1,2,3,-cd]pyrene	PAHSPMEW	ug/L	0.01	N	7.19	2.18

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E26/04010/CGL/26-12615- Amendment A

CGL/10526A Nestle Hayes

Analytical Test Results - ENV Water Suite

Lab Reference					740481	740484
Client Sample ID					1	1
Client Sample Location					TP205	TP202
Client Sample Type					EW	EW
Client Sample Number					-	-
Depth - Top (m)					0.5	2.2
Depth - Bottom (m)					0.5	2.2
Date of Sampling					19/03/2026	19/03/2026
Time of Sampling					-	-
Sample Matrix					-	-
Determinant	**Code**	**Units**	**LOD**	**Accreditation**		
Naphthalene	PAHSPMEW	ug/L	0.01	N	1.27	0.19
Phenanthrene	PAHSPMEW	ug/L	0.01	N	6.99	1.15
Pyrene	PAHSPMEW	ug/L	0.01	N	12.8	2.68
Total PAH (Sum of USEPA 16)	PAHSPMEW	ug/L	0.01	N	79.9	19.8
Phenol	PHOHHPLCW	ug/L	0.2	N	< 0.20	1.06

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CGL/10526A Nestle Hayes

Analytical Test Results - EPH VPH W

Lab Reference					740481	740484
Client Sample ID					1	1
Client Sample Location					TP205	TP202
Client Sample Type					EW	EW
Client Sample Number					-	-
Depth - Top (m)					0.5	2.2
Depth - Bottom (m)					0.5	2.2
Date of Sampling					19/03/2026	19/03/2026
Time of Sampling					-	-
Sample Matrix					-	-
Determinant	**Code**	**Units**	**LOD**	**Accreditation**		
Benzene	VPHW	ug/L	6	N	< 6.00	< 6.00
Toluene	VPHW	ug/L	6	N	< 6.00	< 6.00
Ethylbenzene	VPHW	ug/L	6	N	< 6.00	< 6.00
m&p Xylene	VPHW	ug/L	12	N	< 12.0	< 12.0
o-Xylene	VPHW	ug/L	6	N	< 6.00	< 6.00
Methyl tert-butyl ether (MTBE)	VPHW	ug/L	6	N	< 6.00	< 6.00
Aliphatic >C5 to C6 [5]	VPHW	ug/L	1	N	< 6.00	< 6.00
Aliphatic >C6 to C8 [5]	VPHW	ug/L	1	N	< 6.00	< 6.00
Aliphatic >C8 to C10 [5]	VPHW	ug/L	1	N	< 6.00	< 6.00
Aliphatic >C10 to C12 [8]	EPHW	ug/L	5	N	< 5.00	< 5.00
Aliphatic >C12 to C16 [8]	EPHW	ug/L	10	N	< 10.0	< 10.0
Aliphatic >C16 to C21 [8]	EPHW	ug/L	10	N	< 10.0	< 10.0
Aliphatic >C21 to C35 [8]	EPHW	ug/L	15	N	< 15.0	< 15.0
Aliphatic >C35 to C40 [8]	EPHW	ug/L	10	N	< 10.0	< 10.0
Aliphatic >C40 to C44 [8]	EPHW	ug/L	10	N	< 10.0	< 10.0
Aromatic >C5 to C7 [6]	VPHW	ug/L	1	N	< 1.00	< 1.00
Aromatic >C7 to C8 [6]	VPHW	ug/L	1	N	< 1.00	< 1.00
Aromatic >C8 to C10 [6]	VPHW	ug/L	1	N	< 6.00	< 6.00
Aromatic >C10 to C12 [9]	EPHW	ug/L	5	N	< 5.00	< 5.00
Aromatic >C12 to C16 [9]	EPHW	ug/L	10	N	12.4	< 10.0
Aromatic >C16 to C21 [9]	EPHW	ug/L	10	N	< 10.0	< 10.0
Aromatic >C21 to C35 [9]	EPHW	ug/L	15	N	< 15.0	< 15.0
Aromatic >C35 to C40 [9]	EPHW	ug/L	10	N	< 10.0	< 10.0
Aromatic >C40 to C44 [9]	EPHW	ug/L	10	N	< 10.0	< 10.0

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E26/04010/CGL/26-12615- Amendment A

CGL/10526A Nestle Hayes

Analytical Test Results - ENV Analysis Leachates

Lab Reference					740470	740476	740478
Client Sample ID					1	1	1
Client Sample Location					TP201	TP203	TP205
Client Sample Type					ES	ES	ES
Client Sample Number					-	-	-
Depth - Top (m)					0.4	0.5	0.3
Depth - Bottom (m)					0.4	0.5	0.3
Date of Sampling					18/03/2026	18/03/2026	19/03/2026
Time of Sampling					-	-	-
Sample Matrix					Sand	Sand	Clay
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
10:1 SS Soil Leachate Prep	LEACH-SS-P	-	-	U	10:1 Extraction	10:1 Extraction	10:1 Extraction

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E26/04010/CGL/26-12615- Amendment A

CGL/10526A Nestle Hayes

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
740470	1	TP201	SOIL	-	Made Ground- brown slightly clayey gravelly silty sand with occasional brick fragments bituminous ma	13	36	74
740471	2	TP201	SOIL	-	Brown slightly sandy silty clay	19	< 0.1	100
740472	1	TP204	SOIL	-	Made Ground- greyish brown gravelly silty sand with occasional brick fragments bituminous material	8.6	46	77
740473	2	TP204	SOIL	-	Made Ground- greyish brown gravelly silty sand with occasional brick fragments bituminous material	13	31	67
740474	3	TP204	SOIL	-	Brown silty clay	19	< 0.1	100
740475	4	TP204	SOIL	-	Brown slightly clayey gravelly silty sand	9.3	41	31
740476	1	TP203	SOIL	-	Brown gravelly silty sand	11	14	82
740477	3	TP203	SOIL	-	Orangish brown sandy silty clay	20	< 0.1	100
740478	1	TP205	SOIL	-	Made Ground- greyish brown sandy gravelly silty clay with occasional bituminous material	15	20	88
740479	2	TP205	SOIL	-	Brown slightly sandy slightly gravelly silty clay	16	6.4	98
740480	3	TP205	SOIL	-	Brown slightly sandy silty clay	18	2.3	100
740482	1	TP202	SOIL	-	Made Ground- greyish brown gravelly silty sand with rare brick fragments with occasional bituminous	12	27	60
740483	4	TP202	SOIL	-	Brown gravelly silty clay	13	52	91

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CGL/10526A Nestle Hayes

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
740470	1	TP201	SOIL	-	PAHAR: 1/10 dark extract VPH/BTEX - Sample taken from container with headspace.
740472	1	TP204	SOIL	-	PAHAR: 1/10 dark extract
740474	3	TP204	SOIL	-	VPH/BTEX - Sample taken from container with headspace.
740476	1	TP203	SOIL	-	PAHAR: 1/10 dark extract VPH/BTEX - Sample taken from container with headspace.
740477	3	TP203	SOIL	-	VPH/BTEX - Sample taken from container with headspace.
740482	1	TP202	SOIL	-	PAHAR: 1/10 dark extract

E26/04010/CGL/26-12615- Amendment A

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Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
740470	1	TP201	SOIL	-	PAHAR: 1/10 dark extract VPH/BTEX - Sample taken from container with headspace.
740472	1	TP204	SOIL	-	PAHAR: 1/10 dark extract
740474	3	TP204	SOIL	-	VPH/BTEX - Sample taken from container with headspace.
740476	1	TP203	SOIL	-	PAHAR: 1/10 dark extract VPH/BTEX - Sample taken from container with headspace.
740477	3	TP203	SOIL	-	VPH/BTEX - Sample taken from container with headspace.
740482	1	TP202	SOIL	-	PAHAR: 1/10 dark extract

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Analysis Methodologies - Please refer to sample comments page (if present) for any changes to methods Methods

