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Verification Report

for

Ferry Island (Plot B)
Tottenham Hale
Heart of Hale Lane
London
N17 9LP

(ref. TJ3994IR1v1.0)

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Revision Record

Ref	Version	Date	Description	Prepared by	Approved by
TJ3994IR1	v1.0	22/05/2026	Original version.	PB	BP

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LIST OF ABBREVIATIONS

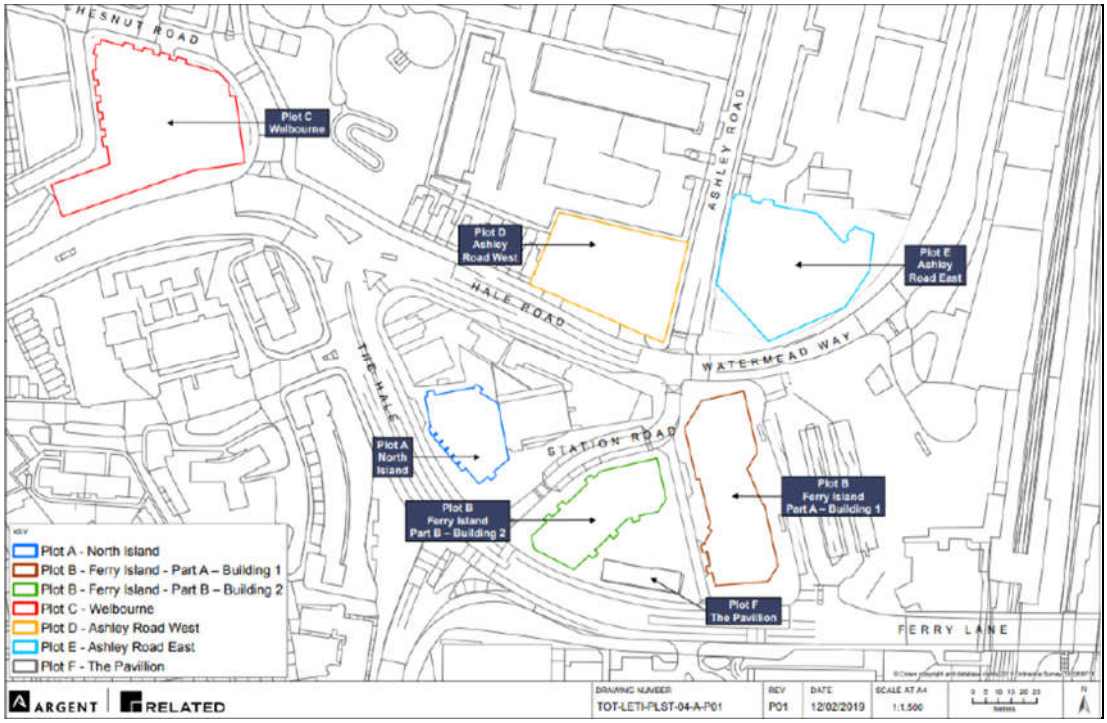
ACM	Asbestos Containing Material
Al	Aluminium
AONB	Area of Outstanding Natural Beauty
AoPC	Area(s) of Potential Concern
AST	Above Ground Storage Tank
BaA	Benzo(a)anthracene
BaP	Benzo(a)pyrene
BbF	Benzo(b)fluoranthene
BGS	British Geological Survey
BH	Borehole
BTEX	Benzene, Toluene, Ethylbenzene & Xylene
CAT	Cable Avoidance Tool
CD&E	Construction, Demolition & Excavation
Chy	Chrysene
CLEA	Contaminated Lane Exposure Assessment
CSM	Conceptual Site Model
CWG	California Working Group
C4SL	Category 4 Screening Levels
DEFRA	Dept. for Environment, Food & Rural Affairs
DQRA	Detailed Quantitative Risk Assessment
E	East
EA	Environment Agency
ERA	Environmental Risk Assessment
EU	European Union (Council/Commission etc.)
FRA	Flood Risk Assessment
GAC	Generic Assessment Criteria
GQA	General Quality Assessment
GQRA	Generic Quantitative Risk Assessment
ha	Hectare(s)
IcdP	Indeno(123-cd)pyrene
LLTC	Low Level of Toxicological Concern
LNR	Local Nature Reserve
LoW	List of Wastes
m	Metre(s)
mAOD	Metres Above Ordnance Datum
mbgl	Metres Below Ground Level
MTBE	Methyl Tert-Butyl Ether
MCERTS	EA Monitoring Certification Scheme
N	North
NGR	National Grid Reference
NNR	National Nature Reserve
NP	National Park
NVZ	Nitrate Vulnerable Zone
PAH	Polyaromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
PCoC	Potential Contaminants of Concern
PE	Polyethylene
PFS	Petrol Filling Station
PID	Photo Ionisation Detector
POS	Parks and Open Spaces
PPE	Personal Protective Equipment
PRA	Preliminary Risk Assessment
PVC	Polyvinyl Chloride
RBMP	River Basin Management Plan
RMS	Risk Management Strategy
RWFD	Revised Waste Framework Directive
RWL	Resting Water Level
S	South
S4UL	Suitable 4 Use Levels
SAC	Special Area of Conservation
SGV	Soil Guideline Value
SNRHW	Stable Non-Reactive Hazardous Waste
SPA	Special Protection Area
SPL	Significant Pollutant Linkage
SPR	Source-Pathway-Receptor
SPZ	Source Protection Zone
SSAC	Site Specific Assessment Criteria
SSSI	Site of Special Scientific Interest
SVOC	Semi Volatile Organic Compounds
TGEN	Terragen Environmental Consultants Limited
TOC	Total Organic Carbon
TP	Trial Pit
TPH	Total Petroleum Hydrocarbons
UCL_{95}	Upper Confidence Limit (95%)
UK	United Kingdom
UKAS	UK Accreditation Service
UKEA	UK Environment Agencies
UN	United Nations
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VOC	Volatile Organic Compounds
W	West
WAC	Waste Assessment Criteria
WFD	Water Framework Directive
WS	Window Sampler

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1.0 INTRODUCTION

TGEN was commissioned by Midgard Limited (MGL) to prepare a Verification Report for the development at Ferry Island (Plot B), Tottenham Hale, Heart of Hale Lane, London N17 9LP (the site).

2.0 SITE INFORMATION

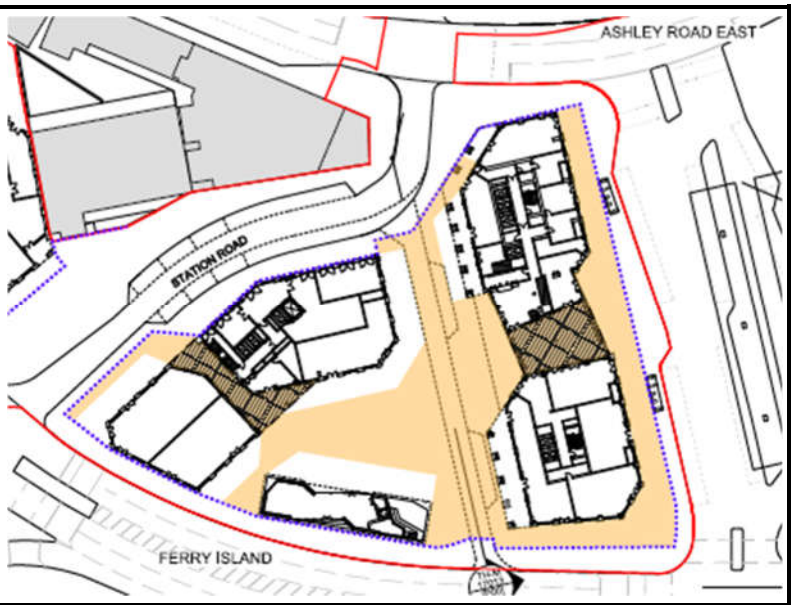
Site Address	Ferry Island (Plot B), Tottenham Hale, Heart of Hale Lane, London N17 9LP.
NGR	TQ 34369 89514.
Site Location Previous Use	The Tottenham Hale Centre (THC) development consists of five different sites: Welbourne, North Island, Ferry Island, Ashley Road East, and Ashley Road West. Prior to 1864, Ferry Island (Plot B) was predominantly residential with a pumping station occupying the E boundary. By 1936, the residential properties in the SW had been developed into a single building and the pumping station was no longer present. During the 1970s and 80s the site was cleared, and a new road junction constructed, in the SE corner of the site. More recently and prior to the current development Ferry Island has been occupied by three commercial units including KFC, Pizza Hut, and Maplin, with associated car parking.  The anticipated geology at the Ferry Island site comprises made ground overlying superficial deposits of Enfield Silt and River Terrace Deposits. The London Clay is at depth and in the order of 15m thick, underlain by the Lambeth Group, Thanet Sand and White Chalk.

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3.0 PROPOSED DEVELOPMENT

Proposed Development

The development at Ferry Island (Plot B) covers an area of circa 1.55ha and includes the construction of two buildings between 7 and 38-storeys in height with a single storey basement connecting the two buildings and associated public realm space. Building 1 will include 376 build to rent apartments with ground floor shell and core retail units. Building 2 will include 108, private, for sale apartments, also with shell and core retail units within the ground floor.



Planning permission (ref. HGY/2018/2223 dated 27/03/2019) was granted by the London Borough of Haringey (the local authority) for demolition works and clearance of the existing site(s) to provide a mixed-use development comprising six buildings up to 38-storeys in height, which together with pavilion and basement accommodation will provide up to 104,053m2 of floorspace (GIA), comprising residential (Use Class C3) (up to 1,036 units), retail (Use Class A1-A4), health centre (Use Class D1), office (Use Class B1), leisure (Use Class D2) parking and servicing areas, hard and soft landscaping (including the provision of a new public square), highways works, creation of new vehicular accesses and the realignment of Station Road, decentralised energy network works and other associated works.

The decision was subject to conditions, including those related to land contamination, which can be summarised as follows:

- **B19) Monitoring and Maintenance Plan Contamination (Environment Agency)**
  The Plot B development hereby permitted may not commence other than for investigative works until a monitoring and maintenance plan in respect of contamination within Plot B, including a timetable of monitoring and submission of reports to the local authority, has been submitted to, and approved in writing by, the local authority. Reports as specified in the approved plan, including details of any necessary contingency action arising from the monitoring, shall be submitted to, and approved in writing by, the local authority.
- **B20) Contamination Not Previously Identified (Environment Agency)**
  If during development, contamination not previously identified is found to be present at Plot B then no further development in respect of that Plot (unless otherwise agreed in writing with the local authority) shall be carried out until a remediation strategy detailing how this contamination will be dealt with has been submitted to and approved in writing by the local authority. The remediation strategy shall be implemented as approved within Plot B.
- **B24) Contaminated Land – Part 1 (LBH Environmental Health)**
  Prior to the commencement of the development on Plot B (other than for investigative work):
  a) Using the information obtained from the previous assessments, an additional site investigation, sampling and analysis shall be undertaken at the Plot as appropriate. The investigation must be comprehensive enough to enable: i) A risk assessment to be undertaken, ii) Refinement of the Conceptual Model, and ii) The development of a Method Statement detailing the remediation requirements. The risk assessment and refined Conceptual Model shall be submitted, along with the site investigation report, to the local authority.
  b) If the risk assessment and refined Conceptual Model indicate any risk of harm, a Method Statement detailing the remediation requirements in respect of the Plot, using the information obtained from the site investigation, and also detailing any post remedial monitoring shall be submitted to, and approved in writing by, the local authority prior to that remediation being carried out on the Plot.
- **B25) Contaminated Land – Part 2 (LBH Environmental Health)**
  Where the contaminated land condition above demonstrates that remediation of contamination on the Plot is required, completion of the remediation detailed in the Method Statement shall be carried out and a report that provides verification that the required works have been carried out, shall be submitted to, and approved in writing by the local authority before the development is occupied within Plot B.

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4.0 PREVIOUS INVESTIGATIONS

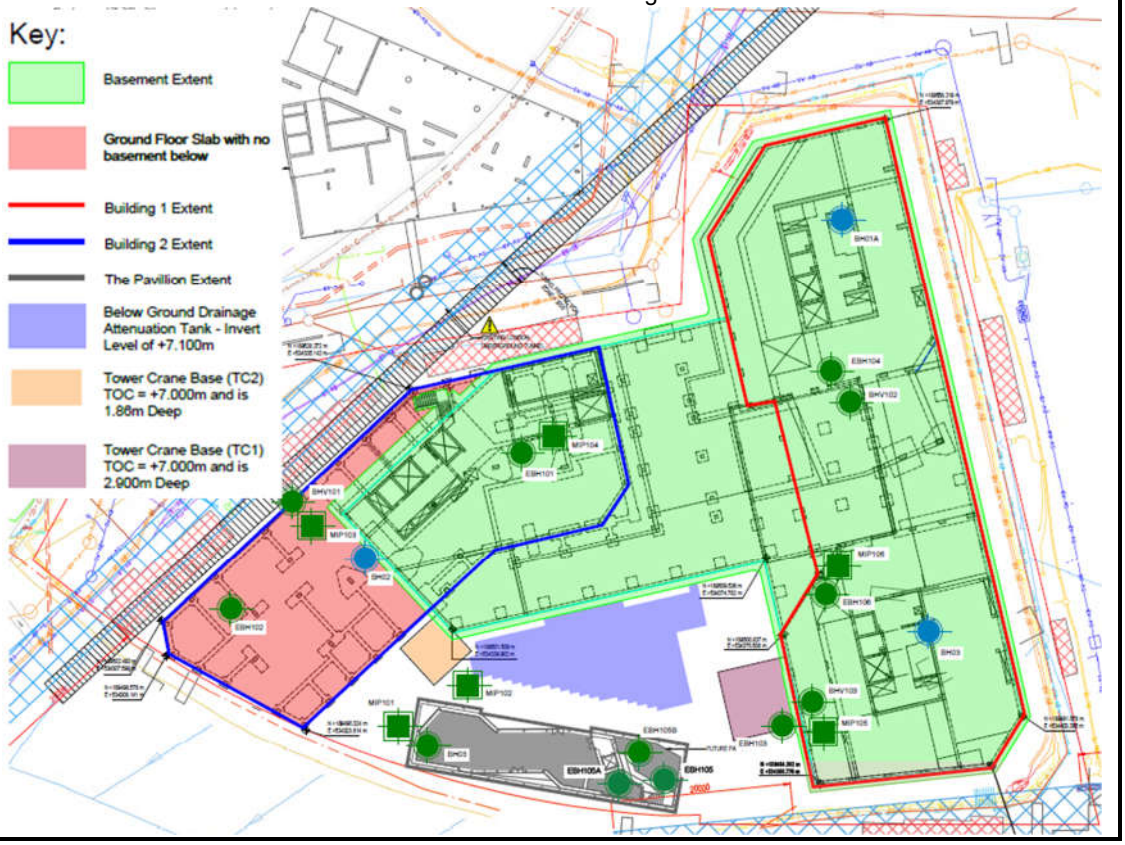
This section comprises a summary of several previous investigations and reports for the wider THC development site and Plot B, which should be read in conjunction with this Verification Report, including:

- BuroHappold Engineering Ltd (August 2016) Tottenham Hale Masterplan, Phase I Geoenvironmental Desk Study (unseen but referred to in various site investigation reports.).
- Whitby Wood Limited (August 2018) Tottenham Hale Development Geotechnical Interpretative Report (ref. P450040-REP-004).
- Whitby Wood Limited (November 2021) Tottenham Hale Development Geo-Environmental Interpretative Report – 2020 (ref. P450040-REP-010).
- JRL Midgard Limited (September 2022) Construction Environmental Management Plan (CEMP) and Construction Logistics Plan (CLP) (ref. TN: BO-JRLG-BM-XX-FM-Z-0006_A1_C02)
- Concept Site Investigations (September 2022) Ferry Island. Ground Investigation Report – Factual (ref. 22/3722-GIR-F01).
- JRL Civil Engineering Limited (October 2022) Method Statement – CFA Piling (ref. T22001-SSOW#001).
- Card Geotechnics Limited (November 2022) Technical Note of Findings of Additional Ground Investigation (ref. CG/39277A).
- Card Geotechnics Limited (November 2022) Plot B, Ferry Island. Remediation Strategy (ref. CG/39277A Rev.1).
- Card Geotechnics Limited (January 2023) Ferry Island Plot B – revised Capping Import Specification. (ref. CG/39277A).
- Card Geotechnics Limited (October 2023) Tottenham Hale, Ferry Island – Discharge of Conditions (ref. CG/39277A).
- Card Geotechnics Limited (January 2024) Ferry Island Plot B RMS – Discharge of Conditions (ref. CG/39277A).

The above reports have been subject to review by the statutory authorities (e.g. The Environment Agency). A full summary of the dialogue between the statutory authorities and authors is beyond the scope of this Verification Report, but can be found, published on the local authority planning portal.