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preparation	Test Details
1377LOIWAC	BS1377 LoI	Oven dried	Passing 2mm test sieve	Testing was in accordance with BS 1377: Part 3: 2018 + A1 :2021 Clause 6. Determination of the mass loss on ignition. Some information required by BS1377: 2016: Part 1 has not been reported. This information is available on request.
ANIONSWA	MS - CL - Anions by Aquakem (Water)	As received	-	Determination of Anions (inc Sulphate, chloride & fluoride.) in waters by Aquakem
ANIONSWB	MS - CL - Anions by Aquakem (Water)	As received	-	Determination of Anions (inc Ammonia, nitrite & TON.) in waters by Aquakem
ASB	MS - AS - Asbestos	-	-	Fibre identification is in accordance with in house documented methods which are based on the procedure documented in the HSE Document HSG 248 "Asbestos: The analysts guide for sampling, analysis and clearance procedures"
ASSO4S	MS - CL - Acid Soluble Sulphate	Oven Dried	Passing 2mm test sieve	Determination of total sulphate in soils by acid extraction followed by ICP analysis
CWGS	Calculation from VPH-S and EPH-S	As received	Passing 10mm test sieve	Determination of TPH CWG (Volatile Petroleum Hydrocarbons and Extractable Petroleum Hydrocarbons) in soils via Headspace-GC-MS and GC-GC-FID respectively
CWGW	MS - CL - VPH & MS - CL - EPH		-	Determination of TPH CWG (Volatile Petroleum Hydrocarbons and Extractable Petroleum Hydrocarbons) in waters via Headspace-GC-MS and GC-FID respectively
EPHW	MS - CL - TPH EPH Waters	As received	-	Determination of Extractable Petroleum Hydrocarbons in waters via GC-FID
GCXGCS	MS - CL - TPH & EPH by GCXGC	As received	Passing 10mm test sieve	Determination of TPH and EPH in soils via GCxGC-FID
ICP-MS DMW	MS - CL - Metals in Waters by ICP-MS	As received	Passing 0.45um membrane filter	Determination of dissolved metals in water via ICP-MS
ICPMETS	MS - CL - ICP Metals	Air dried	Passing 10mm test sieve	Determination of metals in soils via ICP
LEACH-SS-P	MS-CL-Soil Leachate Preparation (SS)	As Received	All crushed to pass 4mm test sieve	Preparation of single stage soil leachates in accordance with MS-CL-Soil Leachate Preparation
PAHASRDS	MS - CL - PAH (As Received)	As received	Passing 10mm test sieve	Determination of Polyaromatic hydrocarbons in soil via GC-MS
PAHASRDSW	MS - CL - PAH (As Received - WAC)	As received	Passing 10mm test sieve	Determination of Polyaromatic hydrocarbons in soil via GC-MS
PAHSPMEW	MS - CL - PAH in Waters	As received	-	Determination of Polyaromatic hydrocarbons in water via GC-MS
PCB7S	MS - CL - PCB Soils	As received	Passing 10mm test sieve	Determination of PCB's (7 congeners) in soils via GC-MS
PHOHHPLCW	MS - CL - Phenol Waters by HPLC	As received	-	Determination of speciated phenols in water using HPLC
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
PHW	MS - CL - pH in Waters	As received	-	Determination of pH in waters using a pH probe

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Analysis Methodologies - Please refer to sample comments page (if present) for any changes to methods Methods

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preparation	Test Details
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis
SKALARCNS	MS - CL - Cyanide by Skalar	As received	Passing 10mm test sieve	Determination of cyanide (total / free / complex) in soil using a Skalar segmented flow analyser
SKALARCNW	MS - CL - Cyanide by Skalar	As received	-	Determination of cyanide (total / free / complex) in water using a Skalar segmented flow analyser
SKALARHCS	MS - CL - Hexavalent Chromium by Skalar	As received	Passing 10mm test sieve	Determination of hexavalent chromium in soil using Skalar segmented flow analyser
SKALARPHS	MS - CL - Phenols by Skalar	As received	Passing 10mm test sieve	Determination of total phenols in soil using Skalar segmented flow analyser
TDSL	MS-CL-Conductivity in Water(TDS by Calc)	As received	BSEN:12457 Leaching	Determination of total dissolved solids in leachates (by calculation)
TOCS	MS - CL - TOC Eltra	Air Dried	Passing 10mm test sieve	Determination of Total Organic Carbon in soils
TOCW	MS - CL - DOC	As received	-	Determination of Dissolved Organic Carbon in waters
TPHSCWAC	MS - CL - TPH (GC-FID) Scrubbed	As received	Passing 10mm test sieve	Determination of Total Petroleum Hydrocarbons in soil using GC-FID. Sample is subjected to a fluorocil cleanup (scrubbing stage) prior to analysis (WAC)
VPHS	MS - CL - VPH	As received	Passing 10mm test sieve	Determination of VPH in soils via Headspace-GC-MS
VPHSWAC	MS - CL - VPH	As received	Passing 10mm test sieve	Determination of VPH in soils via Headspace-GC-MS
VPHW	MS - CL - VPH	As received	-	Determination of VPH in waters via Headspace-GC-MS
WACANIONS	MS - CL - Anions by Aquakem (WAC)	As received	BSEN:12457 Leaching	Determination of sulphate, chloride and fluoride in a leachate as part of a WAC test using a Aquakem analyser
WACDOC	MS - CL - DOC (WAC)	As received	BSEN:12457 Leaching	Determination of dissolved organic carbon in a leachate as part of a WAC test
WACMETALS1	MS-CL-Metals in Waters by ICP-MS (WAC)	As received	MS-CL-Soil Leachate Preparation	Determination of dissolved metals in leachates via ICP-MS, expressed as quantity of analyte leached from the original material.
WACPHS	MS - CL - pH in Soils (WAC)	As received	BSEN:12457 Leaching	Determination of pH in soils as part of a WAC test via pH probe
WACSKALAR	MS - CL - Phenols by Skalar (WAC)	As received	BSEN:12457 Leaching	Determination of Total Phenols within leachate as part of a WAC test using a Skalar Segmented flow analyser
WACTOCS	MS - CL - TOC Eltra (WAC)	Air dried	Passing 10mm test sieve	Determination of Total Organic Carbon in soil as part of a WAC test
WSBORONS	MS - CL - WS Boron	Air dried	Passing 10mm test sieve	Determination of Water soluble Boron in soils via ICP

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Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided
W - No time of sampling provided
C - Received in inappropriate container
H - Contains headspace
T - Temperature on receipt exceeds storage temperature
R - Sample(s) received with less than 2 hours for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
740470	1	TP201	ES		MS - CL - VPH	RX
740470	1	TP201	ES		MS - CL - VPH	RX
740474	3	TP204	ES		MS - CL - VPH	RX
740476	1	TP203	ES		MS - CL - VPH	RX
740476	1	TP203	ES		MS - CL - VPH	RX
740477	3	TP203	ES		MS - CL - VPH	RX
740481	1	TP205	EW		MS - CL - Anions by Aquakem (Water)	RX
740481	1	TP205	EW		MS - CL - DOC	RX
740481	1	TP205	EW		MS - CL - pH in Waters	RX
740484	1	TP202	EW		MS - CL - Anions by Aquakem (Water)	RX
740484	1	TP202	EW		MS - CL - DOC	RX
740484	1	TP202	EW		MS - CL - pH in Waters	RX

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HWOL TPH Acronym Index

Acronym	Description
HS	Headspace Analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics and Aromatics
AL	Aliphatics Only
AR	Aromatics Only
2D	GC-GC - Double Coil Gas Chromatography
#1	EH_Total but with humics mathematically subtracted
#2	EH_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (except for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry

Key of Codes	
[1]	EH_1D_TOTAL
[2]	EH_CU_1D_TOTAL
[3]	EH_CU+HS_1D_TOTAL
[4]	EH_1D+HS_MS_TOTAL
[5]	HS_MS_1D_AL
[6]	HS_MS_1D_AR
[7]	HS_MS_1D_TOTAL
[8]	EH_CU_1D_AL
[9]	EH_CU_1D_AR
[10]	EH_2D+HS_1D_TOTAL
[11]	EH_CU_2D+HS_1D_TOTAL
[12]	EH_2D_TOTAL
[13]	EH_2D_AL
[14]	EH_2D_AR
[15]	EH_CU_2D_TOTAL
[16]	EH_CU_2D_AL
[17]	EH_CU_2D_AR

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Additional Method Notes

Method	Notes
TRL 447 Suite	1. Sample preparation was in accordance with TRL 447 Appendix C. 2. Testing was carried out in accordance with methods 1, 2 and 4 of TRL 447 2001 (Updated 2005). 3. Oxidisable sulphides and total potential sulphate have been calculated in accordance with TRL 447, Appendix C Test 4. Values are reported against a dry mass of sample passing a 2mm test sieve after oven drying, where required material retained on the 2mm test sieve was recombined with the test portion prior to analysis.
BS1377 Acid Soluble Chloride	1. Sample preparation was in accordance with BS 1377 : Part 1 : 2016 2. Testing was in accordance with BS 1377 : Part 3 : 2018 + A1: 2021, acid soluble method. 3. Some information required by BS 1377 has not been reported. This information is available on request.
BS1377 Loss on Ignition	Testing was in accordance with BS 1377: Part 3: 2018 + A1: 2021 Clause 6. Determination of the mass loss on ignition. Some information required by BS1377: 2016: Part 1 has not been reported. This information is available on request.
BS1377 Organic Matter Content	1. Sample preparation was in accordance with BS 1377 : Part 1 : 2016 2. Testing was in accordance with BS 1377: Part 3: 2018 + A1: 2021 Clause 4. 3. The reported % organic content is the average organic matter content present in the soil fraction passing the 2mm test sieve to the nearest 0.1% of the original oven dry mass of soil. 4. Some information required by BS 1377 has not been reported. This information is available on request.
BS1377 pH Value	pH testing was in accordance with BS 1377 : Part 3 : 2018 + A1: 2021 Clause 12
BS1377 Sulphate (acid soluble)	1. Sample preparation was in accordance with BS 1377 : Part 1 : 2016. 2. Sulphate testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.9 & 7.5. 3. Some information required by BS 1377 has not been reported. This information is available on request.
BS1377 Total Dissolved Solids	Determination of TDS in accordance with BS 1377: Part 3
BS1377 Total Sulphur	1. Sample preparation was in accordance with BS 1377 : Part 1 : 2016.
BS1377 Water Soluble Chloride	1. Sample preparation was in accordance with BS 1377 : Part 1 : 2016 2. Testing was in accordance with BS 1377 : Part 3 : 2018 + A1: 2021, Clause 7.2, water soluble method. 3. Some information required by BS 1377 has not been reported. This information is available on request.
BS1377 Sulphate (water soluble) (ICP-OES)	1. Sample preparation was in accordance with BS 1377 : Part 1 : 2016. 2. Sulphate testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.3 & 7.5. 3. pH of the water extract was not recorded. 4. Some information required by BS 1377 has not been reported. This information is available on request.
EN1744 Acid Soluble Sulphate	Testing was in accordance with BS EN 1744-1:2009 + A1:2012 clause 12. Analysis subcontracted to a UKAS accredited laboratory
EN1744 Total Sulphur by HTC (Cl. 11.2)	Testing was in accordance with BS EN 1744-1:2009 + A1:2012 clause 11.2 Analysis subcontracted to a UKAS accredited laboratory
EN1744 Total Sulphur (Cl. 11.1)	Testing was in accordance with BS EN 1744-1:2009 + A1:2012 clause 11. Analysis subcontracted to a UKAS accredited laboratory
EN1744 Water Soluble Chloride	Testing was in accordance with BS EN 1744-1:2009 + A1:2012 clause 7 (Reference Method). Analysis subcontracted to a UKAS accredited laboratory
EN1744 Water Soluble Sulphate	Testing was in accordance with BS EN 1744-1:2009 + A1:2012 clause 10. Analysis subcontracted to a UKAS accredited laboratory

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Additional Method Notes

Method	Notes
Oxidisable Sulphides Calculation (HTC)	Calculated in accordance with TRL 447 using results determined in accordance with EN1744
Oxidisable Sulphides Calculation (Grav)	Calculated in accordance with TRL 447 using results determined in accordance with EN1744
Total Potential Sulphate (Calc from 1744 Total S)	Derived from the Total sulphur concentration determined in accordance with EN1744.
BS1881 Alkali (Na2O + K2O)	1. Testing was in accordance with BS 1881: Part 124: 2015 Clause 12.3. 2. A concrete density of 2300kg/m3 was used in the calculation of equivalent sodium oxide content per m3 of concrete. 3. Samples received were smaller than required by Clause 4.1 of BS 1881 : Part 124 :2015. 4. Quality control samples are tested with each batch of samples.
BS1881 Calcium Oxide Content (EDTA Titration)	1. Testing was in accordance with BS 1881: Part 124: 2015 Clause 6.4. 2. Cement content (%m/m) has been calculated assuming the presence in the concrete of Ordinary Portland Cement, containing 64.5% by mass of Calcium Oxide. 3. Samples of the original constituents of the mix were not submitted. 4. Samples received were smaller than required by Clause 4.1 of BS 1881 : Part 124 :2015. 5. Quality control samples are tested with each batch of samples. 6. Samples were identified as being part of a batch and therefore the results are from a single analysis only.
BS1881 Cement Content (ICP method)	1. Testing was in accordance with BS 1881: Part 124: 2015 Clause 6.5 by ICP. 2. Cement content has been calculated assuming the presence in the concrete of Ordinary Portland Cement, containing 20.2% and 64.5% by mass of soluble silica and calcium oxide respectively. 3. Samples of the original constituents of the mix were not submitted. 4. Samples received were smaller than required by Clause 4.1 of BS 1881 : Part 124 :2015. 5. Quality control samples are tested with each batch of samples. 6. Samples were identified as being part of a batch
Chloride in Concrete by Aquakem (Acid Soluble)	1. Testing was in accordance with in house method statement MS - CL - Chloride in Hardened concrete by Aquakem. 2. Samples were not passed over the 125micron BS Test Sieve before testing. 3 Quality control samples are tested with each batch of samples.
Moisture Content of Grout Mortar & Concrete	1. Testing was in accordance with in house method statement MS Moisture Content of Grout, Mortar and Concrete
MS - Sulphate in Hardened Concrete by ICP	1. Testing undertaken in accordance with in house method statement MS - Sulphate in hardened concrete by ICP. 2. Samples received were smaller than required by Clause 4.1 of BS 1881 : Part 124 :2015. 3. Quality control samples are tested with each batch of samples.
BS1881 Water Cement Ratio	1 Testing was in accordance with BS 1881: Part 124: 2015+A1:2021. 2. Cement content was determined in accordance with BS 1881: Part 124: 2015+A1:2021 Clause 6.5 by ICP. 3. Samples of the original constituents of the mix was/was not submitted. 4. Original water/cement ratio has been calculated in accordance with BS 1881: Part 124: 2015+A1:2021 Clause 9.6. 5. Samples received were smaller than required by Clause 4.1 of BS 1881 : Part 124 :2015+A1:2021.
BS4551 Mix Proportion	1.Sample preparation was in accordance with BS4551 2005 + A2:2013 Clause 7. 4.5. 2. Testing was in accordance with BS 4551: Part 2: 2005 + A2:2013 Clause 7.5.3 and 7.5.3.4. 3. Cement content has been calculated assuming the presence in the mix of Ordinary Portland Cement containing 20.2% and 64.5% by mass of soluble silica and calcium oxide respectively.
BS6463-102 Neutralizing Value	Testing was undertaken in accordance with an in house method statement based on

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Additional Method Notes

Method	Notes
BS3882:2015 Specification for topsoil	Testing was undertaken in accordance with the methodologies within BS3882:2015
BS8601:2013 Specification for subsoil	Testing was undertaken in accordance with the methodologies within BS8601:2013
Depth of Carbonation (BS EN 14630:2006)	1. Testing was carried out in accordance with BS EN 14630:2006 Depth of Carbonation. 2. Testing was carried out in the laboratory. 3. Indicator Solution Used– 1g of Phenolphthalein powder dissolved in a solution of 50ml of Methylated Spirits and 100ml of deionised water
HAC	1. Testing was in accordance with BRE Information Sheet IS 15/74. 2. Contaminated samples may give a false result. 3. Samples taken from extensively carbonated concrete containing Portland Cement may give a false positive result. 4. If conclusive identification of the presence of High Alumina Cement is required this result should be confirmed by a more definitive test.
pH Value of Concrete	1. Testing was in accordance with in house method statement MS – pH Value of Hardened Concrete, Grout and Water from voids
Sub - EN1744 Sulphide	Analysis was in accordance with BS EN 1744-1 : 2009 + A1 : 2012, clause 13 and subcontracted to a UKAS accredited laboratory for this test

APPENDIX E

Contamination Assessments

ASSESSMENT CRITERIA

Table I1 below, sets out CGL's rationale for generic assessment criteria (GAC) adoption in order to evaluate risks posed to potential receptors at the Parkway House site from potential chemical contamination. Potential receptors have been identified with reference to the Part IIA regime and associated LCRM guidance. As with the Part IIA regime, under the planning regime all receptors (humans, controlled waters, ecology, crops/livestock and buildings) have been considered if there is the potential for them to be adversely affected by exposure to contamination. The results of the assessment for this site are then presented in Tables I2 to I4 of this appendix.