Basement Layout and Excavation Arisings

As noted in Section 3.0, the development includes a single storey basement connecting the two buildings and below ground surface water attenuation tanks. The basement finished floor level is 3.85mOD. It is assumed that the excavation will need to be in the order of 5-7m deep to account for the construction thickness of the basement floor as well as the basement height. The basement extent is shown below:



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	We understand that as part of the development, initially there was a shallow reduced level excavation followed by placement of a pile mat, piling, pile cap excavations, and a deep basement excavation, which generated in total circa 26790m^3 of material for disposal from site as waste. Of those arisings, circa 7170m^3 (27%) were made ground, of which circa 2870m^3 were pile mat and hardstanding, and circa 19620m^3 (73%) was uncontaminated and inert natural soil and pile arisings. It is noted that there are underground storage tanks (UST) recorded in the S of the wider Ferry Island site. These are outside of the Plot B boundary within the footprint of Plot F (the Pavilion) and will be addressed during the Plot F redevelopment works. We understand this area has been subject to a separate investigation and is supported by a separate Remediation Strategy.
Site Investigation(s) Summary	During the previous site investigations, the strata encountered typically comprised made ground, on average circa 1.7m thick, containing only a small quantity of deleterious materials, such as fragments of clinker and tarmac, with no visual or olfactory evidence of significant contamination. Asbestos containing material was not visible during the previous site investigations, but it was detected at low concentrations in several samples of made ground tested. The made ground overlies natural and uncontaminated (inert) Enfield Silt, Kempton Park Gravel, and London Clay. During the 2018 and 2021 investigations thirty-five samples were taken from the thirteen exploratory hole locations to depths of up to 6.2mbgl. Occasionally elevated concentrations of lead and PAH (BbF, BaP and DahA) were reported above residential GAC, the majority of which were within the footprint of the proposed deep basement (circa 5-7m deep) and/or the circa 0.5m deep reduced level excavation to accommodate the piling platform. During the later 2022 investigation, an additional eighteen soil samples were also collected and analysed. Of the eighteen samples analysed, concentrations of BbF, BaP and DahA marginally exceeded the residential GAC in one sample collected from BH03 @ 0.3mbgl. This sample was within the basement excavation footprint and was removed during the construction works, thereby removing the source and risk to future site users. Asbestos fibres were not detected in any of the soil samples analysed during the 2022 investigation. The basement excavation will encounter groundwater within the Made Ground, Enfield Silt and Kempton Park Gravels. To discharge the groundwater arising from dewatering the basement excavation may require either a permit from Environment Agency (EA) for disposal to surface water/groundwater or a permit from Thames Water to discharge to sewer. Analysis of the groundwater from beneath the site indicates that although historically there have been some elevated concentrations of contaminants (e.g. for mercury, chloride, copper, manganese, ammonia TPH, trichloroethene, and dichlorobenzenes) the most recent two sampling rounds (2022 and 2020) did not report concentrations of contaminants above the detection limit. It is possible that some additional confirmatory analytical testing of water within the excavation may be required prior to discharge to sewer. Overall, the removal of the Made Ground during excavation of the basement, dewatering and treatment will likely aid the betterment of the groundwater situation at the site. Three rounds of gas monitoring were undertaken. Methane (CH_4) concentrations were below the instrument detection limit in all seven monitoring wells, and the maximum carbon dioxide (CO_2) concentration was 1.8% in EBH106. The gas flow rates were recorded above the instrument's limit of detection. The groundwater level was also noted to be above the slotted section of the monitoring well in EBH103 during each visit and therefore CGL considered the monitoring results from this location to not be representative of the gassing regime of the site. Based on the monitoring undertaken, the maximum hazardous gas flow rate is <0.0001l/hr for CH_4 and 0.0021l/hr for CO_2. The site was considered as Characteristic Situation 1 (CS1), where gas protection measures are not required. In addition, almost 80% of the Plot B footprint was to be excavated for the basement, thereby removing most of the potential soil source. Soil samples analysed generally recorded concentrations below the relevant thresholds for water supply pipes. However, concentrations of aliphatic and aromatic hydrocarbons within the EC_{16} to EC_{40} range were recorded that exceeded the limit of 500 mg/kg. However, it was considered that these materials were due to be excavated and as such, based on soil concentrations from the site, barrier pipes were unlikely to be required.
Remediation Strategy	A remediation strategy (ref. CG/39277A Rev 0 dated September 2022) was prepared by Card Geotechnics Limited, which was submitted to the local authority in respect of the matters reserved by Conditions B19 and B24. In summary, the recommended measures included: • Enabling works including site stripped by 0.5m depth and replaced with a 'clean' engineering fill to create a suitable construction platform. (Completed and to be verified if required one works complete). • Basement excavation. The basement and below ground surface water attenuation tank will cover almost 80% of the footprint of Plot B and will extend to the underlying London Clay. The excavated superficial deposits will be removed from site. • Provision of a capping layer and/or growth medium in areas of soft landscaping (inclusive of ground level and rooftop level areas of soft landscaping). • Selection of appropriate materials for buried water supply pipes. Based on the soil results barrier pipes may not be required but it is recommended that this is confirmed with the local water authority.

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	• Watching brief by and Environmental Consultant and implementation of a discovery strategy during enabling works and general earthworks in the event unexpected contamination is identified, and to facilitate appropriate waste characterisation of soils for disposal. • Materials management. • Implementation of appropriate protection of construction workers and mitigation of risks to offsite receptors from generation of dust and odours.
Capping Import Criteria	As part of the statutory consultation process, the EA raised several queries in relation to the criteria for soils imported to site to be used as capping in areas of soft landscaping. Card Geotechnics Limited (January 2024) prepared a revised capping import specification. It was noted that soils to be used as capping in areas of soft landscaping will be a purchased product from a reputable supplier of clean, naturally occurring soils. The proposed volumes of soil imported for the areas of soft landscaping is very small and includes: • Ground floor: Topsoil – 232.6m^3; Subsoil – 348.9m^3 • Building 1, Level 7: Topsoil – 11.18m^3; Subsoil – 13.03m^3 • Building 1, Level 19: Topsoil – 12.06m^3; Subsoil – 12.06m^3 • Building 2, Level 7: Topsoil – 31.72m^3; Subsoil – 36.65m^3 Layout plans showing the extent and locations of the soft landscaping areas are given in Appendix B. These are proposed for use in four areas, three of which are at podium levels so drainage will be controlled and there will be no percolation / infiltration to groundwater. As required by the remediation strategy, the imported soils are to be sampled and tested to confirm they meet the required import specification, a copy of which is presented in Appendix C. The topsoil is to be certified to BS3882 and will not contain waste products. At ground floor level, the soils will be limited to small, landscaped tree pit areas around the site boundary, and these too will be sampled and tested prior to use at the site. Many of the tree pits are lined with root barriers at the base.
Verification Plan	Within the remediation strategy, the requirements for validation and verification were set out within a Verification Plan, which can be summarised as follows: • Site inspections and compliance testing will be carried out during the works by a suitably qualified geoenvironmental engineer for the various elements of the remediation works. • Site inspection records, photographs, and testing should unexpected contamination be encountered. • Inspect the topsoil/subsoil capping layer construction and verify placement and thickness of the capping layer including obtaining photographic evidence of the topsoil/subsoil capping layer construction. • Sample and test imported capping layer soils (and site won natural soils if appropriate) to confirm compliance with the specification (Appendix C), including review of source data prior to import of material to site. Documentation required to be provided by the contractor will include, but not be limited to: • As built drawings. • Duty of care records for the disposal of soils / asbestos containing materials. • Source data and pre-import laboratory data of imported topsoil/subsoil. • Specification of water supply pipes used (including confirmation from the water supply company of their acceptance of the material used). • Material management procedures (i.e. permits, exemption etc.) as appropriate. • Discovery records or statement confirming no significant observations of contamination. • On completion of the remediation works, a Verification Report will be prepared. This report should detail the works undertaken and should include copies of relevant information listed above including waste transfer records, test results, inspection records, and source certificates for imported materials (if required).

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5.0 STATUS, FRAMEWORK AND REMIT

Framework	The Land Contamination: Risk Management Guidance (EA, May 2020) outlines how to assess if there is unacceptable risk and to decide which options are the most suitable to manage the risk through the implementation of remediation (if necessary). The process involves identifying, making decisions on, and taking appropriate action to deal with, land contamination in a way that is consistent with government policies and legislation within the UK. Environmental assessors use a SPR conceptual site model when determining the risk posed by a potentially contaminated site. For potential risk to arise each stage of the SPR linkage must be present, plausible, and significant. Our approach follows the framework provided in the guidance, the stages, and tiers of which can be briefly summarised as follows: • **Stage 1 Risk Assessment (RA)** Tier 1: Preliminary Risk Assessment (PRA). Tier 2: Site Investigation and Generic Quantitative Risk Assessment (GQRA). Tier 3: Detailed Quantitative Risk Assessment (DQRA). • **Stage 2 Options Appraisal (OA)** Decide if sufficient up to date information is available. Tier 1: Identify feasible remediation options. Tier 2: Detailed evaluation of options. Tier 3: Selection of final remediation option. • **Stage 3 Remediation Strategy (RS)** Tier 1: Develop a Remediation Strategy. Tier 2: Remediation and Verification. Tier 3: Long term monitoring and maintenance (if required).
Statutory Consultation	The site investigation reports and remediation strategy were submitted to the local authority with an application to discharge the matters reserved by Condition B19 (Monitoring and Maintenance Plan) and B24 (Contaminated Land Part 1) of the planning permission. Approval was granted by the local authority (ref. HGY/2022/0779 dated 14/08/2023), a copy of which is presented in Appendix D. The approval was subject to an informative requiring the applicant to address the issue in relation to the importation criteria as raised by the EA prior to Condition B24 being discharged in full. The CEMP and CLP were submitted to the local authority with an application to discharge the matters reserved b Condition B29 (Demolition/Construction Environmental Management Plans) of the planning permission. Approval was granted by the local authority (ref. HGY/2022/2460 dated 24/11/2022), a copy of which is presented in Appendix E Subsequently, the Card Geotechnics Limited revised capping import specification was submitted with an application to discharge the remaining matters reserved by Condition 24 (Contaminated Land Part 1) of the planning permission. Approval was granted by the local authority (ref. HGY/2023/2212 dated 13/03/2024), a copy of which is presented in Appendix F.
Remit	Our remit was to carry out a programme of routine site inspections as part of the watching brief, recover validation samples and compile records gathered by JRL and Midgard in accordance with the requirements of the Verification Plan to present in a Verification Report to address the matters reserved by Conditions B20 (Contamination Not Previously Identified) and B25 (Contaminated Land – Part 2) of the planning permission.

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6.0 VALIDATION RECORDS

6.1 Personnel, Briefings and Competence

CEMP	In accordance with the matters reserved by Condition B29, JRL compiled a CEMP, which outlined risks and control measures (noise, dust, unexpected contamination, vibration etc.) to be implemented during the development. A copy of the approved CEMP is presented in Appendix G.
Toolbox Talk	During the works, JRL delivered a toolbox talk to all operatives prior to their start onsite, a copy of which together with a signed register, is presented in Appendix H. The toolbox talks included details in respect of hazards, risks and control measures associated with contaminants commonly encountered at construction and demolition sites.

6.2 Site Inspection Records

Watching Brief and Routine Reassurance Sampling Visits

As part of the watching brief, TGEN carried out a programme of routine site visits to inspect the arisings being generated by the enabling works. During these visits reassurance samples were taken of the material being disposed offsite and/or imported to site for use in the temporary piling platform. Copies of the individual inspection reports are presented in Appendix I, which are summarised in the table below.

Visit	Date	Summary
Visit 1	13/09/2022	During the inspection visit, three samples of made ground (general excavation arisings) and one sample of tarmac were taken and submitted for testing to confirm the disposal classification.
Visit 2	11/10/2022	During the inspection visit, three samples of made ground (general arisings) were taken and submitted for testing to confirm the disposal classification.
Visit 3	23/11/2022	During the inspection visit, three samples of made ground (general arisings) and one sample of natural ground (piling arisings) were taken and submitted for testing to confirm the disposal classification.
Visit 4	30/11/2022	During the inspection visit, three samples of made ground (arisings from the excavation of the water attenuation tanks) and one sample of natural ground (piling arisings) were taken and submitted for testing to confirm the disposal classification.
Visit 5	09/12/2022	During the inspection visit, three samples of made ground (general arisings) were taken and submitted for testing to confirm the disposal classification, and one sample of aggregate (imported 6F5) was taken and submitted for testing to confirm suitability for reuse onsite. The imported aggregate was subsequently disposed offsite as waste.
Visit 6	14/12/2022	During the inspection visit, three samples of made ground (general arisings) were taken and submitted for testing to confirm the disposal classification.
Visit 7	21/12/2022	During the inspection visit, three samples of natural ground (piling arisings) were taken and submitted for testing to confirm the disposal classification, and one sample of aggregate (imported 6F5) was taken and submitted for testing to confirm suitability for reuse onsite. The imported aggregate was subsequently disposed offsite as waste.
Visit 8	04/01/2023	During the inspection visit, two samples of natural ground (piling arisings) were taken and submitted for testing to confirm the disposal classification.
Visit 9	12/10/2023	During the inspection visit, three samples of made ground (general arisings) and one sample of natural ground (piling arisings) were taken and submitted for testing to confirm the disposal classification.
Visit 10	19/10/2023	During the inspection visit, three samples of made ground (general arisings) and one sample of natural ground (piling arisings) were taken and submitted for testing to confirm the disposal classification.
Visit 11	26/10/2023	During the inspection visit, two samples of made ground (general arisings) were taken and submitted for testing to confirm the disposal classification.
Visit 12	02/11/2023	During the inspection visit, two samples of made ground (general arisings) and three samples of natural ground (piling arisings) were taken and submitted for testing to confirm the disposal classification.
Visit 13	09/11/2023	During the inspection visit, two samples of made ground (general arisings) and three samples of natural ground (piling arisings) were taken and submitted for testing to confirm the disposal classification.
Visit 14	16/11/2023	During the inspection visit, two samples of made ground (general arisings) and two samples of natural ground (basement excavation/piling arisings) were taken and submitted for testing to confirm the disposal classification.

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	Visit 15	23/11/2023	During the inspection visit, two samples of made ground (general arisings) and two samples of natural ground (basement excavation/piling arisings) were taken and submitted for testing to confirm the disposal classification.
	Visit 16	30/11/2023	During the inspection visit, two samples of made ground (general arisings) and two samples of natural ground (basement excavation/piling arisings) were taken and submitted for testing to confirm the disposal classification.
	Visit 17	07/12/2023	During the inspection visit, two samples of made ground (general arisings) and two samples of natural ground (basement excavation/piling arisings) were taken and submitted for testing to confirm the disposal classification.
	Visit 18	14/12/2023	During the inspection visit, two samples of made ground (general arisings) and two samples of natural ground (basement excavation/piling arisings) were taken and submitted for testing to confirm the disposal classification.
	Visit 19	19/12/2023	During the inspection visit, two samples of made ground (general arisings) and two samples of natural ground (basement excavation/piling arisings) were taken and submitted for testing to confirm the disposal classification.
	Visit 20	15/01/2024	During the inspection visit three samples of natural ground (basement excavation) were taken and submitted for testing to confirm the disposal classification.

Hotspot Validation Sampling Visits

A previous waste classification assessment undertaken by Powell Associates Limited (ref. JRLEFIWCR1 dated 22/02/2022) identified hazardous soil and stones (LoW Code 170503*) at two locations:

- *BHV102 @ 0.0mbgl and 0.3mbgl due to elevated total petroleum hydrocarbons (TPH).*
- *EBH105B @ 2.5mbgl due to elevated TPH.*

As part of the enabling works, visually impacted materials deemed hazardous at the two locations to were removed. A geo-environmental engineer from TGEN visited the site to assess the nature of the strata encountered. During the visit, samples of materials were recovered from the four sides (N, S, E and W) and the base (B) of each of the excavations to demonstrate that the hazardous material had been successfully removed or, if not, that additional excavation was required to extend the excavation laterally and/or vertically in order to remove additional materials. A copy of the site inspection report relating to the validation sampling is presented in Appendix J, which is summarised in the table below:

Visit	Date	Summary
Visit 1	13/09/2022	Ten validation samples taken from around the sides and base of remedial excavations at BHV102 and EBH105B. There was no significant odour in the soils around the base and sides of the excavation and the PID readings were <1ppm. The samples of soil from around the perimeter and base of the hotspot excavation at BHV102 returned low concentrations of TPH and PAH. None of the concentrations would be considered hazardous and demonstrated the successful removal of the previously identified hazardous TPH contamination at this location. The samples of soil from around the perimeter and base of the hotspot excavation at EBH105 returned low concentrations of TPH and generally low concentrations of PAH. At two locations (S face and Base) the samples returned slightly elevated concentrations of PAH. None of the concentrations returned by the samples would be considered hazardous and as such, whilst there is some residual contamination in the made ground at this location, the results demonstrate the successful removal of the previously identified hazardous TPH contamination at this location.