Table I1. Rationale for Assessment Criteria Adoption

Source / Media	CGL's Approach & Rationale
Risks to Human Health (long-term chronic risks)	
Soil contaminants	• Laboratory test results have been compared against Generic Assessment Criteria (GACs) derived in-house by CGL using the Contaminated Land Exposure Assessment (CLEA) model and version 1.071 of the CLEA software. Where Soil Guideline Values (SGVs) have been published previously by the Environment Agency, the CGL GACs have updated these based on current exposure parameters (e.g. updated inhalation rates). • The GACs have been generated assuming a sandy loam soil type and a Soil Organic Material of 1% for all soils. • In the event impacts are identified on a site above the GAC level for arsenic, cadmium, chromium VI, benzene or benzo(a)pyrene, the results have been compared to the applicable Category 4 Screening Level (C4SL) published by DEFRA to further assess risks. • The exception to the above relates to lead. The SGV for lead has been withdrawn and the C4SL for lead is used by CGL directly as a first tier of assessment. • The CGL GACs represent conservative screening criteria (set at acceptable or minimal risk) and have generally been calculated using the default parameters for the standard land use scenarios set out in the CLEA technical report and toxicological inputs in line with the requirements of Science Report SC050021/SR2 and, in the case of petroleum hydrocarbons, Science Report P5-080/TR3. • Where a CGL GAC has not been derived alternative assessment criteria will be sourced from current commercially-available sources (including international standards where no suitable UK assessment criteria exists). • Concentrations of cyanide above the laboratory reporting limit are assessed against a Soil Screening Value (SSV) developed by Atkins. Atkins have based this assessment criteria on acute exposure to a 0 to 6 year old child. • Where the dataset is of appropriate size, assessment against the applicable GAC or C4SL is carried out at the 95th percentile of the sample mean (designated US_{95}), which is considered to represent a reasonable worst-case scenario. An assessment of the normality of the data has been undertaken. Where datasets are normally distributed the one sample t-test has been applied to calculate the US_{95}. In the case of non-parametric datasets, the Chebychev Theorem has been applied. The Grubbs Test has also been used to identify potential outliers within datasets. • It is noted that the British Geological Survey has published background levels for a number of organic and inorganic constituents. In the event that the C4SL or a GAC is found to be exceeded, the risk may still be considered to be low, unlikely to meet the definition of contaminated land under Part IIA and potentially suitable for use from a development perspective, if the contaminant concentrations are below local background levels, assuming no other contributing factors. • At this time an authoritative GAC is not available for asbestos fibres in soil. A positive identification of asbestos fibres in a soil sample by the laboratory is considered sufficient to warrant additional assessment of risks. Laboratory identification and quantification by microscopy may be required subject to source of material.
Dissolved contaminants	• Concentrations of organic constituents detected above the laboratory reporting limit in shallow groundwater or perched water have been assessed against groundwater vapour generic assessment criteria (GAC_{gwvap}) developed by the Society of Brownfield Remediation Risk Assessment (SoBRA). These assess chronic risks to human health via the indoor and outdoor air inhalation pathway only. The values assume a sand soil type, a soil organic matter of 1% and a depth below ground level of 650mm.

Source / Media	CGL's Approach & Rationale
Ground gas	• Concentrations and flow rates of carbon dioxide and methane in ground gas are converted to Gas Screening Values (GSVs) in accordance with CIRIA (2007). Potential risks associated with gas chemistry are evaluated in accordance with guidance presented in CIRIA (2007), NHBC (2007), BSI (2007).
Radon	• Risks from the radon content of soil gas are evaluated in accordance with BRE (2011).
Risks to Controlled Waters	
Soil contaminants	• Results from any eluted liquids have been directly compared to Environmental Quality Standards (EQS) and Drinking Water Values (DWV) as an initial screen of water quality. These are considered to be conservative screening criteria.
Dissolved contaminants	• Results have been directly compared to Environmental Quality Standards (EQS) and Drinking Water Values (DWV) as an initial screen of water quality. These are considered to be conservative screening criteria.
Risks to Buildings & Structures	
Water supply pipes	• The evaluation of water supply pipe requirements at the site has been undertaken in general accordance with guidance and criteria produced by the UK Water Industry (2011).
Sulfate & pH conditions	• The evaluation of risks to buried concrete has followed the guidance and criteria produced by BRE (2005).
Risks to Vegetation & Plants	
Soil contaminants	• Risks to plant growth (i.e. phytotoxicity) have been assessed for specific contaminants where the limits for phytotoxic effect proposed (e.g. by BS 3882) are significantly lower than the health GAC.

Table E2 - Data assessment summary - potential soil risks to human health - Made Ground					
Land Use Category:	**Public Open Space - Residential**			**SOM:**	1.00%
Stratum:	**Made Ground**			**No. Samples**	8
Determinand	**GAC** mg/kg	**Min recorded (mg/kg)**	**Max recorded (mg/kg)**	**No. Samples tested for determinand**	**No. Samples exceeding GAC**
Arsenic	52.8	<10	12	8	0
Beryllium	2.19	0.5	0.8	8	0
Boron (Water Soluble)	21500	<2.5	<2.5	8	0
Cadmium	106	0.6	0.9	8	0
Chromium (III)	1480	12	17	8	0
Chromium (Hexavalent)	7.45	<1	<1	8	0
Copper	12000	22	140	8	0
Lead	630	33	480	8	0
Mercury	148	<2.5	<2.5	8	0
Nickel	231	18	23	8	0
Selenium	1370	<8	<8	8	0
Vanadium	1100	37	51	8	0
Zinc	80400	57	410	8	0
Benzene	72.049174	<0.01	<0.01	8	0
Toluene	55800	<0.01	<0.01	8	0
Ethylbenzene	24800	<0.01	0.01	8	0
o-Xylene	40900	<0.01	0.05	8	0
Total Phenols	10300	<1	<1	8	0
Cyanide (Total)	34	<1	<1	8	0
Aliphatic >C5 to C6 [5]	566000	<0.06	<0.06	8	0
Aliphatic >C6 to C8 [5]	590000	<0.06	0.12	8	0
Aliphatic >C8 to C10 [5]	12500	<0.06	1.9	8	0
Aliphatic >C10-C12 [13]	12600	<1	38	8	0
Aliphatic >C12-C16 [13]	12600	<1	210	8	0
Aliphatic >C16-C21 [13]	252000	1.2	250	8	0
Aliphatic >C21-C35 [13]	252000	2.6	94	8	0
Aromatic >C7 to C8 [6]	55800	<0.01	<0.01	8	0
Aromatic >C8 to C10 [6]	5010	<0.06	1.1	8	0
Aromatic >C10-C12 [14]	5030	<1	3.4	8	0
Aromatic >C12-C16 [14]	5040	<1	52	8	0
Aromatic >C16-C21 [14]	3790	5.9	64	8	0
Aromatic >C21-C35 [14]	3790	<2	210	8	0
Naphthalene	3860	<0.2	0.37	8	0
Acenaphthylene	14700	<0.2	0.13	8	0
Acenaphthene	14700	<0.2	0.23	8	0
Fluorene	9830	<0.2	0.23	8	0
Phenanthrene	3070	<0.02	3.2	8	0
Anthracene	73800	<0.2	0.67	8	0
Fluoranthene	3070	<0.02	3.4	8	0
Pyrene	7380	<0.02	3.3	8	0
Benzo[a]anthracene	28.5	<0.02	1.8	8	0
Chrysene	57	<0.02	1.3	8	0
Benzo[b]fluoranthene	7.21	<0.02	1.3	8	0
Benzo[k]fluoranthene	190	<0.2	0.64	8	0
Benzo[a]pyrene	5.72	<0.02	1.4	8	0
Indeno[1,2,3,-cd]pyrene	81.7	<0.02	0.78	8	0
Dibenzo[a,h]anthracene	0.607	<0.2	0.24	8	0
Benzo[ghi]perylene	636	<0.02	0.87	8	0
Asbestos	None detected	None detected	None detected	8	0
pH	14	8.3	11.3	8	0

Table E3. Data assessment summary - potential soil risks to human health - Langley Silt Member					
Land Use Category:	**Public Open Space - Residential**			**SOM:**	1.00%
Stratum:	**Langley Silt Member**			**No. Samples**	3
Determinand	**GAC mg/kg**	**Min recorded (mg/kg)**	**Max recorded (mg/kg)**	**No. Samples tested for determinand**	**No. Samples exceeding GAC**
Zinc	80400	53	81	3	0
Vanadium	1100	35	61	3	0
Lead	630	13	61	3	0
Nickel	231	18	30	3	0
Copper	12000	14	23	3	0
Aromatic >C21-C35 [14]	3790	<2	24	3	0
Chromium (III)	1480	11	22	3	0
Arsenic	52.8	<10	17	3	0
Aromatic >C16-C21 [14]	3790	6.6	8.8	3	0
pH	14	6.7	8.6	3	0
Aliphatic >C21-C35 [13]	252000	<2	3.3	3	0
Aliphatic >C16-C21 [13]	252000	<1	3.2	3	0
Beryllium	2.19	0.6	1.4	3	0
Cadmium	106	0.6	1	3	0
Pyrene	7380	<0.02	0.15	3	0
Fluoranthene	3070	<0.02	0.13	3	0
Benzo[a]anthracene	28.5	<0.02	0.08	3	0
Benzo[a]pyrene	5.72	<0.02	0.08	3	0
Chrysene	57	<0.02	0.07	3	0
Benzo[b]fluoranthene	7.21	<0.02	0.06	3	0
Phenanthrene	3070	<0.02	0.06	3	0
Benzo[ghi]perylene	636	<0.02	0.05	3	0
Indeno[1,2,3,-cd]pyrene	81.7	<0.02	0.04	3	0
Benzo[k]fluoranthene	190	<0.02	0.02	3	0
Asbestos	2	0	0	3	0
Aromatic >C7 to C8 [6]	55800	<0.01	<0.01	3	0
Benzene	72.049174	<0.01	<0.01	3	0
Ethylbenzene	24800	<0.01	<0.01	3	0
o-Xylene	40900	<0.01	<0.01	3	0
Toluene	55800	<0.01	<0.01	3	0
Acenaphthene	14700	<0.02	<0.02	3	0
Acenaphthylene	14700	<0.02	<0.02	3	0
Anthracene	73800	<0.02	<0.02	3	0
Dibenzo[a,h]anthracene	0.607	<0.02	<0.02	3	0
Fluorene	9830	<0.02	<0.02	3	0
Naphthalene	3860	<0.02	<0.02	3	0
Aliphatic >C5 to C6 [5]	566000	<0.06	<0.06	3	0
Aliphatic >C6 to C8 [5]	590000	<0.06	<0.06	3	0
Aliphatic >C8 to C10 [5]	12500	<0.06	<0.06	3	0
Aromatic >C8 to C10 [6]	5010	<0.06	<0.06	3	0
Aliphatic >C10-C12 [13]	12600	<1	<1	3	0
Aliphatic >C12-C16 [13]	12600	<1	<1	3	0
Aromatic >C10-C12 [14]	5030	<1	<1	3	0
Aromatic >C12-C16 [14]	5040	<1	<1	3	0
Chromium (Hexavalent)	7.45	<1	<1	3	0
Cyanide (Total)	34	<1	<1	3	0
Total Phenols	10300	<1	<1	3	0
Boron (Water Soluble)	21500	<2.5	<2.5	3	0
Mercury	148	<2.5	<2.5	3	0
Selenium	1370	<8	<8	3	0

Table E3. Data assessment summary - potential soil risks to human health - Langley Silt Member					
Land Use Category:	**Public Open Space - Residential**			**SOM:**	1.00%
Stratum:	**Langley Silt Member**			**No. Samples**	3
Determinand	**GAC mg/kg**	**Min recorded (mg/kg)**	**Max recorded (mg/kg)**	**No. Samples tested for determinand**	**No. Samples exceeding GAC**
Zinc	80400	53	81	3	0
Vanadium	1100	35	61	3	0
Lead	630	13	61	3	0
Nickel	231	18	30	3	0
Copper	12000	14	23	3	0
Aromatic >C21-C35 [14]	3790	<2	24	3	0
Chromium (III)	1480	11	22	3	0
Arsenic	52.8	<10	17	3	0
Aromatic >C16-C21 [14]	3790	6.6	8.8	3	0
pH	14	6.7	8.6	3	0
Aliphatic >C21-C35 [13]	252000	<2	3.3	3	0
Aliphatic >C16-C21 [13]	252000	<1	3.2	3	0
Beryllium	2.19	0.6	1.4	3	0
Cadmium	106	0.6	1	3	0
Pyrene	7380	<0.02	0.15	3	0
Fluoranthene	3070	<0.02	0.13	3	0
Benzo[a]anthracene	28.5	<0.02	0.08	3	0
Benzo[a]pyrene	5.72	<0.02	0.08	3	0
Chrysene	57	<0.02	0.07	3	0
Benzo[b]fluoranthene	7.21	<0.02	0.06	3	0
Phenanthrene	3070	<0.02	0.06	3	0
Benzo[ghi]perylene	636	<0.02	0.05	3	0
Indeno[1,2,3,-cd]pyrene	81.7	<0.02	0.04	3	0
Benzo[k]fluoranthene	190	<0.02	0.02	3	0
Asbestos	2	0	0	3	0
Aromatic >C7 to C8 [6]	55800	<0.01	<0.01	3	0
Benzene	72.049174	<0.01	<0.01	3	0
Ethylbenzene	24800	<0.01	<0.01	3	0
o-Xylene	40900	<0.01	<0.01	3	0
Toluene	55800	<0.01	<0.01	3	0
Acenaphthene	14700	<0.02	<0.02	3	0
Acenaphthylene	14700	<0.02	<0.02	3	0
Anthracene	73800	<0.02	<0.02	3	0
Dibenzo[a,h]anthracene	0.607	<0.02	<0.02	3	0
Fluorene	9830	<0.02	<0.02	3	0
Naphthalene	3860	<0.02	<0.02	3	0
Aliphatic >C5 to C6 [5]	566000	<0.06	<0.06	3	0
Aliphatic >C6 to C8 [5]	590000	<0.06	<0.06	3	0
Aliphatic >C8 to C10 [5]	12500	<0.06	<0.06	3	0
Aromatic >C8 to C10 [6]	5010	<0.06	<0.06	3	0
Aliphatic >C10-C12 [13]	12600	<1	<1	3	0
Aliphatic >C12-C16 [13]	12600	<1	<1	3	0
Aromatic >C10-C12 [14]	5030	<1	<1	3	0
Aromatic >C12-C16 [14]	5040	<1	<1	3	0
Chromium (Hexavalent)	7.45	<1	<1	3	0
Cyanide (Total)	34	<1	<1	3	0
Total Phenols	10300	<1	<1	3	0
Boron (Water Soluble)	21500	<2.5	<2.5	3	0
Mercury	148	<2.5	<2.5	3	0
Selenium	1370	<8	<8	3	0