Formation Inspection Sampling Visits

At the completion of the basement excavation, site visits were carried out to inspect and recover samples from the soils remaining in-situ at formation level. Copies of the individual inspection reports are presented in Appendix K, which are summarised in the table below.

Visit	Date	Summary
Visit 1	08/02/2024	During the formation level inspection visit, four samples of natural ground (London Clay) at formation level were taken and submitted for testing to confirm suitability for reuse onsite.
Visit 2	04/03/2024	During the formation level inspection visit, three samples of natural ground (London Clay) at formation level were taken and submitted for testing to confirm suitability for reuse onsite.

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6.3 Duty of Care Records

During the works undertaken by JRL and Midgard, between 14/09/2022 and 30/03/2026, a total of 33,511 tonnes of waste soil and stones, tarmac and were disposed offsite as waste. In addition, a total of 2262 loads of non-waste soil (naturally occurring soil and mineral material) were directly transferred from the site to a receiver site operating a Materials Management Plan (MMP) in accordance with the CL:AIRE Definition of Waste Code of Practice (DoWCoP). The duty of care records are summarised in the following sections.

6.3.1 Waste Carriers

The table below summarises the details of the waste carriers used during the groundworks to remove arisings from the site. A copy of the waste carriers license (WCL) for each carrier is presented in Appendix L.

Carrier	WCL	Valid From	Valid To
JRL Environmental Limited	CBDU86520	21/09/2022	04/02/2025
	CBDU569104	05/02/2025	05/02/2028

6.3.2 Waste Transfer Notes

A summary of the waste disposal facilities and receiving sites is presented in Section 6.3.4 and a selection of waste transfer notes (WTN) for the various receiving sites is presented in Appendix M. Full copies of the WTN are available from JRL/MGL on request.

6.3.3 Hazardous Waste Consignment Notes

As detailed in Section 6.2, two hotspots of hazardous waste were identified at BHV102 and EBH105B, both due to elevated hydrocarbons. Upon confirmation of the success of the validation exercise, on 13/10/2022, two loads of hazardous waste (LoW Code 170503*) were disposed offsite to the Keltbray Environmental Limited facility at Mohawk Wharf. Copies of the consignment notes are presented in Appendix N.

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6.3.4 Waste Disposal Facilities and Receiving Sites

The table below summarises the details of the sites/facilities waste arisings from the site was sent to during the groundworks. A copy of the permit for each receiving site is presented in Appendix O.

Receiving Sites	Material Type	Haulier	Tonnage	Date From	Date To	Environmental Permit Ref	Facility Type
Queen Mary Reservoir Recycling Facility, Ashford Road, Laleham, Staines, TW18 1QF	Ballast	JRLE	132.26	23/10/2023	12/12/2023	EPR/EB3732RR	Store and treat waste to produce soil, soil substitutes, and aggregates
Rainham Recycling Facility, Launders Lane, Rainham, Essex, RM13 9GJ	Ballast	JRLE	4,096.72	23/10/2023	23/01/2024	EPR/DB3501KS	
Silt Lagoons at Rainham and Wennington Marshes, Cold Harbour Lane, Rainham, RM13 9YQ	Ballast	JRLE	20.58	23/10/2023	23/10/2023	EPR/FB3701XY	Landfill for non-hazardous waste including inert waste and landfill restoration
	Non-Hazardous Soil and Stones	JRLE	18.00	10/01/2023	10/01/2023		
	Soil and Stone	JRLE	11,898.00	21/09/2022	03/02/2023		
Perry Road Recycling Facility, Perry Road, Off Chequers Lane, Dagenham, RM9 6QD	Ballast	JRLE	144.00	23/10/2023	09/11/2023	EPR/DB3502TZ	Treatment of waste to produce soil, soil substitutes, and aggregates
	Tarmac Away	JRLE	18.00	15/09/2022	15/09/2022		
DB Schenker Rail (UK) Limited, Marshgate Sidings, Pudding Mill Lane, Bow, E15 2PJ	Non-Hazardous Soil and Stones	JRLE	108.00	08/11/2022	12/12/2022	EPR/BP3698EQ	Non-hazardous waste physical treatment facility
GB Railfreight Limited, Upside Railway Yard, Brent Terrace, Cricklewood, NW2 1LN	Non-Hazardous Soil and Stones	JRLE	18.00	29/09/2022	29/09/2022	EPR/AB3200KE	Non-hazardous waste transfer and treatment facility
JRL Environmental, Knights Road, Silvertown, E16 2AT	Screenable Material	JRLE	18.00	27/10/2022	27/10/2022	EPR/WE4202AA	Treatment of waste to produce soil, soil substitutes, and aggregates
	Soil and Stone	JRLE	4,378.84	21/09/2022	03/10/2024		
Sewells Reservoir Construction Limited. Barking Riverside Recycling Centre, Choats Road, Barking, RM9 69RJ	Screenable Material	JRLE	594.22	28/02/2025	30/03/2026	EPR/HB3109CX	Reception, transfer, storage, and processing of non-hazardous and inert waste for recovery
	Soil and Stone	JRLE	78.10	04/10/2024	04/11/2025		
Brett Aggregates Ltd. East Hall Farm, New Road, Wennington, Rainham, RM13 9DS	Soil and Stone	JRLE	6,696.00	15/12/2022	01/03/2024	EPR/EB3201HA	Landfill for inert waste
Lafarge Aggregates Limited, Tyttenhanger Landfill, Coursers Road, London Colney, Hertfordshire	Soil and Stone	JRLE	5,022.00	27/09/2022	08/04/2024	BX3368PN	Landfill
Thames Materials Limited, Thames Materials, Skip Lane, Harvil Road, Harefield, UB9 6RP	Soil and Stone	JRLE	108.00	16/12/2022	16/12/2022	EPR/BB3709TU	Importation, storage, and treatment of waste to produce soil, soil substitutes, and aggregates.
Hanson Quarry Products Europe Limited. Dagenham Dock Aggregate Recycling Facility, Land on Breach Lane, Dagenham, RM9 6QD	Tarmac Away	JRLE	126.00	08/04/2025	18/12/2025	EPR/BB3005TG	Physical treatment including manual and mechanical sorting/separation, crushing, and screening of non-hazardous waste for recovery.
Keltbray Environmental Ltd. Plaistow Wharf, North Woolwich Road, London, E16 2AB	Hazardous Soil and Stones	JRLE	36.00	13/10/2022	13/10/2022	EPR/CP3035QC	Transfer station accepting hazardous and non-hazardous waste
Woodland Environmental Ltd, Canalside Park, Glade Lane, Ealing UB2 4PG	Naturally Occurring Soil & Minerals	JRLE	2262 Loads	19/12/2022	22/10/2025	MMP	CL:AIRE DoWCoP MMP Receiver Site

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6.3 Discharge Water

During the enabling works and basement excavation, it was necessary to carry out a programme of de-watering. Water from the excavation was discharged to the local sewer network via a settlement tank. A copy of the discharge permit is presented in Appendix P.

6.5 Imported Topsoil and Subsoil

<table>
<tr><td rowspan="3">Site Inspection and Topsoil/Subsoil Validation Sampling</td><td colspan="3">As noted in Section 4.0, a small volume of topsoil and subsoil was imported to be placed in areas of landscape planting, primarily composed of concrete, containerised planters above the podium or on the upper floors as shown on the landscape planting plan presented in Appendix B. The volumes imported included:
• Ground floor: Topsoil – 232.6m^3; Subsoil – 348.9m^3
• Building 1, Level 7: Topsoil – 11.18m^3; Subsoil – 13.03m^3
• Building 1, Level 19: Topsoil – 12.06m^3; Subsoil – 12.06m^3
• Building 2, Level 7: Topsoil – 31.72m^3; Subsoil – 36.65m^3
The topsoil and subsoil were certified by the supplier and was subject to a programme of testing validation testing to demonstrate that the soil complied with the capping import criteria. A topsoil/subsoil validation report is presented in Appendix Q and is summarised below:</td></tr>
<tr><td>Visit</td><td>Date</td><td>Summary</td></tr>
<tr><td>1</td><td>07/08/2025</td><td>As part of the supplier certification, the topsoil was tested in accordance with BS3882:2015 Specification for Topsoil and the subsoil was tested in accordance with BS8601:2013 Specification for Subsoil. Both were also tested for a comprehensive suite of potential contaminants.
The topsoil was fully compliant with the requirements of BS3882:2015 for Multipurpose Topsoil. The subsoil was compliant with the requirements of BS8601:2013 for Multipurpose Subsoil except for the pH, which was strongly alkaline. The is common in light, sandy soils, which have a low buffering capacity (i.e., resistance to a change in pH) and it is therefore, not considered to represent a problem for landscape applications, if species tolerant of alkaline, calcareous soils are selected. Both samples returned concentrations that were below the respective thresholds given in the chemical criteria for imported soils and were therefore considered acceptable for use at the site.
Three representative samples of topsoil and three representative samples of subsoil were recovered and submitted to a UKAS/MCERTS accredited laboratory for testing in accordance with the parameters listed in Appendix C.</td></tr>
</table>

6.6 Imported Aggregates

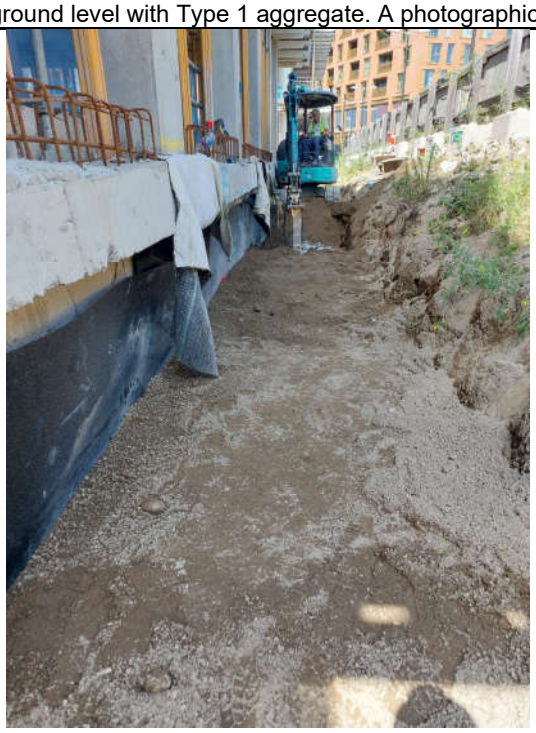
During the development, circa 1200 tonnes of aggregate were imported to the site. Supplier certification for the products is presented in Appendix R.

Supplier	Material Type	Haulier	Tonnes	Date From	Date To
Hanson Aggregates – Dagenham (Appendix R1)	0/4mm Marine Sharp Washed Sand	JRLE	82.54	23/09//24	19/02/25
	10mm Primary Shingle	JRLE	30.24	06/08/25	18/09/25
	20mm Primary Shingle	JRLE	14.52	01/10/25	01/10/25
	MOT Type 1 Crushed Concrete	JRLE	365.20	07/12/22	25/03/26
	4/10mm Marine Graded Gravel	JRLE	9.82	09/02/26	09/02/26
JRL Silvertown (Appendix R2)	6C Stone	JRLE	2325.46	11/11/22	20/02/24
	6F5 Crushed Concrete	JRLE	11718.00	28/09/22	25/07/24
	6N Material	JRLE	978.00	26/10/22	10/10/24
	Recycled Type 1 Concrete	JRLE	506.91	07/12/22	27/09/24
SRC – Sheepscoate (Appendix R3)	Building Sand	JRLE	18.78	23/10/24	23/10/24
SRC – Wembley (Appendix R4)	MOT Type 1 Crushed Concrete	JRLE	132.94	10/10/24	01/11/24
SRC – Barking (Appendix R5)	Recycled Type 1 Concrete	JRLE	59.00	05/11/24	26/11/24
	Reject Sand	JRLE	55.00	10/10/24	06/11/24
Travis Perkins (Appendix R6)	Soft Sand	JRLE	10.00	01/08/24	01/08/24

A selection of delivery notes is presented in Appendix S. Full copies of the delivery notes are available from MGL on request.

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6.7 Water Supply Pipes

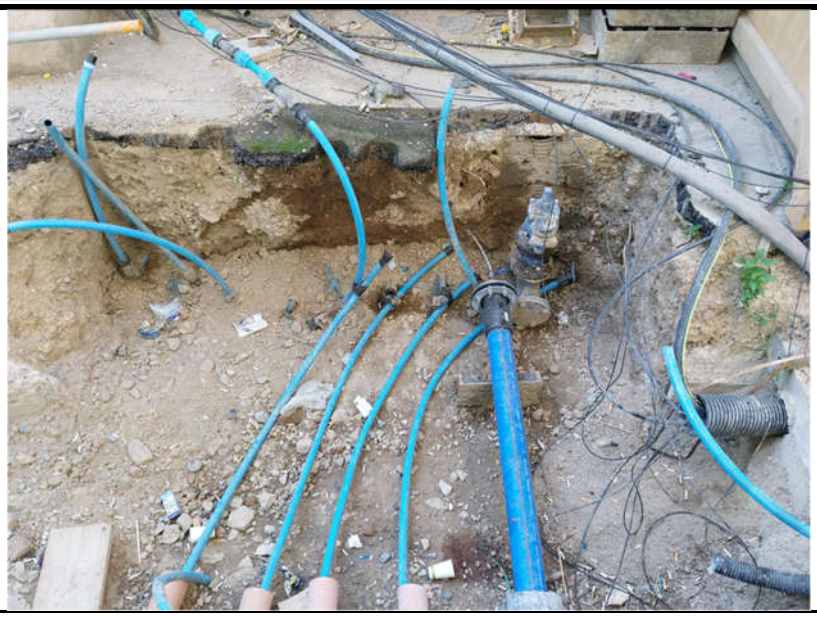
<table>
<tr><td>Site Inspection – Water Supply Pipes</td><td colspan="2">Whilst in accordance with the Remediation Strategy, it was considered that standard PE pipes would be suitable for use at the site, to adopt a conservative approach, JRL/Midgard installed Barrier Pipes. A plan showing the locations of the connections at the site is presented in Appendix T. The route of the water main across the site was below a temporary walkway. The walkway was broken up, and a trench was excavated to accommodate the water supply pipes, The trench was then backfilled with bedding sand and backfilled to ground level with Type 1 aggregate. A photographic record is presented below:</td></tr>
<tr><td rowspan="4">Trench Construction</td><td>  </td><td>  </td></tr>
<tr><td colspan="2">Excavation of the trench for the water supply pipes.</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td colspan="2">Backfilling the water supply pipe trench with bedding sand.</td></tr>
</table>

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Water Supply Pipe Specification

Brand	Puriton®
Approved by	WRAS Approved Material
Standards	BS 8588
Coil Width	1010mm
Colour	Blue
Outside Diameter	32mm
Length	50 m
Material	PE80, Aluminium, PE80 Composite
Max. Pressure	12.5 bar (SDR11)
Pipe Length	50 m
Size	32 mm
Suitable Application	The barrier pipe system of choice for your new or replacement drinking water supply. Puriton® is a cutting edge solution for the safe distribution of drinking water through contaminated land.
Type	Barrier Pipe
Weight	22kg

Photographic Record



Delivery Records

384m of 63mm Protectaline Barrier Pipe and 50m of Puriton II Barrier Pipe together with associated connections (elbow joints, couplings etc.) were delivered to the site, records of which are presented in Appendix U.

6.8 Discovery Strategy, Unexpected Contamination and Developer Declaration

Developer Declaration	As detailed in the CEMP, the remediation scheme implemented by JRL/Midgard included a discovery strategy for unexpected contamination that was implemented during the enabling works phase and construction phase of the development. Except for the expected hazardous soils that were segregated during the basement excavation, no unexpected contamination was encountered. A declaration confirming this is presented in Appendix V.

7.0 REGULATORY APPROVAL

Formal approval should be sought from the local authority regarding the matters reserved by Conditions B20 (Contamination Not Previously Identified) and B25 (Contaminated Land – Part 2) of the planning permission.