Table E4. Data assessment summary - potential soil risks to human health - Lynch Gravel Member					
Land Use Category:	**Public Open Space - Residential**			**SOM:**	1.00%
Stratum:	**Lynch Gravel Member**			**No. Samples**	2
Determinand	**GAC mg/kg**	**Min recorded (mg/kg)**	**Max recorded (mg/kg)**	**No. Samples tested for determinand**	**No. Samples exceeding GAC**
Zinc	80400	56	94	2	0
Vanadium	1100	41	43	2	0
Lead	630	24	33	2	0
Nickel	231	20	24	2	0
Copper	12000	14	17	2	0
Chromium (III)	1480	12	14	2	0
Arsenic	52.8	10	11	2	0
pH	14	8.6	8.6	2	0
Aromatic >C21-C35 [14]	3790	3.7	6.8	2	0
Aromatic >C16-C21 [14]	3790	5.1	6.4	2	0
Aliphatic >C21-C35 [13]	252000	3.9	5.9	2	0
Aliphatic >C16-C21 [13]	252000	1.1	1.9	2	0
Beryllium	2.19	0.9	0.9	2	0
Cadmium	106	0.8	0.8	2	0
Aliphatic >C6 to C8 [5]	590000	<0.06	0.16	2	0
Fluoranthene	3070	0.05	0.11	2	0
Pyrene	7380	0.05	0.11	2	0
Aliphatic >C8 to C10 [5]	12500	<0.06	0.07	2	0
Benzo[a]anthracene	28.5	0.03	0.05	2	0
Benzo[a]pyrene	5.72	0.02	0.05	2	0
Benzo[b]fluoranthene	7.21	0.02	0.05	2	0
Phenanthrene	3070	<0.02	0.05	2	0
Benzo[ghi]perylene	636	<0.02	0.04	2	0
Chrysene	57	<0.02	0.04	2	0
Benzo[k]fluoranthene	190	<0.02	0.02	2	0
Indeno[1,2,3,-cd]pyrene	81.7	<0.02	0.02	2	0
Asbestos	2	0	0	2	0
Aromatic >C7 to C8 [6]	55800	<0.01	<0.01	2	0
Benzene	72.049174	<0.01	<0.01	2	0
Ethylbenzene	24800	<0.01	<0.01	2	0
o-Xylene	40900	<0.01	<0.01	2	0
Toluene	55800	<0.01	<0.01	2	0
Acenaphthene	14700	<0.02	<0.02	2	0
Acenaphthylene	14700	<0.02	<0.02	2	0
Anthracene	73800	<0.02	<0.02	2	0
Dibenzo[a,h]anthracene	0.607	<0.02	<0.02	2	0
Fluorene	9830	<0.02	<0.02	2	0
Naphthalene	3860	<0.02	<0.02	2	0
Aliphatic >C5 to C6 [5]	566000	<0.06	<0.06	2	0
Aromatic >C8 to C10 [6]	5010	<0.06	<0.06	2	0
Aliphatic >C10-C12 [13]	12600	<1	<1	2	0
Aliphatic >C12-C16 [13]	12600	<1	<1	2	0
Aromatic >C10-C12 [14]	5030	<1	<1	2	0
Aromatic >C12-C16 [14]	5040	<1	<1	2	0
Chromium (Hexavalent)	7.45	<1	<1	2	0
Cyanide (Total)	34	<1	<1	2	0
Total Phenols	10300	<1	<1	2	0
Boron (Water Soluble)	21500	<2.5	<2.5	2	0
Mercury	148	<2.5	<2.5	2	0
Selenium	1370	<8	<8	2	0

Table E5. Standard Water Supply Pipe Assessment

Test Group[1]	Testing Required?	PE threshold (mg/kg)	Metal Pipes / Barrier Pipe	Laboratory Detection Limit (mg/kg)	Testing UKAS accredited Y/N	Maximum concentration at proposed pipeline depth[2] (mg/kg)	Maximum site concentration[3] (mg/kg)	Locations and depths where concentrations exceed proposed pipeline threshold.
Total VOCs	**Where Preliminary Risk Assessment (PRA) has identified land potentially affected by contamination**	**0.5**	Not tested for					
Total BTEX		**0.1**	**Pass**	0.01 to 0.02 and 5	(N) MCERTS	<0.01 to 0.05	<0.01 to 0.05	None
Total SVOCs		**2**	Not tested for					
EC5–EC10 aliphatic and aromatic hydrocarbons		**2**	**Pass**	0.01 to 0.06	(N) MCERTS	<0.01 to 1.90 (aliphatic) <0.01 to 1.10 (aromatic)	<0.01 to 1.90 (aliphatic) <0.01 to 1.10 (aromatic)	None
EC10-EC16 aliphatic and aromatic hydrocarbons		**10**	**Fail**	1.00	(N) MCERTS	<1.00 to 210.00 (aliphatic) <1.00 to 52.00 (aromatic)	<1.00 to 210.00 (aliphatic) <1.00 to 52.00 (aromatic)	38.00 mg/kg Aliphatic >C10 to C12 in TP205 ES1, 0.3mbgl 210.00 mg/kg Aliphatic >C12 to C16 in TP205 ES1, 0.3mbgl 52 mg/kg Aromatic >C12 to C16 in TP205 ES1, 0.3mbgl
EC16-EC40 aliphatic and aromatic hydrocarbons		**500**	**Pass**	1.00 to 2.00	(N) MCERTS	1.20 to 250.00 (aliphatic) <2.00 to 210.00 (aromatic)	1.20 to 250.00 (aliphatic) <2.00 to 210.00 (aromatic)	None
Phenols		**2**	**Pass**	1.00	(N) MCERTS	<1.00	<1.00	None
Creosols and chlorinated phenols		**2**	Not tested for					
Ethers	**Only where identified**	**0.5**						
Nitrobenzene		**0.5**						
Ketones		**0.5**						
Aldehydes		**0.5**						
Amines		**Fail**						
Corrosive	**Conductivity** **Redox** **pH**	**Pass**	**Note[4]**	- - n/a	- - (N) MCERTS	Not Tested For Not Tested For 6.7 (MIN) 11.3 (MAX)	Not Tested For Not Tested For 6.7 (MIN) 11.3 (MAX)	None None pH < 7 in TP203 ES3, 2.0mbgl pH >8 for all other samples

[1] Tests Groups as per Appendix G of UKWIR Guidance.

[2] Water pipes are normally laid 0.75-1.35 metres below finished ground level- doesn't take into consideration changes in formation levels as a result of enabling works

[3] State if liquid free product is present in soil or groundwater.

[4] Threshold: For wrapped steel, corrosive if pH<7 and conductivity >400 µs/cm. For wrapped ductile iron corrosive if pH<5, Eh not neutral and conductivity >400 µs/cm. For copper, corrosive if pH<5 or>8 and Eh positive.

Table E6. Data assessment summary – potential risk to controlled waters – Made Ground

Contaminant	Freshwater EQS[1] (µg/l)	EC Drinking Water Value (DWV) (µg/l)	Measured value (Made Ground) (µg/l)	Bioavailable Concentration (µg/l)[2]	No. of samples exceeding EQS	No. of samples exceeding Drinking Water Value (DWV)
Arsenic	50.00	10.00	2.68	-	-	-
Barium	*[3]	1,000.00[4]	18	-	-	-
Beryllium	15.00[5]	*	<0.50	-	-	-
Boron	*	1,000.00	68.00	-	-	-
Cadmium	0.08[6]	5.00	<0.20	-	-	-
Copper	1.00	2,000.00	4.51	0.24	1 (bioavailable concentration below EQS)	-
Lead	1.20 (7.20[7])	10.00	<0.50	<0.05	-	-
Mercury	0.07	1.00	<0.05	-	-	-
Nickel	4.00	20.00	2.64	0.94	-	-
Selenium	*	10.00	1.02	-	-	-
Zinc	10.90	5,000.00[4]	<2.00	<0.48	-	-
Cyanide (total)	1.00	50.00	<5.00	-	-	-
Sulphate	0.00	250,000.00	120.00	-	1	-
Anthracene	0.10	*	1.69	-	1	-
Benzo[a]pyrene	0.02	0.01	7.85	-	1	1
Benzo[b]fluoranthene	0.10	0.10	6.81	-	1	1
Benzo[ghi]perylene	0.10	0.10	5.21	-	1	1
Benzo[k]fluoranthene	0.10	0.10	2.52	-	1	1
Fluoranthene	0.10	*	11.1	-	1	-
Indeno[1,2,3,-cd]pyrene	0.10	0.10	7.19	-	1	1
Naphthalene	2.00	*	1.27	-	-	-
Benzene	10.00	1.00	<6.00	-	-	-
Toluene	74.00	*	<6.00	-	-	-
Aliphatic (C5 to C6)	10.00	10.00	< 6.00	-	-	-
Aliphatic (C6 to C8)	10.00	10.00	< 6.00	-	-	-
Aliphatic (C8 to C10)	10.00	10.00	< 6.00	-	-	-
Aliphatic (C10 to C12)	10.00	10.00	< 5.00	-	-	-
Aliphatic (C12 to C16)	10.00	10.00	< 10.0	-	-	-
Aliphatic (C16 to C21)	10.00	10.00	< 10.0	-	-	-
Aliphatic (C21 to C35)	10.00	10.00	< 15.0	-	-	-
Aliphatic (C35 to C40)	10.00	10.00	< 10.0	-	-	-
Aliphatic (C40 to C44)	10.00	10.00	< 10.0	-	-	-
Aromatic (C7 to C8)	10.00	10.00	< 1.00	-	-	-
Aromatic (C8 to C10)	10.00	10.00	< 6.00	-	-	-
Aromatic (C10 to C12)	10.00	10.00	< 5.00	-	-	-
Aromatic (C12 to C16)	10.00	10.00	12.4	-	1	1
Aromatic (C16 to C21)	10.00	10.00	< 10.0	-	-	-
Aromatic (C21 to C35)	10.00	10.00	< 15.0	-	-	-
Aromatic (C35 to C40)	10.00	10.00	< 10.0	-	-	-
pH	6.00 – 9.00	6.50 – 10.00	8.30	-	-	-

[1] Annual Averages prescribed within The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.

[2] Screened against the bioavailable fraction of the dissolved concentration of copper, nickel, lead and zinc. "bioavailable" means the fraction of the dissolved concentration of zinc, nickel and copper likely to result in toxic effects as determined using the UKTAG Metal Bioavailability Assessment Tool.

[3] * = No values given or defined

[4] Concentration formerly prescribed within the Water Supply (Water Quality) Regulations 1989.

[5] Dutch Indication Level of Serious Contamination.

[6] EQS varies with water hardness where range given. Evaluated against appropriate band.

[7] Former EQS value for total lead.

Table E7. Data assessment summary – potential risk to controlled waters – Lynch Gravel Member

Contaminant	Freshwater EQS[1] (µg/l)	EC Drinking Water Value (DWV) (µg/l)	Measured value (Made Ground) (µg/l)	Bioavailable Concentration (µg/l)[2]	No. of samples exceeding EQS	No. of samples exceeding Drinking Water Value (DWV)
Arsenic	50.00	10.00	0.95	-	-	-
Barium	*[3]	1,000.00[4]	20.60	-	-	-
Beryllium	15.00[5]	*	<0.50	-	-	-
Boron	*	1,000.00	69.00	-	-	-
Cadmium	0.08[6]	5.00	<0.20	-	-	-
Copper	1.00	2,000.00	1.71	0.20	1 (bioavailable concentration below EQS)	-
Lead	1.20 (7.20[7])	10.00	<0.50	0.13	-	-
Mercury	0.07	1.00	<0.05	-	-	-
Nickel	4.00	20.00	0.82	0.40	-	-
Selenium	*	10.00	2.68	-	-	-
Zinc	10.90	5,000.00[4]	<2.00	<0.87	-	-
Cyanide (total)	1.00	50.00	<0.50	-	-	-
Sulphate	0.00	250,000.00	82.00	-	1	-
Anthracene	0.10	*	0.42	-	1	-
Benzo[a]pyrene	0.02	0.01	2.02	-	1	1
Benzo[b]fluoranthene	0.10	0.10	2.24	-	1	1
Benzo[ghi]perylene	0.10	0.10	1.24	-	1	1
Benzo[k]fluoranthene	0.10	0.10	0.87	-	1	1
Fluoranthene	0.10	*	2.89	-	1	-
Indeno[1,2,3,-cd]pyrene	0.10	0.10	2.18	-	1	1
Naphthalene	2.00	*	0.19	-	-	-
Benzene	10.00	1.00	<6.00	-	-	-
Toluene	74.00	*	<6.00	-	-	-
Aliphatic (C5 to C6)	10.00	10.00	< 6.00	-	-	-
Aliphatic (C6 to C8)	10.00	10.00	< 6.00	-	-	-
Aliphatic (C8 to C10)	10.00	10.00	< 6.00	-	-	-
Aliphatic (C10 to C12)	10.00	10.00	< 5.00	-	-	-
Aliphatic (C12 to C16)	10.00	10.00	< 10.0	-	-	-
Aliphatic (C16 to C21)	10.00	10.00	< 10.0	-	-	-
Aliphatic (C21 to C35)	10.00	10.00	< 15.0	-	-	-
Aliphatic (C35 to C40)	10.00	10.00	< 10.0	-	-	-
Aliphatic (C40 to C44)	10.00	10.00	< 10.0	-	-	-
Aromatic (C7 to C8)	10.00	10.00	< 1.00	-	-	-
Aromatic (C8 to C10)	10.00	10.00	< 6.00	-	-	-
Aromatic (C10 to C12)	10.00	10.00	< 5.00	-	-	-
Aromatic (C12 to C16)	10.00	10.00	< 10.0	-	-	-
Aromatic (C16 to C21)	10.00	10.00	< 10.0	-	-	-
Aromatic (C21 to C35)	10.00	10.00	< 15.0	-	-	-
Aromatic (C35 to C40)	10.00	10.00	< 10.0	-	-	-
pH	6.00 – 9.00	6.50 – 10.00	8.20	-	-	-

Table E8. Data assessment summary – potential groundwater vapour risk to human health (Residential land use)

Contaminant	*Residential GAC_{gwvap} (µg/l)*	*Measured value (Made Ground) (µg/l)*	*Measured value (Lynch Gravel Member) (µg/l)*	*No. of samples exceeding assessment criteria*
Benzene	500	<6.00	<6.00	0
Toluene	230,000	<6.00	<6.00	0
Ethylbenzene	10,000	<6.00	<6.00	0
Total Xylene	9,500	<12.00	<12.00	0
Methyl tertiary butyl ether (MTBE)	83,000	<6.00	<6.00	0
TPH aromatic >EC5 to EC7[1]	210,000	<1.00	<1.00	0
TPH aromatic >EC7 to EC8	220,000	<1.00	<1.00	0
TPH aromatic >EC8 to EC10	1,900	<6.00	<6.00	0
TPH aromatic >EC10 to EC12	6,800	<5.00	<5.00	0
TPH aromatic >EC12 to EC16	39,000	12.40	<10.00	0
TPH aliphatic EC5 to EC6	1,900	<6.00	<6.00	0
TPH aliphatic >EC6 to EC8	1,500	<6.00	<6.00	0
TPH aliphatic >EC8 to EC10	57	<6.00	<6.00	0
TPH aliphatic >EC10 to EC12	37	<5.00	<5.00	0
Acenaphthene	170,000[1]	1.02	0.06	0
Acenaphthylene	220,000[1]	1.58	0.47	0
Fluorene	210,000[1]	0.77	0.11	0
Naphthalene	1,440	1.27	0.19	0
Isopropylbenzene	850	Not measured		0
Propylbenzene	2,700	Not measured		0
Styrene	8,800	Not measured		0
1,2,4-trimethylbenzene	24	Not measured		0
Hexachlorobenzene	16[1]	Not measured		0
Pentachlorobenzene	140	Not measured		0
1,2,3,4-tetrachlorobenzene	240	Not measured		0
1,2,3,5-tetrachlorobenzene	7	Not measured		0
1,2,4,5-tetrachlorobenzene	8.1	Not measured		0
1,2,3-trichlorobenzene	35	Not measured		0
1,2,4-trichlorobenzene	68	Not measured		0
1,3,5-trichlorobenzne	7.4	Not measured		0
1,2-dichlorobenzene	2,000	Not measured		0
1,3-dichlorobenzene	31	Not measured		0
1,4-dichlorobenzene	5,000	Not measured		0
Chlorobenzene	98	Not measured		0
Hexachloroethane	8.5	Not measured		0
1,1,1,2-tetrachloroethane	240	Not measured		0
1,1,2,2-tetrachloroethane	1,600	Not measured		0
1,1,1-trichloroethane	3,000	Not measured		0

Contaminant	*Residential GAC_{gwvap} (µg/l)*	*Measured value (Made Ground) (µg/l)*	*Measured value (Lynch Gravel Member) (µg/l)*	*No. of samples exceeding assessment criteria*
1,1,2-trichloroethane	520	Not measured		0
1,1-dichloroethane	2,700	Not measured		0
1,2-dichloroethane	160	Not measured		0
Chloroethane	10,000	Not measured		0
Tetrachloroethene (TCE)	61	Not measured		0
Trichloroethene	3.2	Not measured		0
1,1-dichloroethene	160	Not measured		0
Cis-1,2-dichloroethene	370	Not measured		0
Trans-1,2-dichloroethene	540	Not measured		0
Chloroethene (vinyl chloride)	12	Not measured		0
1,2-dichloropropane	22	Not measured		0
Bromobenzene	220	Not measured		0
Bromodichloromethane	17	Not measured		0
Bromoform (tribromomethane)	3,100	Not measured		0
Tetrachloromethane (carbon tetrachloride)	5.3	Not measured		0
Trichloromethane (chloroform)	790	Not measured		0
Chloromethane	14	Not measured		0
hexachlorobutadiene	1.7	Not measured		0
2-chloronaphthalene	160	Not measured		0
Biphenyl (limonene)	15,000[1]	Not measured		0
Carbon disulphide	56	Not measured		0
Elemental mercury	1.1	<0.05	<0.05	0

1. Assessment criteria for TPH Aromatic >EC5 to EC7 should also be compared to assessment criteria for benzene to account for genotoxic mutagenic affects.