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8.0 LIMITATIONS AND USE OF THIS REPORT

IMPORTANT: This section should be read before reliance is placed on any of the opinions, advice, recommendations, or conclusions set out in this report.

a) This report has been prepared for the purpose of providing advice to the client pursuant to its appointment of TGEN to act as a consultant.
b) Save for the client no duty is undertaken or warranty or representation made to any party in respect of the opinions, advice, recommendations, or conclusions herein set out.
c) All work carried out in preparing this report has used, and is based upon, our professional knowledge and understanding of the current relevant English and European Community standards, approved codes of practice, technology, and legislation.
d) Changes in the above may cause the opinion, advice, recommendations, or conclusions set out in this report to become inappropriate or incorrect. However, in giving its opinions, advice, recommendations, and conclusions, TGEN has considered pending changes to environmental legislation and regulations of which it is currently aware. Following delivery of this report, we will have no obligation to advise the client of any such changes, or of their repercussions.
e) TGEN acknowledges that it is being retained, in part, because of its knowledge and experience with respect to environmental matters. TGEN will consider and analyse all information provided to it in the context of our knowledge and experience and all other relevant information known to us. To the extent that the information provided to us is not inconsistent or incompatible therewith, TGEN shall be entitled to rely upon and assume, without independent verification, the accuracy and completeness of such information.
f) The content of this report represents the professional opinion of experienced environmental consultants. TGEN does not provide specialist legal advice, and the advice of lawyers may be required.
g) In the summary and recommendations sections of this report, TGEN has set out our key findings and provided a summary and overview of our advice, opinions, and recommendations. However, other parts of this report will often indicate the limitations of the information obtained by TGEN and therefore any advice, opinions or recommendations set out in the executive summary, summary and recommendations sections ought not to be relied upon unless they are considered in the context of the whole report.
h) The assessments made in this report are based on the ground conditions as revealed by walkover survey and/or intrusive investigations, together with the results of any field or laboratory testing or chemical analysis undertaken and other relevant data which may have been obtained including previous site investigations. In any event, ground contamination often exists as small discrete areas of contamination (hot spots) and there can be no certainty that any or all such areas have been located and/or sampled.
i) There may be special conditions appertaining to the site which have not been accounted for in the report. The assessment may be subject to amendment should additional information becoming available.
j) Where any data supplied by the client or from other sources, including that from previous site investigations, have been used it has been assumed that the information is correct. No responsibility can be accepted by TGEN for inaccuracies within the data supplied by other parties.
k) Whilst the report may express an opinion on possible ground conditions between or beyond trial pit or borehole locations, or on the possible presence of features based on either visual, verbal, or published evidence this is for guidance only and no liability can be accepted for the accuracy thereof.
l) Comments on groundwater conditions are based on observations made at the time of the investigation unless otherwise stated. Groundwater conditions may vary due to seasonal or other effects.
m) This report is prepared and written in the context of the agreed scope of work and should not be used in a different context. Furthermore, new information, improved practices and changes in legislation may necessitate a reinterpretation of the report in whole or part after its original submission.
n) The copyright in the written materials shall remain the property of the TGEN but with a royalty-free perpetual license to the client deemed to be granted on payment in full to TGEN by the client of the outstanding amounts.
o) These terms apply in addition to the TGEN standard terms of engagement (or in addition to another written contract which may be in place instead thereof) unless specifically agreed in writing (In the event of a conflict between these terms and the said standard terms of engagement the said standard terms of engagement shall prevail). In the absence of such a written contract the standard terms of engagement will apply.
p) TGEN maintains adequate insurance cover for public liability and professional indemnity. However, we are unable to accept liability for asbestos related matters. Our work must not be taken as sufficient to identify the presence or absence of asbestos in or on the ground. In placing a contract with us the client accepts the restriction on asbestos. If we find or strongly suspect asbestos is or may be present in or on the ground, we will inform the client and advise specialist investigation. The client agrees that they shall not bring any claim personally against any director / employee or consultant to us in respect of loss or damage suffered by the client arising out of this contract.

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Appendix A
Planning Permission.

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Haringey LONDON

Planning Service

Emma Williamson Assistant Director Planning Service

Mr Matthew Sherwood
Quod
Ingeni Building
17 Broadwick Street
London
W1F 0DE

On behalf of
TH DM Limited
C/O Agent

Planning Application Reference No. **HGY/2018/2223**

TOWN AND COUNTRY PLANNING ACT 1990
TOWN AND COUNTRY PLANNING (DEVELOPMENT MANAGEMENT PROCEDURE) (ENGLAND) ORDER 2015

NOTICE OF PLANNING PERMISSION

Location: **Strategic Development Partnership (SDP) Sites Welbourne, North Island, Ferry Island, Ashley Road East and Ashley Road West Station Road N17**

Proposal: **Demolition works and clearance of existing site to provide a mixed-use development comprising 6 buildings up to 38 storeys in height, which together with pavilion and basement accommodation will provide up to 104,053m² of floorspace (GIA), comprising residential (Use Class C3) (up to 1,036 units), retail (Use Class A1-A4), health centre (Use Class D1), office (Use Class B1), leisure (Use Class D2) parking and servicing areas, hard and soft landscaping (including the provision of a new public square), highways works, creation of new vehicular accesses and the realignment of Station Road, decentralised energy network works and other associated works.**

In pursuance of their powers under the above Act, the London Borough of Haringey as Local Planning Authority hereby **PERMIT** the above development in accordance with the application dated 30/07/2018 and drawing numbers:

Masterplan

TH-M_ZZ_001_A_17013_P(00)_P001	P 01
TH-M_ZZ_001_A_17013_P(00)_P003	P 01
TH-M_ZZ_001_A_17013_P(00)_P100	P 01
TH-M_ZZ_001_A_17013_P(00)_P101	P 01

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Planning Service
Emma Williamson Assistant Director Planning Service

North Island and Ferry Island

TH-IS_ZZ_001_A_16092_(P00)_P099A	P 01
TH-IS_ZZ_001_A_16092_(P00)_P099B	P 01
TH-IS_ZZ_001_A_16092_(P00)_P100A	P 01
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Welbourne

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TH-WEL-01-001-A-16063-00-101	01
TH-WEL-01-001-A-16063-00-102	01
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TH-WEL-01-001-A-16063-00-300	00
TH-WEL-01-001-A-16063-00-301	01

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TH-WEL-01-001-A-16063-00-302	01

Ashley Road East

TH-ARE-01-001-A-2452-00-100	00
TH-ARE-01-001-A-2452-00-100M	00
TH-ARE-01-001-A-2452-00-101	00
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TH-ARE-01-001-A-2452-00-305	00

Ashley Road West

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TH-ARW-01-001-A-16098-00-301	00
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Pavilion

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TH-IS_ZZ_001_A_17040_(00)_P200	P 00
TH-IS_ZZ_001_A_17040_(00)_P301	P 00
TH-IS_ZZ_001_A_17040_(00)_P500	P 00

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Emma Williamson Assistant Director Planning Service

Landscaping

North Island and Ferry Island

TH-IS-PR-001-LA-TOT494-(90)-3001 01
TH-IS-PR-001-LA-TOT494-(90)-5001 01

Ashley Road

TH-AR-PR-001-LA-288-(90)-104 P00
TH-AR-PR-001-LA-288-(90)-105 P00

Welbourne

TH-WB-PR-001-LA-283-(90)-104 P00
TH-WB-PR-001-LA-283-(90)-105 P00

Demolition

TH-M_ZZ_001_C_040204_(P00)_P710 P01

The approved documents comprise:

Planning Statement (July 2018) and Addendum (October 2018) prepared by Quod; Arboricultural Impact Assessment and Method Statement (July 2018) and Addendum (October 2018) prepared by RPS; Flood Risk Assessment (July 2018) and Addendum (October 2018) prepared by Whitby Wood; Archaeological Desk Based Assessment (July 2018) prepared by GgMs; Ecological Appraisal (July 2018) prepared by RPS; Environmental Statement (ES) Volumes I – III and Non-Technical Summary (July 2018) and Addendum (October 2018) prepared by Quod.

SEE SCHEDULE OF CONDITIONS ATTACHED

27/03/2019

Dean Hermitage
Head of Development Management and Planning Enforcement
Planning Service

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Planning Service

Emma Williamson Assistant Director Planning Service

NOTE: 1. You can find advice in regard to your rights of appeal at: www.planningportal.gov.uk/planning/appeals/guidance/guidancecontent

2. This notice relates solely to a planning decision and does not purport to convey any approval or consent which may be required under the Building Regulations or any other statutory purpose.
For more information about making a Building Regulations application, please contact Haringey Council Building Control Team by email building.control@haringey.gov.uk, telephone 020 8489 5504, or see our website at www.haringey.gov.uk/buildingcontrol.

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HGY/2018/2223

NOTE

1. The conditions that relate to individual buildings are split between the various "Plots" that form the planning application development identified on Drawing Reference TH-M_ZZ_001_A_17013_P(00)_P003. The Plots comprise the following development:

   "PLOT A" – NORTH ISLAND
   "PLOT B" – FERRY ISLAND
   "PLOT C" – WELBOURNE
   "PLOT D" – ASHLEY ROAD WEST
   "PLOT E" – ASHLEY ROAD EAST
   "PLOT F" – THE PAVILION

2. Other than those 'Conditions relating to the Whole Site' below the subsequent conditions in each Section A – F shall only be enforceable against the plot to which they relate.

The following conditions have been applied to this consent and these conditions must be complied with:

CONDITIONS RELATING TO THE WHOLE SITE

1) Three Year Expiry (HGY Development Management)

   The development hereby authorised must be begun not later than the expiration of 3 years from the date of this permission, failing which the permission shall be of no effect.

   REASON: This condition is imposed by virtue of the provisions of the Planning & Compulsory Purchase Act 2004 and to prevent the accumulation of unimplemented planning permissions.

2) Development in Accordance with Approved Drawings and Documents (LBH Development Management)

   The approved plans comprise drawing nos:

   Masterplan

TH-M_ZZ_001_A_17013_P(00)_P001	P 01
TH-M_ZZ_001_A_17013_P(00)_P003	P 01
TH-M_ZZ_001_A_17013_P(00)_P100	P 01
TH-M_ZZ_001_A_17013_P(00)_P101	P 01

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North Island and Ferry Island

TH-IS_ZZ_001_A_16092_(P00)_P099A P 01
TH-IS_ZZ_001_A_16092_(P00)_P099B P 01
TH-IS_ZZ_001_A_16092_(P00)_P100A P 01
TH-IS_ZZ_001_A_16092_(P00)_P100B P 01
TH-IS_ZZ_001_A_16092_(P00)_P100MA P 01
TH-IS_ZZ_001_A_16092_(P00)_P100MB P 01
TH-IS_ZZ_001_A_16092_(P00)_P101 P 00
TH-IS_ZZ_001_A_16092_(P00)_P102 P 00
TH-IS_ZZ_001_A_16092_(P00)_P103 P 00
TH-IS_ZZ_001_A_16092_(P00)_P107 P 00
TH-IS_ZZ_001_A_16092_(P00)_P108 P 00
TH-IS_ZZ_001_A_16092_(P00)_P109 P 00
TH-IS_ZZ_001_A_16092_(P00)_P112 P 00
TH-IS_ZZ_001_A_16092_(P00)_P113 P 00
TH-IS_ZZ_001_A_16092_(P00)_P114 P 00
TH-IS_ZZ_001_A_16092_(P00)_P118 P 00
TH-IS_ZZ_001_A_16092_(P00)_P119 P 00
TH-IS_ZZ_001_A_16092_(P00)_P120 P 00
TH-IS_ZZ_001_A_16092_(P00)_P136 P 00
TH-IS_ZZ_001_A_16092_(P00)_P137 P 00
TH-IS_ZZ_001_A_16092_(P00)_P210 P 01
TH-IS_ZZ_001_A_16092_(P00)_P211 P 01
TH-IS_ZZ_001_A_16092_(P00)_P212 P 01
TH-IS_ZZ_001_A_16092_(P00)_P213 P 01
TH-IS_ZZ_001_A_16092_(P00)_P220 P 01
TH-IS_ZZ_001_A_16092_(P00)_P221 P 01
TH-IS_ZZ_001_A_16092_(P00)_P230 P 01
TH-IS_ZZ_001_A_16092_(P00)_P231 P 01

Welbourne

TH-WEL-01-001-A-16063-00-100 01
TH-WEL-01-001-A-16063-00-101 01
TH-WEL-01-001-A-16063-00-102 01
TH-WEL-01-001-A-16063-00-103 01
TH-WEL-01-001-A-16063-00-104 01
TH-WEL-01-001-A-16063-00-105 01
TH-WEL-01-001-A-16063-00-106 00
TH-WEL-01-001-A-16063-00-107 00
TH-WEL-01-001-A-16063-00-108 00
TH-WEL-01-001-A-16063-00-109 00
TH-WEL-01-001-A-16063-00-110 00
TH-WEL-01-001-A-16063-00-300 00

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TH-WEL-01-001-A-16063-00-301	01
TH-WEL-01-001-A-16063-00-302	01

Ashley Road East

TH-ARE-01-001-A-2452-00-100	00
TH-ARE-01-001-A-2452-00-100M	00
TH-ARE-01-001-A-2452-00-101	00
TH-ARE-01-001-A-2452-00-102	00
TH-ARE-01-001-A-2452-00-103	00
TH-ARE-01-001-A-2452-00-104	00
TH-ARE-01-001-A-2452-00-105	00
TH-ARE-01-001-A-2452-00-106	00
TH-ARE-01-001-A-2452-00-107	00
TH-ARE-01-001-A-2452-00-108	00
TH-ARE-01-001-A-2452-00-113	00
TH-ARE-01-001-A-2452-00-114	00
TH-ARE-01-001-A-2452-00-120	00
TH-ARE-01-001-A-2452-00-300	00
TH-ARE-01-001-A-2452-00-301	00
TH-ARE-01-001-A-2452-00-302	00
TH-ARE-01-001-A-2452-00-303	00
TH-ARE-01-001-A-2452-00-304	00
TH-ARE-01-001-A-2452-00-305	00

Ashley Road West

TH-ARW-01-001-A-16098-00-101	00
TH-ARW-01-001-A-16098-00-102	00
TH-ARW-01-001-A-16098-00-103	00
TH-ARW-01-001-A-16098-00-301	00
TH-ARW-01-001-A-16098-00-302	00

Pavilion

TH-IS_ZZ_001_A_17040_(00)_P120	P 00
TH-IS_ZZ_001_A_17040_(00)_P200	P 00
TH-IS_ZZ_001_A_17040_(00)_P301	P 00
TH-IS_ZZ_001_A_17040_(00)_P500	P 00

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Landscaping

North Island and Ferry Island

TH-IS-PR-001-LA-TOT494-(90)-3001 01
TH-IS-PR-001-LA-TOT494-(90)-5001 01

Ashley Road

TH-AR-PR-001-LA-288-(90)-104 P00
TH-AR-PR-001-LA-288-(90)-105 P00

Welbourne

TH-WB-PR-001-LA-283-(90)-104 P00
TH-WB-PR-001-LA-283-(90)-105 P00

Demolition

TH-M_ZZ_001_C_040204_(P00)_P710 P01

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The development shall be completed in accordance with the approved plans and documents except where conditions attached to this planning permission or S106 obligations related to this planning permission indicate otherwise or where alternative details have been subsequently approved following an application for a non-material amendment.

REASON: In order to ensure the development is carried out in accordance with the Approved details and in the interests of amenity.

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3) Floorspace Ranges (LBH Development Management)

The following non-residential floorspace ranges are permitted:

Land Use	Minimum Area Permitted (m² GIA)	Maximum Area Permitted (m² GIA)
Retail (Use Class A1 – A4)	Up to 4,306	
Leisure (Use Class D2)	Up to 2,288	
Office (Use Class B1(a))	831	5,137
Health Centre (Use Class D1)	1,643	

REASON: To ensure that the Development is undertaken in accordance with the approved drawings and the assessed Environmental Statement.

4) Tree/Plant Replacement – 5 Years (LBH Development Management)

Any tree or plant on the development which, within a period of five years of first occupation of the approved development 1) has died 2) is removed 3) becomes damaged or 4) becomes diseased, shall be replaced in the next planting season with a similar size and species of tree or plant.

REASON: to protect the amenity of the locality.

5) Wheelchair Accessible Dwellings (LBH Development Management)

At least 10% of all dwellings hereby approved shall be wheelchair accessible or easily adaptable for wheelchair use (Part M4 (3) 'wheelchair user dwellings' of the Building Regulations 2015) in conformity with the submitted Design and Access Statement (July 2018) and Addendum (October 2018), unless otherwise agreed in writing with the Local Planning Authority.

REASON: To ensure inclusive and accessible development

6) Part M4 (2) Accessible and Adaptable Dwellings (LBH Development Management)

90% of residential units within the proposed development shall be designed to Part M4 (2) 'accessible and adaptable dwellings' of the Building Regulations 2015 unless otherwise agreed in writing with the Local Planning Authority.
REASON: To ensure inclusive and accessible development

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7) BREEAM Very Good Certification (LBH Carbon Management)

The non-residential development hereby approved shall achieve a BREEAM "Very Good" outcome (BREEAM New Construction 2018 version). The rating shall be maintained thereafter.

REASON: In the interest of addressing climate change and to secure sustainable development

8) Green/Living Roof – Amenity Access Precluded (LBH Carbon Management)

The Green/Living roofs hereby approved shall not be used for external amenity space. Access shall only be permitted for maintenance, repair or escape in an emergency unless agreed in writing with the Local Planning Authority.
REASON: To ensure that the development provides the maximum provision towards the creation of habitats for biodiversity and supports the water retention on site during rainfall.

9) Tree Removal In Accordance with Relevant Standards (LBH Arboricultural Officer)

All tree removals on the site shall be in accordance with BS3998:2010 Tree Work – Recommendations unless agreed in writing with the Local Planning Authority.

REASON: to protect the amenity of the locality.

10) New Tree Provision – Industry Best Practice (LBH Arboricultural Officer)

All new trees shall be provided in accordance with the following industry best practice:

- BS 8545:2014 Trees: from nursery to independence in the landscape (Sec 8: Nursery production & procurement, Sec 9: handling & storage and Annex D & E.

All trees to be supplied must be produced by working in accordance with UK plant bio security policies.

REASON: To minimise the introduction of harmful pests and diseases through imported tree stock.

11) Electric Charging Points (LBH Transportation)

The development hereby approved shall provide 20% of the total number of car parking spaces with active electric charging points, with a further 80% passive provision for future conversion.

REASON: To reduce carbon emissions and protect air quality.

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12) Noise Levels – Compliance (LBH Environmental Health – Noise)

All residential premises hereby approved shall be designed in accordance with BS8233:2014 'Guidance on sound insulation and noise reduction for buildings' and meet the following noise levels;

Time	Area	Average Noise level
Daytime Noise 7am – 11pm	**Living rooms & Bedrooms**	**35dB(A)** ($L_{Aeq,16hour}$)
	Dining Room Area	**40dB(A)** ($L_{Aeq,16hour}$)
Night Time Noise 11pm - 7am	**Bedrooms**	**30dB(A)** ($L_{Aeq,8hour}$)

With individual noise events not to exceed 45 dB LAmax (measured with F time weighting) more than 10-15 times in bedrooms between 23:00hrs – 07:00hrs.

REASON: To protect the amenity of occupiers

13) Building Services Plant Noise (LBH Environmental Health – Noise)

Noise arising from the use of the building service plants and associated equipment shall;

1) Not increase the background noise level (LA90 15mins) when measured (LAeq 15mins) 1 metre external from the nearest residential receptor.
2) Not exceed the background noise level (LA90 15mins) when measured (LAeq 15mins) 1 metre external from the nearest commercial receptor.

All plant units shall be installed and maintained throughout the duration of the use in accordance with the above condition.

REASON: to ensure high quality residential development and protect the amenity of the locality

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14) Infiltration of Surface Water Drainage (Environment Agency)

No infiltration of surface water drainage associated with the development is permitted other than with the written consent of the Local Planning Authority. The development shall be carried out in accordance with the approved details.

REASON: To ensure that the development is not contributing to, put at unacceptable risk from, or adversely affected by, unacceptable levels of water pollution caused by mobilised contaminants in line with paragraph 170 of the National Planning Policy Framework. To prevent deterioration of groundwater within the principal chalk aquifer.

15) Intermittent and Exceptional Use of Diesel Generators (LBH Environmental Health)

Generators shall be used solely on brief intermittent and exceptional occasions when required in response to an emergency and for testing as necessary to meet that purpose and shall not be used at any other time. At all times the generators shall be operated to minimise noise impacts and emissions of air pollutants and a log of operational hours shall be maintained and be available for inspection by the Local Planning Authority.

REASON: to protect air quality and the amenity of the locality.

16) Back-Up Diesel Generators – Details of EU Stage V Emission Standards Compliance (LBH Environmental Health)

Prior to the installation of back up diesel generators on the application site, details of generator compliance with EU Stage V Emission Standards for Generator Set Engines shall be provided in writing to and for approval by the Local Planning Authority. Installation shall be in compliance with the approved details and maintained thereafter.

REASON: to protect air quality and the amenity of the locality.

17) Diesel Generator Fuel - Ultra Low Sulphur Diesel (ULSD) - (LBH Environmental Health)

Any diesel generators on the application site shall run on ultra low sulphur diesel (ULSD) meeting the fuel specification within EN590:2004.

REASON: to protect air quality and the amenity of the locality.

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18) Flue Height Termination Above Highest Roof - (LBH Environmental Health)

All combustion flues on the application site must terminate at least 1 m above the highest roof in the relevant plot, unless otherwise agreed in writing by the Local Planning Authority

REASON: to protect air quality and the amenity of the locality.

19) Plant and Machinery – EU Air Quality Compliance (LBH Environmental Health)

All plant and machinery to be used at the demolition and construction phases of development shall meet Stage IIIA of EU Directive 97/68/ EC for both NOx and PM.

REASON: To protect the amenity of the locality.

20) Hard and Soft Landscaping (LBH Development Management)

Part A

Full details of both hard and soft landscape works within the publicly accessible areas of the Site shall be submitted in writing to and approved by the Local Planning Authority prior to installation of such works. The hard and soft landscaping within the publicly accessible areas of the Site shall be constructed in accordance with the approved details and shall be delivered in line with the timeframes set out in the Public Access Areas Phasing Details as defined in the s106 Agreement relating to, and of even date with, this permission.

Part B

Full details of both hard and soft landscape works within each plot's building(s) demise shall be submitted in writing to and approved by the Local Planning Authority prior to installation of such works on the relevant plot. The hard and soft landscaping shall be constructed in accordance with the approved details. The soft landscaping details approved under this condition 20B shall be implemented in the first planting and seeding season following the residential occupation of the relevant plot. The hard landscaping details approved under this condition 20B shall be implemented within 3 months of the residential occupation of the relevant plot.
Relevant details from the following apply to both Parts A and B above.

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Details of hard landscaping works shall include:

- Hard surfacing materials;
- Street furniture, short stay cycle parking in accordance with the London Cycle Design Standards (LCDS, October 2016), refuse or other storage units and signage; and
- Details of any hard landscaping mitigation measures required to mitigate potential wind tunnel effects identified within the ES (July 2018) and ES Addendum (October 2018).

Details of soft landscape works shall include:

- A full schedule of species of new trees and shrubs proposed to be planted;
- Written specifications (including cultivation and other operations) associated with plant establishment;
- Schedules of plants, noting species, plant sizes and proposed numbers/densities where appropriate;
- Details of any proposed residential podium space;
- Details of any soft landscaping mitigation measures required to mitigate potential wind tunnel effects identified within the ES (July 2018) and ES Addendum (October 2018); and
- An implementation programme and management plan.

REASON: To protect the amenity of the locality.

21) Public Lighting Strategy (LBH Development Management)

Details of a Public Realm Lighting Strategy shall be submitted in writing to and approved by the Local Planning Authority prior to installation of any lighting. The Strategy shall be in broad conformity with Vol 8 – Lighting Strategy of the Design and Access Statement (July 2018). The strategy shall be implemented as approved and maintained thereafter and shall be delivered in line with the timescales set out in the Public Access Areas Phasing Details as defined in the s106 Agreement relating to, and of even date with, this permission.

REASON: to ensure a high quality public realm

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22) Tree Replacement in Accordance with Approved Documents (LBH Development Management)

Unless otherwise agreed in writing with the Local Planning Authority, the replacement of trees hereby approved shall be in conformity with the approved documents Arboricultural Impact Assessment and Method Statement (July 2018) and Addendum (October 2018) prepared by RPS.

REASON: to protect the amenity of the locality

A. CONDITIONS RELATING TO NORTH ISLAND (PLOT A)

A1) Materials Samples (LBH Development Management)
Prior to the installation of materials on the external surfaces on the building(s) within Plot A, samples of materials to be used for the external surfaces of the building(s) hereby approved within Plot A, shall be submitted in writing to and for approval by the Local Planning Authority. Samples shall include type and shade of cladding, window frames and balcony frames, sample panels or brick types and a roofing material sample combined with a schedule of the exact product references. The development shall be constructed of the approved materials and maintained thereafter.

REASON: In order for the Local Planning Authority to retain control over the exact materials to be used for the proposed development and to assess the suitability of the samples submitted in the interests of visual amenity.

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A2) Waste Management Plan (LBH Waste Management)

Prior to the residential occupation of Plot A, a Residential Waste Management Plan in respect of Plot A shall be submitted in writing to and for approval by the Local Planning Authority.

Prior to the occupation of the Plot A non-residential floorspace, a Commercial Waste Management Plan in respect of Plot A shall be submitted in writing to and for approval by the Local Planning Authority.

The plans shall demonstrate as necessary:

- Any distances between waste storage areas and collection vehicles further than 10 metres are mitigated by appropriate management measures.
- Installed dropped kerbs relevant to servicing access have gradients no greater than 1:20
- Suitable pest control of waste storage areas.
- Separate commercial and residential waste storage and disposal
- In respect of the non-residential units, arrangements for a scheduled waste collection with a Commercial Waste Contractor
- A cleansing schedule and measures to ensure waste is contained at all times.

The development within Plot A shall be implemented in accordance with the approved Plan and maintained thereafter.

REASON: To protect the amenity of the locality

A3) Drainage – Attenuation Details (LBH Local Lead Flood Authority)

Prior to the commencement of the Plot A development other than demolition, below ground and building core works, full details of the drainage attenuation in respect of Plot A shall be submitted in writing to and for approval by the local Planning Authority.

Attenuation measures shall demonstrate compliance with the relevant London Plan (2016) Standards, in relation to greenfield runoff rate, and the approved details shall then be implemented as approved and maintained thereafter.

REASON: to mitigate flood risk.

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A4) Drainage - Design Implementation, Maintenance Management (LBH Local Lead Flood Authority)

Prior to commencement of the Plot A development other than demolition, below ground and building core works, details of design implementation, maintenance and management of the sustainable drainage scheme in respect of Plot A shall be submitted in writing to and for approval by the Local Planning Authority, those details shall include:-

i) Information about the design storm periods and intensity, discharge rates for both pre and post development, means of access for maintenance, methods used to control surface water discharge from the Plot.
ii) Any works required off site to ensure adequate discharge of surface water without causing flooding.
iii) Floodwater exceedance routes, both on and off site.
iv) Timetable for implementation.
v) A detailed management maintenance plan for the lifetime of the Plot A development, which shall include arrangements for adoption by an appropriate public body or statutory undertaker, management by Residents management company or other arrangements to secure the operation of the drainage scheme throughout the lifetime of the Plot A development.

The scheme shall be implemented, retained, managed and maintained within Plot A in accordance with the approved details.

REASON: To prevent increased risk of flooding to improve water quality and amenity to ensure future maintenance of the surface water drainage system.

A5) BREAAM – Post Occupation Certificate (LBH Carbon Management)

Six calendar months after the first non-residential occupation of the Plot, a BREEAM Post Construction Certificate in respect of the non-residential space within Plot A shall be submitted to the Local Planning Authority. The Certificate shall be issued by the Building Research Establishment (or another independent certification body). The development within Plot A shall maintain the rating in the approved Certificate thereafter unless agreed in writing with the Local Planning Authority.

REASON: In the interest of addressing climate change and to secure sustainable development

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A6) Overheating and Model Report (LBH Carbon Management)

Prior to above ground works within Plot A (excluding demolition and works to construct the building core), an Overheating Model and Report in respect of Plot A shall be submitted in writing to and for approval by the Local Planning Authority. The submission shall assess the overheating risk (using future weather temperature projections), and demonstrate how the risks have been mitigated and removed through design solutions. This assessment will use TM59 (for domestic) or TM52 (for non-domestic). Both models shall be run using the London Weather File TM49.

The submission shall include details of the design measures incorporated within the scheme within Plot A (including details of the feasibility of using external solar shading and passive cooling and ventilation) to ensure adaptation to higher temperatures are addressed, and the units do not overheat. The submission shall include the following:

A. Full listing (based on unit number relating to planning drawings) of units modelled and the overheating risk before measures are installed;
B. The measures installed to reduce overheating risk:

   i. the standard and the impact of the solar control glazing;
   ii. that all heating pipework is appropriately insulated
   iii. that passive cooling and ventilation features have been included
   iv. highlight the mitigation strategies to overcome any overheating risk
   v. that there is space for pipe work or localised building services and that this is designed in to the building to allow the retrofitting of centralised or localised cooling and ventilation equipment if needed.

The submission shall preclude the use of air conditioning unless exceptional justification is given for design based upon current weather projection (CIBSE DSY 1). The development within Plot A shall be constructed in accordance with the approved submission.

REASON: In the interest of adapting to climate change and to secure sustainable development.

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A7) Biodiversity Plan (LBH Carbon Management)

Prior to the installation of the measures listed in items i to v below within Plot A, details of a Biodiversity Plan in respect of the development within Plot A shall be submitted in writing to and for approval by the Local Planning Authority. The Plan shall detail:

i. Details on the number, and location of the bird brick boxes (or other) - including orientation and links to habitats that would be needed to support the identified bird species;
ii. Details on the bird brick box (or other) design and for what bird species would they serve;
iii. The lighting measures and ongoing management to reduce the impact on recorded bat populations;
iv. The number, and location of the bat brick boxes; and
v. The number, and location of the insect hotels.

The development within Plot A shall be constructed in accordance with the approved Plan and the approved measures incorporated prior to the occupation of the development within Plot A. The approved biodiversity infrastructure should where possible preclude impacts by amenity uses and access should be permitted only for maintenance, repair or escape in an emergency.
REASON: To ensure that the development provides the maximum provision towards the creation of habitats for biodiversity and supports the water retention on site during rainfall.

A8) Green/living Roof Plan (LBH Carbon Management)

Prior to installation of green/living roofs, a Green/Living Roof Plan in respect of the development within Plot A shall be submitted in writing to and for approval by the Local Planning Authority. The Plan shall include:

- A roof(s) plan identifying where the living roofs will be located;
- Confirmation of the substrates depth ranges;
- Details on the diversity of substrate depths across the roof to provide contours of substrate;
- Details on the diversity of substrate types and sizes;
- Details on bare areas of substrate to allow for self colonisation of local windblown seeds and invertebrates;
- Details on the range of native species of wildflowers and herbs planted to benefit native wildlife precluding a overreliance on sedum;
- Details of the location of log piles / flat stones for invertebrates; and
- Schedule of ongoing maintenance and management

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The measures should be incorporated prior to the occupation of the development within Plot A. The development within Plot A shall be carried out in accordance with the approved Plan and maintained thereafter.

REASON: To ensure that the development provides the maximum provision towards the creation of habitats for biodiversity and supports the water retention on site during rainfall.

A9) Boiler Details (LBH Environmental Health/Carbon Management)

Prior to above ground works within Plot A (excluding demolition and works to construct the building core), details of the boiler facilities and associated infrastructure within the Plot, shall be submitted to and approved in writing by the Local Planning Authority. The details shall include:

a) location of the energy centre;
b) specification of equipment and pipework;
c) details of all the flue arrangements and chimney heights calculations, diameters and locations;
d) confirmation that the boilers to be provided for space heating and domestic hot water shall have dry NOx emissions not exceeding 40 mg/kWh;
e) confirmation that the site wide heating and hot water network has been designed and shall be constructed following the CIBSE / ADE Heat Networks Code of Practice
f) operation/management strategy;
g) the method of how the facility and infrastructure shall be designed to allow for the future connection to any neighbouring heating network (including the proposed connectivity location, space for extra equipment, punch points and large enough route of the link); and
h) the route from the Energy Centre to the red line boundary with installed pipe specification to serve all heat loads.

The development within Plot A shall be constructed in accordance with the approved details and maintained thereafter.

REASON: To protect air quality, ensure future district energy connection and protect the amenity of the locality.

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A10) Accessible Parking Demarcated (LBH Transportation)

Prior to the occupation of the Plot A development, all accessible car parking spaces within that Plot shall be marked as such and retained permanently.

REASON: In order to ensure that a reasonable number of parking spaces are located conveniently for use by people with disabilities.

A11) Cycle Parking (LBH Transportation)

Prior to the occupation of the Plot A development, full details of the long stay cycle parking (including the type, dimensions and method of security and access), in line with the London Cycle Design Standards (LCDS, October 2016) within that Plot shall be submitted in writing to and approved by the Local Planning Authority. Cycle parking within the Plot shall be installed in accordance with the approved details.

REASON: To promote sustainable transport.

A12) Service and Delivery Plan (LBH Transportation)

Part A

Prior to the residential occupation of the Plot A development, a full Residential Service and Delivery Plan (SDP) in respect of the development within Plot A shall be submitted in writing to and for approval by the Local Planning Authority. The Plan should provide details on how servicing and deliveries will take place. The plan shall demonstrate how deliveries and servicing are coordinated to avoid the AM and PM peak periods. Servicing and deliveries within Plot A shall be undertaken in accordance with the approved plan.

Part B

Prior to the occupation of the non-residential floorspace within Plot A, a full Service and Delivery Plan (SDP) for the non-residential uses within Plot A shall be submitted in writing to and for approval by the Local Planning Authority. The Plan should provide details on how servicing and deliveries will take place. The plan shall demonstrate how deliveries and servicing are coordinated to avoid the AM and PM peak periods. Servicing and deliveries within Plot A shall be undertaken in accordance with the approved plan.

REASON: To reduce traffic and congestion on the transportation and highways network.