APPENDIX F

Risk Assessment Methodology

CGL Risk Assessment Methodology

The following risk Assessment methodology is based on CIRIA C552 (2001) Contaminated Land Risk Assessment – A Guide to Good Practice[1], in order to quantify potential risk via risk estimation and risk evaluation, which can be adopted at the Phase I stage. This will then determine an overall risk category which can be used to identify likely actions. This methodology uses qualitative descriptors and therefore is a qualitative approach and is undertaken for each potential pollution linkage (source-pathway-receptor) identified for the site in accordance with Land Condition Risk Management[2].

The methodology requires the classification of:

- The magnitude of the consequence (severity) of a risk occurring, and
- The magnitude of the probability (likelihood) of a risk occurring.

The potential consequences of contamination risks occurring at this site are classified in accordance with Table 1 below, which is adapted from the CIRIA guidance[1].

Table 1. Classifications of Consequence ratings

Classification	*Definition of Consequence*	*Examples*
Severe	Short-term (acute) risks to human health.	High concentration of cyanide on the surface of an informal recreation area
	Short-term (acute) risk of pollution of sensitive water resource or ecosystem.	Major spillage of contaminants from site into controlled waters
	Catastrophic damage to crops/buildings/property/infrastructure, including off-site soils.	Explosion causing building collapse
Medium	Long-term (chronic) risks to human health	Concentrations of a contaminant from site exceeding the generic or site specific assessment criteria
	Long-term (chronic) pollution of sensitive water resource	Leaching of contaminants from a site into a major or minor aquifer
	Significant change in an ecosystem/contamination of off-site soils	Death of a species within a designated nature reserve
Mild	Pollution of non-sensitive water resource	Pollution of a non-classified groundwater
	Significant damage to crops/ buildings/property/infrastructure	Damage to a building rendering it unsafe to occupy (e.g. foundation damage resulting in instability)
	Damage to an ecosystem or sensitive buildings/structures/services	
Minor	Easily preventable non-permanent health effects	Presence of contamination at concentrations which require the use of personal protective equipment during site work
	Harm, although not necessarily significant harm, which may result in financial loss or expenditure to resolve	Loss of plants in a landscaping scheme/discolouration of concrete
	Easily repairable effects of damage to buildings/structures/services	

[1] CIRIA, (2001). *Contaminated Land Risk Assessment. A Guide to Good Practice*. CIRIA C552.

[2] Land Condition Risk Management - https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm

The potential probability of the risks being realised are classified in accordance with the ratings set out in Table 2 which are adapted from the CIRIA guidance[1]. It should be noted that where a pollutant linkage has not been identified the likelihood is considered to be zero.

Table 2. Classifications of probability ratings

Classification	*Definition*
High likelihood	There is a pollution linkage and an event that either appears very likely in the short term and almost inevitable in the long term, or there is evidence at the receptor that an event has occurred
Likely	There is a pollution linkage and all the elements are present and in the right place which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term
Low likelihood	There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such an event would take place and is less likely in the short term.
Unlikely	There is a pollutant linkage but circumstances are such that it is improbable that an event would occur even in the very long term

In accordance with C552 the risk classification for each pollution linkage are classified in accordance with the matrix for consequence and probability set out in Table 3. The definitions for the risk classifications are presented in **Table** 4.

Table 3. Risk classification matrix

		Consequence			
		Severe	***Medium***	***Mild***	***Minor***
Probability	**High likelihood**	Very High	High	Moderate	Moderate / Low
	Likely	High	Moderate	Moderate / Low	Low
	Low likelihood	Moderate	Moderate / Low	Low	Very Low
	Unlikely	Moderate / Low	Low	Very Low	Very Low

Table 4. Risk classification definitions

Classification	*Definition*
Very High	There is a high probability that severe harm could arise to a designated receptor from the identified hazard or there is evidence that severe harm is currently happening. This risk, if realised, is likely to result in substantial liability. Urgent investigation (if not already undertaken) and remediation are likely to be required.
High	Harm is likely to arise to a designated receptor from the identified hazard. Realisation of the risk is likely to result in substantial liability. Urgent investigation (if not already undertaken) and remediation are likely to be required.
Moderate	It is possible that harm could arise to a designated receptor from the identified hazard. However, it is either relatively unlikely that such harm would be severe or if any harm were to occur it is more likely that the harm would be relatively mild. Urgent investigation (if not already undertaken) is normally required to clarify the potential risk and to determine the potential liability. Some remedial works may be required in the longer term.
Low	It is possible that harm could arise to a designated receptor from the identified hazard, but it is considered likely that this harm, if realised, would at worse normally be mild.
Very Low	There is a low possibility that harm could arise to a designated receptor from the identified hazard. In the event of such harm being realised it is not likely to be severe.

APPENDIX G

Verification Plan

Item	Requirements.™ .Criteria.	Evidence	Responsible.Party
Growth Medium	Material should be of suitable provenance, and to the depth and specification of the landscape architect. Pre-import laboratory test results will be screened against suitable Generic Assessment Criteria (GAC) for the protection of human health to confirm that the material is suitable for its intended use. Post delivery, additional testing to be undertaken to confirm quality of material. Testing at a rate of 1 sample per 250m^3 for greenfield sources and 1 sample per 50m^3 for brownfield sources, with a minimum of 3 samples per material / source (Note: sampling frequency may be reduced if sufficient pre-delivery source data is available and if on-site observations confirm homogeneous material).	Provenance certificates Pre-import chemical test results Pre-import screening assessment Post-placement chemical test results & screening assessment Site plan showing areas of placement for each source. Site visit records Photographs	Principal Contractor Principal Contractor CGL CGL Principal Contractor CGL CGL
Imported earthworks material	Source certification to be provided for all earthwork materials. Factory Production Manual to be provided for all recycled aggregates produced under the WRAP protocol, along with evidence that the material has ceased to be waste. Post delivery sampling at a frequency of 1 sample per 500m^3 and screening assessment against suitable GAC to confirm that the material poses a low risk to human health and the environment. Testing to include asbestos screening.	Provenance certificates End of waste / Quality Protocol declaration Factory Production Manual Chemical test results (pre-import) Post delivery chemical test results & screening assessment.	Principal Contractor Principal Contractor Principal Contractor Principal Contractor CGL
Services	Suitable water supply pipe material to be used to prevent the permeation of contaminants. Installation of clay baffles at site boundary to prevent cross-boundary migration of mobile contamination through permeable service trench backfill from other phases.	Details/specification of pipework material Confirmation of suitability from the utility provider Design of clay baffles & records of installation Photographs & installation records	Principal Contractor Principal Contractor Principal Contractor Principal Contractor
Watching brief	Watching brief during earthworks for unexpected ground conditions and contamination.	Watching brief statement Site visit records	Principal Contractor CGL

Item	Requirements.™ .Criteria.	Evidence	Responsible.Party
	Details of findings, including any intrusive investigations and chemical test results, as appropriate. Adherence to the Discovery Strategy set out in Section 6.1 of the *Geoenvironmental Interpretative Report and Remediation Method Statement*. Risk assessments, screening assessments and details of measures taken to control risks e.g. remediation.	Photographs Chemical test results & assessments Duty of care / waste records (where material removed off-site)	Principal Contractor / CGL CGL Principal Contractor
Dust & odour control	Appropriate dust and odour suppression measures to be used as needed. Appropriate management of stockpiles.	Details of dust & odour suppression methods Stockpile management plan Photographs	Principal Contractor Principal Contractor Principal Contractor / CGL
Material management	Details of materials management, including in relation to stockpiling, segregation, re-use and disposal of material. Materials re-use on-site (if planned) to be undertaken in accordance with appropriate legal mechanisms (e.g. CL:AIRE DoWCoP) and materials movements to be recorded on a site tracker. Details of the segregation and disposal of any asbestos containing materials (ACMs). All material intended for off-site disposal must be classified in accordance with a construction-stage Waste Sampling Plan prepared in accordance with the requirements of Appendix D of EA Technical Guidance WM3.	Materials Management Plan (MMP) if necessary for on-site re-use of site-won materials Waste Sampling Plan Chemical test results to assist with waste classification Waste management & stockpile management records Duty of care records (including permits for hauliers and receiving facilities) Contractors report on disposal (including pre-treatment, disposal sites, load details, volumes, waste characterisation etc.)	Principal Contractor Principal Contractor (CGL can assist if required) Principal Contractor (CGL can assist if required) Principal Contractor Principal Contractor Principal Contractor