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A13) Noise Level Testing Details (LBH Environmental Health – Noise)

Prior to the occupation of the Plot A development, testing details (the scope of which shall be agreed with the Local Planning Authority prior to submission) confirming the noise levels cited in Site Wide condition 12 above have been met shall be submitted in writing to and for approval by the Local Planning Authority. The approved noise level shall be maintained within Plot A thereafter.

REASON: To protect the amenity of occupiers.

A14) Sound Insulation Between Residential and Commercial Properties (LBH Environmental Health – Noise)

Prior to the commencement of the building works for the fit-out of the commercial units within Plot A, details of a Sound Insulation Scheme to be installed between the commercial premises and residential premises within Plot A shall be submitted in writing to and for approval by the Local Planning Authority. The scheme shall be submitted following consultation with the Council's Environmental Health Officer (Noise). The scheme shall be installed as approved prior to any commercial occupation of Plot A and shall be maintained thereafter.
REASON: to protect the amenity of the locality.

A15) Secure by Design Accreditation (Metropolitan Police)

Part A

Prior to carrying out above ground works within Plot A (excluding demolition and works to construct the building core) details shall be submitted to, and approved in writing by the Local Planning Authority to demonstrate that the Plot (and building(s) contained therein) has incorporated the principles and practices of Secured by Design where these can be practically achieved. Where the principles cannot be achieved, then justification for this will be required. The development within Plot A shall be implemented in accordance with the approved details.

Part B

Prior to first occupation of each building or part of a building or use within Plot A, details shall be submitted to, and approved in writing by the Local Planning Authority to demonstrate that such Plot (and building(s) contained therein) has delivered the principles and practices of Secured by Design, and as agreed by the Local Planning Authority in the discharge of Part A.
REASON: To ensure safe and secure development and reduce crime.

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A16) Site Levels (LBH Development Management)

No development shall proceed within Plot A (excluding above ground demolition) until details of all existing and proposed levels on the Plot in relation to the adjoining properties have been submitted to and approved by the Local Planning Authority. The Plot A development shall be built in accordance with the approved details.

REASON: In order to ensure that any works in conjunction with the permission hereby granted respects the height of adjacent properties through suitable levels on the site.

A17) Open Space Management & Maintenance Plan (LBH Development Management)

Prior to the occupation of the Plot A development, an Open Space Management & Maintenance Plan in respect of the development within Plot A shall be submitted to and approved in writing by the Local Planning Authority The Plan shall include details of the following:

i) Long-term management and maintenance responsibilities for all private, communal play spaces/amenity spaces and all publicly accessible open spaces
ii) Soft landscaping management and maintenance arrangements to ensure positive contribution to biodiversity

Spaces within Plot A shall be managed and maintained in accordance with the approved Plan and maintained thereafter.

REASON: to ensure high quality open space

A18) Child Playspace Strategy (LBH Development Management)

Prior to the residential occupation of Plot A, a Child Play Space Strategy in respect of the development within Plot A shall be submitted in writing to and for approval by the Local Planning Authority. The Strategy shall provide detail of child play spaces in accordance with the London Plan (2016) and the London Plan SPG Play and Informal Recreation (2012). The development within Plot A shall be implemented in accordance with the Strategy and maintained thereafter.

REASON: to ensure high quality development

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A19) Monitoring and Maintenance Plan – Contamination (Environment Agency)

The Plot A development hereby permitted may not commence other than for investigative works until a monitoring and maintenance plan in respect of contamination within Plot A, including a timetable of monitoring and submission of reports to the Local Planning Authority, has been submitted to, and approved in writing by, the Local Planning Authority. Reports as specified in the approved plan, including details of any necessary contingency action arising from the monitoring, shall be submitted to, and approved in writing by, the Local Planning Authority.

REASON: To ensure that the site does not pose any further risk to human health or the water environment by managing any ongoing contamination issues and completing all necessary long-term remediation measures. This is in line with paragraph 170 of the National Planning Policy Framework. To prevent deterioration of groundwater within the principal chalk aquifer.

A20) Contamination Not Previously Identified (Environment Agency)

If during development, contamination not previously identified is found to be present at Plot A then no further development in respect of that Plot (unless otherwise agreed in writing with the Local Planning Authority) shall be carried out until a remediation strategy detailing how this contamination will be dealt with has been submitted to and approved in writing by the Local Planning Authority. The remediation strategy shall be implemented as approved within Plot A.

REASONS: To ensure that the development is not contributing to, put at unacceptable risk from, or adversely affected by, unacceptable levels of water pollution from previously unidentified contamination sources at the development site in line with paragraph 170 of the National Planning Policy Framework. To prevent deterioration of groundwater within the principal chalk aquifer.

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A21) Written Consent for Piling or Other Intrusive Ground Works (Environment Agency)

Piling or other intrusive ground works (investigation boreholes, tunnel shafts, ground source heating and cooling systems) using penetrative methods which breach the base of the London Clay or where the London Clay is absent shall not be carried out other than with the written consent of the local planning authority. The development within Plot A shall be carried out in accordance with the approved details.

REASON: To ensure that the proposed piling activities through potentially contaminated land is not contributing to, put at unacceptable risk from, or adversely affected by unacceptable levels of water pollution caused by mobilised contaminants in line with paragraph 170 of the National Planning Policy Framework and the Environment Agency's approach to groundwater protection. To prevent deterioration of groundwater within the principal chalk aquifer.

A22) Method of Piling (LBH Environmental Health)

(1) No piling; or (2) other intrusive ground works which breach the base of the London Clay or occur in areas where the London Clay is absent within Plot A shall take place until a Piling Impact Study has been undertaken in respect of Plot A. The Piling Impact Study shall include the method of piling foundations and shall be submitted to and approved in writing by the Local Planning Authority. Piling or any other foundation design using penetrative methods shall not be permitted within Plot A except for those parts of Plot A where it has been demonstrated that there is no resultant unacceptable risk to ground water."

REASON: To prevent the contamination of the underlying groundwater aquifer

A23) Written Scheme of Investigation (WSI) – Historic England (GLAAS)

No demolition or development (apart from demolition to slab level) shall take place within Plot A until a stage 1 written scheme of investigation (WSI) in respect of Plot A has been submitted to and approved by the local planning authority in writing. For land that is included within the WSI, no demolition or development (apart from demolition to slab level) shall take place within Plot A other than in accordance with the agreed WSI, and the programme and methodology of site evaluation and the nomination of a competent person(s) or organisation to undertake the agreed works.

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If heritage assets of archaeological interest are identified by stage 1 then for those parts of the site which have archaeological interest a stage 2 WSI shall be submitted to and approved by the local planning authority in writing. For land that is included within the stage 2 WSI, no demolition/development (apart from demolition to slab level) shall take place within Plot A other than in accordance with the agreed stage 2 WSI which shall include:

A. The statement of significance and research objectives, the programme and methodology of site investigation and recording and the nomination of a competent person(s) or organisation to undertake the agreed works

B. The programme for post-investigation assessment and subsequent analysis, publication & dissemination and deposition of resulting material. This part of the condition shall not be discharged until these elements have been fulfilled in accordance with the programme set out in the stage 2 WSI.

REASON: To protect the Historic Environment

A24) Contaminated Land – Part 1 (LBH Environmental Health)

Prior to the commencement of the development on Plot A (other than for investigative work):

a) Using the information obtained from the previous assessments, an additional site investigation, sampling and analysis shall be undertaken at the Plot as appropriate. The investigation must be comprehensive enough to enable:-

i) A risk assessment to be undertaken,
ii) Refinement of the Conceptual Model, and
ii) The development of a Method Statement detailing the remediation requirements.
The risk assessment and refined Conceptual Model shall be submitted, along with the site investigation report, to the Local Planning Authority.

b) If the risk assessment and refined Conceptual Model indicate any risk of harm, a Method Statement detailing the remediation requirements in respect of the Plot, using the information obtained from the site investigation, and also detailing any post remedial monitoring shall be submitted to, and approved in writing by, the Local Planning Authority prior to that remediation being carried out on the Plot.

REASON: To ensure the development can be implemented and occupied with adequate regard for environmental and public safety.

A25) Contaminated Land – Part 2 (LBH Environmental Health)

Where the contaminated land condition above demonstrates that remediation of contamination on the Plot is required, completion of the remediation detailed in the Method Statement shall be carried out and a report that provides verification that the required works have been carried out, shall be submitted to, and approved in writing by the Local Planning Authority before the development is occupied within Plot A.

REASON: To ensure the development can be implemented and occupied with adequate regard for environmental and public safety.

A26) Development Near Subsurface Potable Water Infrastructure (Thames Water)

No construction shall take place within 5m of the water main unless otherwise agreed in writing with the Local Planning Authority in consultation with Thames Water. Information detailing how the developer intends to divert the asset / align the Plot A development, so as to prevent the potential for damage to subsurface potable water infrastructure, must be submitted to and approved in writing by the local planning authority in consultation with Thames Water. Any construction must be undertaken in accordance with the terms of the approved information. Unrestricted access must be available at all times for the maintenance and repair of the asset during and after the construction works.
REASON: The proposed works will be in close proximity to underground strategic water main, utility infrastructure. The works have the potential to impact on local underground water utility infrastructure.

A27) Central Satellite Dish/Receiving System (LBH Development Management)
Prior to the residential occupation of the Plot A development, details of a Central Satellite Dish/Receiving System in respect of Plot A shall be submitted in writing to and for approval by the Local Planning Authority. The System shall be implemented in accordance with approved details and maintained thereafter.

REASON: To protect the amenity of the locality.

A28) Satellite Dish or Television Antenna (LBH Development Management)

The placement of any satellite dish or television antenna on any external surface of any building in the Plot is not permitted, excepting the approved central dish/receiving system noted in the condition above, unless agreed in writing with the Local Planning Authority.

REASON: To protect the amenity of the locality.

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A29) Demolition/Construction Environmental Management Plans (LBH Development Management)

Part A

Demolition works shall not commence within Plot A until a Demolition Environmental Management Plan (DEMP) in respect of Plot A has been submitted to and approved in writing by the local planning authority.

Part B

Development shall not commence within Plot A (other than demolition) until a Construction Environmental Management Plan (CEMP) in respect of Plot A has been submitted to and approved in writing by the local planning authority.

The following applies to both Parts A and B above:

a) The DEMP/CEMP shall include a Construction Logistics Plan (CLP) and Air Quality and Dust Management Plan (AQDMP) in respect of Plot A.

b) The DEMP/CEMP shall provide details of how demolition/construction works in respect of Plot A are to be undertaken respectively and shall include:
   i. A construction method statement which identifies the stages and details how works will be undertaken;
   ii. Details of working hours, which unless otherwise agreed with the Local Planning Authority shall be limited to 08.00 to 18.00 Monday to Friday and 08.00 to 13.00 on Saturdays;
   iii. Details of plant and machinery to be used during demolition/construction works;
   iv. Details of an Unexploded Ordnance Survey;
   v. Details of the waste management strategy;
   vi. Details of community engagement arrangements;
   vii. Details of any acoustic hoarding;
   viii. A temporary drainage strategy and performance specification to control surface water runoff and Pollution Prevention Plan (in accordance with Environment Agency guidance);
   ix. Details of external lighting; and,
   x. Details of any other standard environmental management and control measures to be implemented.

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c) The CLP will be in accordance with Transport for London's Construction Logistics Plan Guidance (July 2017) and shall provide details on:

i. Monitoring and joint working arrangements, where appropriate;
ii. Site access and car parking arrangements;
iii. Delivery booking systems;
iv. Agreed routes to/from the Plot;
v. Timing of deliveries to and removals from the Plot (to avoid peak times, as agreed with Highways Authority, 07.00 to 9.00 and 16.00 to 18.00, where possible); and
vi. Travel plans for staff/personnel involved in demolition/construction works to detail the measures to encourage sustainable travel to the Plot during the demolition/construction phase; and
vii. Joint arrangements with neighbouring developers for staff parking, Lorry Parking and consolidation of facilities such as concrete batching.

d) The AQDMP will be in accordance with the Greater London Authority SPG Dust and Emissions Control (2014) and shall include:

i. Mitigation measures to manage and minimise demolition/construction dust emissions during works;
ii. Details confirming the Plot has been registered at http://nrmm.london;
iii. Evidence of Non-Road Mobile Machinery (NRMM) and plant registration shall be available on site in the event of Local Authority Inspection;
iv. An inventory of NRMM currently on site (machinery should be regularly serviced and service logs kept on site, which includes proof of emission limits for equipment for inspection);
v. A Dust Risk Assessment for the works; and
vi. Lorry Parking, in joint arrangement where appropriate.

The development on Plot A shall be carried out in accordance with the approved details.

Additionally, the site or Contractor Company must be registered with the Considerate Constructors Scheme. Proof of registration must be sent to the Local Planning Authority prior to any works being carried out.

REASON: To safeguard residential amenity, reduce congestion and mitigate obstruction to the flow of traffic, protect air quality and the amenity of the locality.

A30) Details of Roof Top PV Panels (LBH Development Management)

Prior to the occupation of Plot A for residential purposes, details of the layout and specification of the PV solar panel installation in respect of Plot A shall be submitted in writing to and for approval by the Local Planning Authority. The installation within Plot A shall be constructed in accordance with the approved details and maintained thereafter.

REASON: To ensure sustainable development and mitigate the impacts of climate change.

A31) Legal Agreement – Interested Parties (LBH Development Management)

Unless the local planning authority shall have first agreed in writing that it is not necessary to bind the particular interest or interests in question, no works shall be carried out under this permission on that land shown shaded green on plan TOT-PLAN-PLAP-06-A-P01 Rev P01 unless and until all legal and equitable interests in that land have been bound by the provisions of the section 106 agreement of even date with this permission.
REASON: to secure a legal agreement with all those with an interest in the land.

A32) Installation of Roof Top Structures (LBH Development Management)
Prior to the installation of any access ladders or building cleaning equipment at the roof level of Plot A, details shall be submitted in writing to and for approval by the Local Planning Authority. The installation within Plot A shall be constructed in accordance with the approved details and maintained thereafter.

REASON: To ensure that the building has a satisfactory appearance

A33) Opaque Glazing to Non-Residential Units (LBH Development Management)

Prior to the installation of any opaque glazing on the ground floor non-residential units of Plot A, details shall be submitted in writing to and for approval by the Local Planning Authority. The installation within Plot A shall be constructed in accordance with the approved details and maintained thereafter.

REASON: To ensure that the building has a satisfactory appearance

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A34) Cooling Demand (Great London Authority Energy)

Prior to the occupation of the non-residential floorspace within Plot A, details of measures to be undertaken to minimise the non-domestic cooling demand shall be submitted in writing to and for approval by the Local Planning Authority. The measures shall be incorporated in accordance with the approved details.

REASON: In the interest of adapting to climate change and to secure sustainable development.

A35) Overheating (Great London Authority Energy)

Prior to the residential occupation of the Plot A development, a Building User Guide for new residential occupants shall be submitted in writing to and for approval by the Local Planning Authority. The Building User Guide will advise residents how to operate their property during a heatwave, setting out a cooling hierarchy in accordance with London Plan (2016) Policy 5.9 with passive measures being considered ahead of cooling systems. The Building User Guide will be issued to residential occupants upon first occupation.

REASON: In the interest of adapting to climate change and to secure sustainable development.

A36) Heat Network (Great London Authority Energy)

Prior to the occupation of the non-residential floorspace within Plot A, a Building User Guide for new non-residential tenants shall be submitted in writing to and for approval by the Local Planning Authority. The Building User Guide shall explain that valved connections have been made available to each tenant, for the purpose of their primary heating and hot water generation. The Building User Guide will be issued to non-residential tenants upon first occupation.

REASON: In the interest of adapting to climate change and to secure sustainable development.

A37) CO2 (Great London Authority Energy)

Prior to the occupation of each non-residential unit within Plot A, details demonstrating that a Seasonal Energy Efficiency Ratio (SEER) of 7.0 can be achieved shall be submitted in writing to and for approval by the Local Planning Authority. The development shall be occupied in accordance with the approved details.

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REASON: In the interest of adapting to climate change and to secure sustainable development.

B. CONDITIONS RELATING TO FERRY ISLAND (PLOT B)

B1) Materials Samples (LBH Development Management)

Part A – Building 1

Prior to the installation of materials on the external surfaces on Building 1 within Plot B, samples of materials to be used for the external surfaces of Building 1 hereby approved, shall be submitted in writing to and for approval by the Local Planning Authority. Samples shall include type and shade of cladding, window frames and balcony frames, sample panels or brick types and a roofing material sample combined with a schedule of the exact product references. The development shall be constructed of the approved materials and maintained thereafter.

Part B – Building 2

Prior to the installation of materials on the external surfaces on the Building 2 within Plot B, samples of materials to be used for the external surfaces of Building 2 hereby approved, shall be submitted in writing to and for approval by the Local Planning Authority. Samples shall include type and shade of cladding, window frames and balcony frames, sample panels or brick types and a roofing material sample combined with a schedule of the exact product references. The development shall be constructed of the approved materials and maintained thereafter.
REASON: In order for the Local Planning Authority to retain control over the exact materials to be used for the proposed development and to assess the suitability of the samples submitted in the interests of visual amenity.

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B2) Waste Management Plan (LBH Waste Management)

Prior to the residential occupation of Plot B, a Residential Waste Management Plan in respect of Plot B shall be submitted in writing to and for approval by the Local Planning Authority.

Prior to the occupation of the Plot B non-residential floorspace, a Commercial Waste Management Plan in respect of Plot B shall be submitted in writing to and for approval by the Local Planning Authority.

The plans shall demonstrate as necessary:

- Any distances between waste storage areas and collection vehicles further than 10 metres are mitigated by appropriate management measures.
- Installed dropped kerbs relevant to servicing access have gradients no greater than 1:20
- Suitable pest control of waste storage areas.
- Separate commercial and residential waste storage and disposal
- In respect of the non-residential units, arrangements for a scheduled waste collection with a Commercial Waste Contractor
- A cleansing schedule and measures to ensure waste is contained at all times.

The development within Plot B shall be implemented in accordance with the approved Plan and maintained thereafter.
REASON: To protect the amenity of the locality

B3) Drainage – Attenuation Details (LBH Local Lead Flood Authority)

Prior to the commencement of the Plot B development other than demolition, below ground and building core works, full details of the drainage attenuation in respect of Plot B shall be submitted in writing to and for approval by the local Planning Authority.

Attenuation measures shall demonstrate compliance with the relevant London Plan (2016) Standards, in relation to greenfield runoff rate, and the approved details shall then be implemented as approved and maintained thereafter.

REASON: to mitigate flood risk.

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B4) Drainage - Design Implementation, Maintenance Management (LBH Local Lead Flood Authority)

Prior to commencement of the Plot B development other than demolition, below ground and building core works, details of design implementation, maintenance and management of the sustainable drainage scheme in respect of Plot B shall be submitted in writing to and for approval by the Local Planning Authority, those details shall include:-

i) Information about the design storm periods and intensity, discharge rates for both pre and post development, means of access for maintenance, methods used to control surface water discharge from the Plot.
ii) Any works required off site to ensure adequate discharge of surface water without causing flooding.
iii) Floodwater exceedance routes, both on and off site.
iv) Timetable for implementation.
v) A detailed management maintenance plan for the lifetime of the Plot B development, which shall include arrangements for adoption by an appropriate public body or statutory undertaker, management by Residents management company or other arrangements to secure the operation of the drainage scheme throughout the lifetime of the Plot B development.

The scheme shall be implemented, retained, managed and maintained within Plot B in accordance with the approved details.
REASON: To prevent increased risk of flooding to improve water quality and amenity to ensure future maintenance of the surface water drainage system.

B5) BREAAM – Post Occupation Certificate (LBH Carbon Management)

Part A – Building 1

Six calendar months after the first non-residential occupation of Building 1 on Plot B, a BREEAM Post Construction Certificate in respect of the non-residential space within Building 1 on Plot B shall be submitted to the Local Planning Authority. The Certificate shall be issued by the Building Research Establishment (or another independent certification body). The development within Building 1 on Plot B shall maintain the rating in the approved Certificate thereafter unless agreed in writing with the Local Planning Authority.

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Part B – Building 2

Six calendar months after the first non-residential occupation of Building 2 on Plot B, a BREEAM Post Construction Certificate in respect of the non-residential space within Building 2 on Plot B shall be submitted to the Local Planning Authority. The Certificate shall be issued by the Building Research Establishment (or another independent certification body). The development within Building 2 on Plot B shall maintain the rating in the approved Certificate thereafter unless agreed in writing with the Local Planning Authority.

REASON: In the interest of addressing climate change and to secure sustainable development

B6) Overheating and Model Report (LBH Carbon Management)

Part A – Building 1

Prior to above ground works of Building 1 on Plot B (excluding demolition and works to construct the building core), an Overheating Model and Report in respect of Building 1 on Plot B shall be submitted in writing to and for approval by the Local Planning Authority. The submission shall assess the overheating risk (using future weather temperature projections), and demonstrate how the risks have been mitigated and removed through design solutions. This assessment will use TM59 (for domestic) or TM52 (for non-domestic). Both models shall be run using the London Weather File TM49.

The submission shall include details of the design measures incorporated within Building 1 on Plot B (including details of the feasibility of using external solar shading and passive cooling and ventilation) to ensure adaptation to higher temperatures are addressed, and the units do not overheat.

Part B – Building 2

Prior to above ground works of Building 2 on Plot B (excluding demolition and works to construct the building core), an Overheating Model and Report in respect of Building 2 on Plot B shall be submitted in writing to and for approval by the Local Planning Authority. The submission shall assess the overheating risk (using future weather temperature projections), and demonstrate how the risks have been mitigated and removed through design solutions. This assessment will use TM59 (for domestic) or TM52 (for non-domestic). Both models shall be run using the London Weather File TM49.
The submission shall include details of the design measures incorporated within Building 2 on Plot B (including details of the feasibility of using external solar shading and passive cooling and ventilation) to ensure adaptation to higher temperatures are addressed, and the units do not overheat.

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The Part A and Part B submissions shall include the following:

A. Full listing (based on unit number relating to planning drawings) of units modelled and the overheating risk before measures are installed;
B. The measures installed to reduce overheating risk:

i. the standard and the impact of the solar control glazing;
ii. that all heating pipework is appropriately insulated
iii. that passive cooling and ventilation features have been included
iv. highlight the mitigation strategies to overcome any overheating risk
v. that there is space for pipe work or localised building services and that this is designed in to the building to allow the retrofitting of centralised or localised cooling and ventilation equipment if needed.

The submission shall preclude the use of air conditioning unless exceptional justification is given for design based upon current weather projection (CIBSE DSY 1). The development within Plot B shall be constructed in accordance with the approved submission.

REASON: In the interest of adapting to climate change and to secure sustainable development.

B7) Biodiversity Plan (LBH Carbon Management)

Part A – Building 1

Prior to the installation of the measures listed in items i to v below for Building 1 of Plot B, details of a Biodiversity Plan in respect of the development for Building 1 of Plot B shall be submitted in writing to and for approval by the Local Planning Authority.

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Part B – Building 2

Prior to the installation of the measures listed in items i to v below for Building 2 of Plot B, details of a Biodiversity Plan in respect of the development for Building 2 of Plot B shall be submitted in writing to and for approval by the Local Planning Authority.
The Plans submitted for Part A and Part B shall detail:

i. Details on the number, and location of the bird brick boxes (or other) - including orientation and links to habitats that would be needed to support the identified bird species;
ii. Details on the bird brick box (or other) design and for what bird species would they serve;
iii. The lighting measures and ongoing management to reduce the impact on recorded bat populations;
iv. The number, and location of the bat brick boxes; and
v. The number, and location of the insect hotels.

The development within Plot B shall be constructed in accordance with the approved Plans.

The approved measures for Building 1 of Plot B shall be incorporated prior to the occupation of Building 1 of Plot B. The approved measures for Building 2 of Plot B shall be incorporated prior to the occupation of Building 2 of Plot B.
The approved biodiversity infrastructure should where possible preclude impacts by amenity uses and access should be permitted only for maintenance, repair or escape in an emergency.

REASON: To ensure that the development provides the maximum provision towards the creation of habitats for biodiversity and supports the water retention on site during rainfall.

B8) Green/living Roof Plan (LBH Carbon Management)

Part A – Building 1

Prior to installation of green/living roofs on Building 1 of Plot B, a Green/Living Roof Plan in respect of Building 1 of Plot B shall be submitted in writing to and for approval by the Local Planning Authority.

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Part B – Building 2

Prior to installation of green/living roofs on Building 2 of Plot B, a Green/Living Roof Plan in respect of Building 2 of Plot B shall be submitted in writing to and for approval by the Local Planning Authority.

The Plans submitted for Part A and Part B shall include:

- A roof(s) plan identifying where the living roofs will be located;
- Confirmation of the substrates depth ranges;
- Details on the diversity of substrate depths across the roof to provide contours of substrate;
- Details on the diversity of substrate types and sizes;
- Details on bare areas of substrate to allow for self colonisation of local windblown seeds and invertebrates;
- Details on the range of native species of wildflowers and herbs planted to benefit native wildlife precluding a overreliance on sedum;
- Details of the location of log piles / flat stones for invertebrates; and
- Schedule of ongoing maintenance and management

The approved measures for Building 1 of Plot B shall be incorporated prior to the occupation of Building 1 of Plot B. The approved measures for Building 2 of Plot B shall be incorporated prior to the occupation of Building 2 of Plot B
The development within Plot B shall be carried out in accordance with the approved Plans and maintained thereafter.

REASON: To ensure that the development provides the maximum provision towards the creation of habitats for biodiversity and supports the water retention on site during rainfall.

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B9) Boiler Details (LBH Environmental Health/Carbon Management)

Prior to above ground works within Plot B (excluding demolition and works to construct the building cores), details of the boiler facilities and associated infrastructure within the Plot, shall be submitted to and approved in writing by the Local Planning Authority. The details shall include:

a) location of the energy centre;
b) specification of equipment and pipework;
c) details of all the flue arrangements and chimney heights calculations, diameters and locations;
d) confirmation that the boilers to be provided for space heating and domestic hot water shall have dry NOx emissions not exceeding 40 mg/kWh;
e) confirmation that the site wide heating and hot water network has been designed and shall be constructed following the CIBSE / ADE Heat Networks Code of Practice
f) operation/management strategy;
g) the method of how the facility and infrastructure shall be designed to allow for the future connection to any neighbouring heating network (including the proposed connectivity location, space for extra equipment, punch points and large enough route of the link); and
h) the route from the Energy Centre to the red line boundary with installed pipe specification to serve all heat loads.

The development within Plot B shall be constructed in accordance with the approved details and maintained thereafter.
REASON: To protect air quality, ensure future district energy connection and protect the amenity of the locality.

B10) Accessible Parking Demarcated (LBH Transportation)

Prior to the occupation of Building 2 on Plot B development, all accessible car parking spaces within that Plot shall be marked as such and retained permanently.

REASON: In order to ensure that a reasonable number of parking spaces are located conveniently for use by people with disabilities.

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B11) Cycle Parking (LBH Transportation)

Part A – Building 1

Prior to the occupation of Building 1 on Plot B, full details of the long stay cycle parking (including the type, dimensions and method of security and access), in line with the London Cycle Design Standards (LCDS, October 2016) within that Plot shall be submitted in writing to and approved by the Local Planning Authority. Cycle parking within Building 1 on Plot B shall be installed in accordance with the approved details.

Part B – Building 2
Prior to the occupation of Building 2 on Plot B, full details of the long stay cycle parking (including the type, dimensions and method of security and access), in line with the London Cycle Design Standards (LCDS, October 2016) within that Plot shall be submitted in writing to and approved by the Local Planning Authority. Cycle parking within Building 1 on Plot B shall be installed in accordance with the approved details.

REASON: To promote sustainable transport.

B12) Service and Delivery Plan (LBH Transportation)

Part A

Part (i) – Building 1

Prior to the residential occupation of Building 1 of the Plot B development, a full Residential Service and Delivery Plan (SDP) in respect of Building 1 within Plot B shall be submitted in writing to and for approval by the Local Planning Authority. The Plan should provide details on how servicing and deliveries will take place. The plan shall demonstrate how deliveries and servicing are coordinated to avoid the AM and PM peak periods. Servicing and deliveries for Building 1 within Plot B shall be undertaken in accordance with the approved plan.

Part (ii) – Building 2

Prior to the residential occupation of Building 2 of the Plot B development, a full Residential Service and Delivery Plan (SDP) in respect of Building 2 within Plot B shall be submitted in writing to and for approval by the Local Planning Authority. The Plan should provide details on how servicing and deliveries will take place. The plan shall demonstrate how deliveries and servicing are coordinated to avoid the AM and PM peak periods. Servicing and deliveries for Building 2 within Plot B shall be undertaken in accordance with the approved plan.

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Part B

Part (i) – Building 1

Prior to the occupation of the non-residential floorspace within Building 1 of Plot B, a full Service and Delivery Plan (SDP) for the non-residential uses within Building 1 of Plot B shall be submitted in writing to and for approval by the Local Planning Authority. The Plan should provide details on how servicing and deliveries will take place. The plan shall demonstrate how deliveries and servicing are coordinated to avoid the AM and PM peak periods. Servicing and deliveries within Building 1 of Plot B shall be undertaken in accordance with the approved plan.

Part (ii) – Building 2

Prior to the occupation of the non-residential floorspace within Building 2 of Plot B, a full Service and Delivery Plan (SDP) for the non-residential uses within Building 2 of Plot B shall be submitted in writing to and for approval by the Local Planning Authority. The Plan should provide details on how servicing and deliveries will take place. The plan shall demonstrate how deliveries and servicing are coordinated to avoid the AM and PM peak periods. Servicing and deliveries within Building 2 of Plot B shall be undertaken in accordance with the approved plan.

REASON: To reduce traffic and congestion on the transportation and highways network.

B13) Noise Level Testing Details (LBH Environmental Health – Noise)

Part A – Building 1

Prior to the occupation of Building 1 within the Plot B development, testing details (the scope of which shall be agreed with the Local Planning Authority prior to submission) confirming the noise levels cited in Site Wide condition 12 above have been met shall be submitted in writing to and for approval by the Local Planning Authority. The approved noise level shall be maintained within Building 1 of Plot B thereafter.

Part B – Building 2

Prior to the occupation of Building 2 within the Plot B development, testing details (the scope of which shall be agreed with the Local Planning Authority prior to submission) confirming the noise levels cited in Site Wide condition 12 above have been met shall be submitted in writing to and for approval by the Local Planning Authority. The approved noise level shall be maintained within Building 2 of Plot B thereafter.

REASON: To protect the amenity of occupiers.

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B14) Sound Insulation Between Residential and Commercial Properties (LBH Environmental Health – Noise)

Part A – Building 1

Prior to the commencement of the building works for the fit-out of the commercial units within Building 1 of Plot B, details of a Sound Insulation Scheme to be installed between the commercial premises and residential premises within Building 1 of Plot B shall be submitted in writing to and for approval by the Local Planning Authority. The scheme shall be submitted following consultation with the Council's Environmental Health Officer (Noise). The scheme shall be installed as approved prior to any commercial occupation of Building 1 of Plot B and shall be maintained thereafter.

Part B – Building 2

Prior to the commencement of the building works for the fit-out of the commercial units within Building 2 of Plot B, details of a Sound Insulation Scheme to be installed between the commercial premises and residential premises within Building 2 of Plot B shall be submitted in writing to and for approval by the Local Planning Authority. The scheme shall be submitted following consultation with the Council's Environmental Health Officer (Noise). The scheme shall be installed as approved prior to any commercial occupation of Building 2 of Plot B and shall be maintained thereafter.

REASON: to protect the amenity of the locality.

B15) Secure by Design Accreditation (Metropolitan Police)

Part A

Prior to carrying out above ground works within Plot B (excluding demolition and works to construct the building cores) details shall be submitted to, and approved in writing by the Local Planning Authority to demonstrate that the Plot (and building(s) contained therein) has incorporated the principles and practices of Secured by Design where these can be practically achieved. Where the principles cannot be achieved, then justification for this will be required. The development within Plot B shall be implemented in accordance with the approved details.

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Part B

Prior to first occupation of each building or part of a building or use within Plot B, details shall be submitted to, and approved in writing by the Local Planning Authority to demonstrate that such Plot (and building(s) contained therein) has delivered the principles and practices of Secured by Design, and as agreed by the Local Planning Authority in the discharge of Part A.

REASON: To ensure safe and secure development and reduce crime.

B16) Site Levels (LBH Development Management)

No development shall proceed within Plot B (excluding above ground demolition) until details of all existing and proposed levels on the Plot in relation to the adjoining properties have been submitted to and approved by the Local Planning Authority. The Plot B development shall be built in accordance with the approved details.
REASON: In order to ensure that any works in conjunction with the permission hereby granted respects the height of adjacent properties through suitable levels on the site.

B17) Open Space Management & Maintenance Plan (LBH Development Management)

Prior to the occupation of the Plot B development, an Open Space Management & Maintenance Plan in respect of the development within Plot B shall be submitted to and approved in writing by the Local Planning Authority The Plan shall include details of the following:

i) Long-term management and maintenance responsibilities for all private, communal play spaces/amenity spaces and all publicly accessible open spaces
ii) Soft landscaping management and maintenance arrangements to ensure positive contribution to biodiversity

Spaces within Plot B shall be managed and maintained in accordance with the approved Plan and maintained thereafter.

REASON: to ensure high quality open space

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B18) Child Playspace Strategy (LBH Development Management)

Part A – Building 1

Prior to the residential occupation of Building 1 on Plot B, a Child Play Space Strategy in respect of the development within Building 1 on Plot B shall be submitted in writing to and for approval by the Local Planning Authority. The Strategy shall provide detail of child play spaces in accordance with the London Plan (2016) and the London Plan SPG Play and Informal Recreation (2012). The development within Building 1 of Plot B shall be implemented in accordance with the Strategy and maintained thereafter.

Part B – Building 2

Prior to the residential occupation of Building 2 on Plot B, a Child Play Space Strategy in respect of the development within Building 2 on Plot B shall be submitted in writing to and for approval by the Local Planning Authority. The Strategy shall provide detail of child play spaces in accordance with the London Plan (2016) and the London Plan SPG Play and Informal Recreation (2012). The development within Building 2 of Plot B shall be implemented in accordance with the Strategy and maintained thereafter.

REASON: to ensure high quality development

B19) Monitoring and Maintenance Plan – Contamination (Environment Agency)

The Plot B development hereby permitted may not commence other than for investigative works until a monitoring and maintenance plan in respect of contamination within Plot B, including a timetable of monitoring and submission of reports to the Local Planning Authority, has been submitted to, and approved in writing by, the Local Planning Authority. Reports as specified in the approved plan, including details of any necessary contingency action arising from the monitoring, shall be submitted to, and approved in writing by, the Local Planning Authority.

REASON: To ensure that the site does not pose any further risk to human health or the water environment by managing any ongoing contamination issues and completing all necessary long-term remediation measures. This is in line with paragraph 170 of the National Planning Policy Framework. To prevent deterioration of groundwater within the principal chalk aquifer.

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B20) Contamination Not Previously Identified (Environment Agency)

If during development, contamination not previously identified is found to be present at Plot B then no further development in respect of that Plot (unless otherwise agreed in writing with the Local Planning Authority) shall be carried out until a remediation strategy detailing how this contamination will be dealt with has been submitted to and approved in writing by the Local Planning Authority. The remediation strategy shall be implemented as approved within Plot B.

REASON: To ensure that the development is not contributing to, put at unacceptable risk from, or adversely affected by, unacceptable levels of water pollution from previously unidentified contamination sources at the development site in line with paragraph 170 of the National Planning Policy Framework. To prevent deterioration of groundwater within the principal chalk aquifer.

B21) Written Consent for Piling or Other Intrusive Ground Works (Environment Agency)

Piling or other intrusive ground works (investigation boreholes, tunnel shafts, ground source heating and cooling systems) using penetrative methods which breach the base of the London Clay or where the London Clay is absent shall not be carried out other than with the written consent of the local planning authority. The development within Plot B shall be carried out in accordance with the approved details.

REASON: To ensure that the proposed piling activities through potentially contaminated land is not contributing to, put at unacceptable risk from, or adversely affected by unacceptable levels of water pollution caused by mobilised contaminants in line with paragraph 170 of the National Planning Policy Framework and the Environment Agency's approach to groundwater protection. To prevent deterioration of groundwater within the principal chalk aquifer.

B22) Method of Piling (LBH Environmental Health)

(1) No piling; or (2) other intrusive ground works which breach the base of the London Clay or occur in areas where the London Clay is absent within Plot B shall take place until a Piling Impact Study has been undertaken in respect of Plot B. The Piling Impact Study shall include the method of piling foundations and shall be submitted to and approved in writing by the Local Planning Authority. Piling or any other foundation design using penetrative methods shall not be permitted within Plot B except for those parts of Plot B where it has been demonstrated that there is no resultant unacceptable risk to ground water.

REASON: To prevent the contamination of the underlying groundwater aquifer

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B23) Written Scheme of Investigation (WSI) – Historic England (GLAAS)

No demolition or development (apart from demolition to slab level) shall take place within Plot B until a stage 1 written scheme of investigation (WSI) in respect of Plot B has been submitted to and approved by the local planning authority in writing. For land that is included within the WSI, no demolition or development (apart from demolition to slab level) shall take place within Plot B other than in accordance with the agreed WSI, and the programme and methodology of site evaluation and the nomination of a competent person(s) or organisation to undertake the agreed works.

If heritage assets of archaeological interest are identified by stage 1 then for those parts of the site which have archaeological interest a stage 2 WSI shall be submitted to and approved by the local planning authority in writing. For land that is included within the stage 2 WSI, no demolition/development (apart from demolition to slab level) shall take place within Plot B other than in accordance with the agreed stage 2 WSI which shall include:

A. The statement of significance and research objectives, the programme and methodology of site investigation and recording and the nomination of a competent person(s) or organisation to undertake the agreed works

B. The programme for post-investigation assessment and subsequent analysis, publication & dissemination and deposition of resulting material. This part of the condition shall not be discharged until these elements have been fulfilled in accordance with the programme set out in the stage 2 WSI.

REASON: To protect the Historic Environment

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B24) Contaminated Land – Part 1 (LBH Environmental Health)

Prior to the commencement of the development on Plot B (other than for investigative work):

a) Using the information obtained from the previous assessments, an additional site investigation, sampling and analysis shall be undertaken at the Plot as appropriate. The investigation must be comprehensive enough to enable:-

i) A risk assessment to be undertaken,
ii) Refinement of the Conceptual Model, and
ii) The development of a Method Statement detailing the remediation requirements.

The risk assessment and refined Conceptual Model shall be submitted, along with the site investigation report, to the Local Planning Authority.

b) If the risk assessment and refined Conceptual Model indicate any risk of harm, a Method Statement detailing the remediation requirements in respect of the Plot, using the information obtained from the site investigation, and also detailing any post remedial monitoring shall be submitted to, and approved in writing by, the Local Planning Authority prior to that remediation being carried out on the Plot.

REASON: To ensure the development can be implemented and occupied with adequate regard for environmental and public safety.

B25) Contaminated Land – Part 2 (LBH Environmental Health)

Where the contaminated land condition above demonstrates that remediation of contamination on the Plot is required, completion of the remediation detailed in the Method Statement shall be carried out and a report that provides verification that the required works have been carried out, shall be submitted to, and approved in writing by the Local Planning Authority before the development is occupied within Plot B.

REASON: To ensure the development can be implemented and occupied with adequate regard for environmental and public safety.

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B26) Development Near Subsurface Potable Water Infrastructure (Thames Water)

No construction shall take place within 5m of the water main unless otherwise agreed in writing with the Local Planning Authority in consultation with Thames Water. Information detailing how the developer intends to divert the asset / align the Plot B development, so as to prevent the potential for damage to subsurface potable water infrastructure, must be submitted to and approved in writing by the local planning authority in consultation with Thames Water. Any construction must be undertaken in accordance with the terms of the approved information. Unrestricted access must be available at all times for the maintenance and repair of the asset during and after the construction works.

REASON: The proposed works will be in close proximity to underground strategic water main, utility infrastructure. The works have the potential to impact on local underground water utility infrastructure.

B27) Central Satellite Dish/Receiving System (LBH Development Management)

Part A – Building 1

Prior to the residential occupation of Building 1 of the Plot B development, details of a Central Satellite Dish/Receiving System in respect of Building 1 of Plot B shall be submitted in writing to and for approval by the Local Planning Authority. The System shall be implemented in accordance with approved details and maintained thereafter.

Part B – Building 2

Prior to the residential occupation of Building 2 of the Plot B development, details of a Central Satellite Dish/Receiving System in respect of Building 2 of Plot B shall be submitted in writing to and for approval by the Local Planning Authority. The System shall be implemented in accordance with approved details and maintained thereafter.

REASON: To protect the amenity of the locality.

B28) Satellite Dish or Television Antenna (LBH Development Management)

The placement of any satellite dish or television antenna on any external surface of any building in the Plot is not permitted, excepting the approved central dish/receiving system noted in the condition above, unless agreed in writing with the Local Planning Authority.

REASON: To protect the amenity of the locality.

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B29) Demolition/Construction Environmental Management Plans

Part A

Demolition works shall not commence within Plot B until a Demolition Environmental Management Plan (DEMP) in respect of Plot B has been submitted to and approved in writing by the local planning authority.

Part B

Development shall not commence within Plot B (other than demolition) until a Construction Environmental Management Plan (CEMP) in respect of Plot B has been submitted to and approved in writing by the local planning authority.

The following applies to both Parts A and B above:

a) The DEMP/CEMP shall include a Construction Logistics Plan (CLP) and Air Quality and Dust Management Plan (AQDMP) in respect of Plot B.

b) The DEMP/CEMP shall provide details of how demolition/construction works in respect of Plot B are to be undertaken respectively and shall include:
   i. A construction method statement which identifies the stages and details how works will be undertaken;
   ii. Details of working hours, which unless otherwise agreed with the Local Planning Authority shall be limited to 08.00 to 18.00 Monday to Friday and 08.00 to 13.00 on Saturdays;
   iii. Details of plant and machinery to be used during demolition/construction works;
   iv. Details of an Unexploded Ordnance Survey;
   v. Details of the waste management strategy;
   vi. Details of community engagement arrangements;
   vii. Details of any acoustic hoarding;
   viii. A temporary drainage strategy and performance specification to control surface water runoff and Pollution Prevention Plan (in accordance with Environment Agency guidance);
   ix. Details of external lighting; and,
   x. Details of any other standard environmental management and control measures to be implemented.

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c) The CLP will be in accordance with Transport for London's Construction Logistics Plan Guidance (July 2017) and shall provide details on:

i. Monitoring and joint working arrangements, where appropriate;
ii. Site access and car parking arrangements;
iii. Delivery booking systems;
iv. Agreed routes to/from the Plot;
v. Timing of deliveries to and removals from the Plot (to avoid peak times, as agreed with Highways Authority, 07.00 to 9.00 and 16.00 to 18.00, where possible); and
vi. Travel plans for staff/personnel involved in demolition/construction works to detail the measures to encourage sustainable travel to the Plot during the demolition/construction phase; and
vii. Joint arrangements with neighbouring developers for staff parking, Lorry Parking and consolidation of facilities such as concrete batching.

c) The AQDMP will be in accordance with the Greater London Authority SPG Dust and Emissions Control (2014) and shall include:

i. Mitigation measures to manage and minimise demolition/construction dust emissions during works;
ii. Details confirming the Plot has been registered at http://nrmm.london;
iii. Evidence of Non-Road Mobile Machinery (NRMM) and plant registration shall be available on site in the event of Local Authority Inspection;
iv. An inventory of NRMM currently on site (machinery should be regularly serviced and service logs kept on site, which includes proof of emission limits for equipment for inspection);
v. A Dust Risk Assessment for the works; and
vi. Lorry Parking, in joint arrangement where appropriate.

The development on Plot B shall be carried out in accordance with the approved details.

Additionally, the site or Contractor Company must be registered with the Considerate Constructors Scheme. Proof of registration must be sent to the Local Planning Authority prior to any works being carried out.

Reason: To safeguard residential amenity, reduce congestion and mitigate obstruction to the flow of traffic, protect air quality and the amenity of the locality.

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B30) Details of Roof Top PV Panels

Part A – Building 1

Prior to the occupation of Building 1 of Plot B for residential purposes, details of the layout and specification of the PV solar panel installation in respect of Building 1 of Plot B shall be submitted in writing to and for approval by the Local Planning Authority. The installation within Building 1 of Plot B shall be constructed in accordance with the approved details and maintained thereafter.

Part B – Building 2

Prior to the occupation of Building 2 of Plot B for residential purposes, details of the layout and specification of the PV solar panel installation in respect of Building 2 of Plot B shall be submitted in writing to and for approval by the Local Planning Authority. The installation within Building 2 of Plot B shall be constructed in accordance with the approved details and maintained thereafter.

REASON: To ensure sustainable development and mitigate the impacts of climate change.

B31) Installation of Roof Top Structures (LBH Development Management)
Prior to the installation of any access ladders or building cleaning equipment at roof level of Plot B, details shall be submitted in writing to and for approval by the Local Planning Authority. The installation within Plot B shall be constructed in accordance with the approved details and maintained thereafter.

REASON: To ensure that the building has a satisfactory appearance

B32) Source Protection Strategy (Ferry Island) – (Thames Water)

Prior to the commencement of the Plot B development (excluding above ground demolition), a Source Protection Strategy in respect of Plot B detailing how the developer intends to ensure the water abstraction source is not detrimentally affected by the proposed development both during and after its construction shall be submitted to and approved by, the local planning authority in consultation with the water undertaker (Thames Water). The development within Plot B shall be constructed in line with the recommendations of the strategy.

REASON: To ensure that the water resource is not detrimentally affected by the development.

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B33) Building 1 Internal Street (LBH Development Management)

Prior to installation, detailed drawings of the soffit serving the Building 1 internal street shall be submitted in writing to and for approval by the Local Planning Authority. The soffit shall be installed in accordance with the approved details prior to the residential occupation of Building 1 and maintained thereafter.

REASON: To ensure that the building has a satisfactory appearance

B34) Opaque Glazing to Non-Residential Units (LBH Development Management)

Prior to the installation of any opaque glazing on the ground floor non-residential units of Plot B, details shall be submitted in writing to and for approval by the Local Planning Authority. The installation within Plot B shall be constructed in accordance with the approved details and maintained thereafter.

REASON: To ensure that the building has a satisfactory appearance

B35) Cooling Demand (Great London Authority Energy)

Prior to the occupation of the non-residential floorspace within Plot B, details of measures to be undertaken to minimise the non-domestic cooling demand shall be submitted in writing to and for approval by the Local Planning Authority. The measures shall be incorporated in accordance with the approved details.

REASON: In the interest of adapting to climate change and to secure sustainable development.

B36) Overheating (Great London Authority Energy)

Prior to the residential occupation of the Plot B development, a Building User Guide for new residential occupants shall be submitted in writing to and for approval by the Local Planning Authority. The Building User Guide will advise residents how to operate their property during a heatwave, setting out a cooling hierarchy in accordance with London Plan (2016) Policy 5.9 with passive measures being considered ahead of cooling systems. The Building User Guide will be issued to residential occupants upon first occupation.

REASON: In the interest of adapting to climate change and to secure sustainable development.

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B37) Heat Network (Great London Authority Energy)

Prior to the occupation of the non-residential floorspace within Plot B, a Building User Guide for new non-residential tenants shall be submitted in writing to and for approval by the Local Planning Authority. The Building User Guide shall explain that valved connections have been made available to each tenant, for the purpose of their primary heating and hot water generation. The Building User Guide will be issued to non-residential tenants upon first occupation.

REASON: In the interest of adapting to climate change and to secure sustainable development.

B38) CO2 (Great London Authority Energy)

Prior to the occupation of each non-residential unit within Plot B, details demonstrating that a Seasonal Energy Efficiency Ratio (SEER) of 7.0 can be achieved shall be submitted in writing to and for approval by the Local Planning Authority. The development shall be occupied in accordance with the approved details.

REASON: In the interest of adapting to climate change and to secure sustainable development.

C. CONDITIONS RELATING TO WELBOURNE (PLOT C)

C1) Materials Samples (LBH Development Management)

Prior to the installation of materials on the external surfaces on the building(s) within Plot C, samples of materials to be used for the external surfaces of the building(s) hereby approved within Plot C, shall be submitted in writing to and for approval by the Local Planning Authority. Samples shall include type and shade of cladding, window frames and balcony frames, sample panels or brick types and a roofing material sample combined with a schedule of the exact product references. The development shall be constructed of the approved materials and maintained thereafter.

REASON: In order for the Local Planning Authority to retain control over the exact materials to be used for the proposed development and to assess the suitability of the samples submitted in the interests of visual amenity.

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C2) Waste Management Plan (LBH Waste Management)

Prior to the residential occupation of Plot C, a Residential Waste Management Plan in respect of Plot C shall be submitted in writing to and for approval by the Local Planning Authority.

Prior to the occupation of the Plot C non-residential floorspace, a Commercial Waste Management Plan in respect of Plot C shall be submitted in writing to and for approval by the Local Planning Authority.

The plans shall demonstrate as necessary:

- Any distances between waste storage areas and collection vehicles further than 10 metres are mitigated by appropriate management measures.
- Installed dropped kerbs relevant to servicing access have gradients no greater than 1:20
- Suitable pest control of waste storage areas.
- Separate commercial and residential waste storage and disposal
- In respect of the non-residential units, arrangements for a scheduled waste collection with a Commercial Waste Contractor
- A cleansing schedule and measures to ensure waste is contained at all times.

The development within Plot C shall be implemented in accordance with the approved Plan and maintained thereafter.

REASON: To protect the amenity of the locality

C3) Drainage – Attenuation Details (LBH Local Lead Flood Authority)

Prior to the commencement of the Plot C development other than demolition, below ground and building core works, full details of the drainage attenuation in respect of Plot C shall be submitted in writing to and for approval by the local Planning Authority.

Attenuation measures shall demonstrate compliance with the relevant London Plan (2016) Standards, in relation to greenfield runoff rate, and the approved details shall then be implemented as approved and maintained thereafter.

REASON: to mitigate flood risk.

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C4) Drainage - Design Implementation, Maintenance Management (LBH Local Lead Flood Authority)

Prior to commencement of the Plot C development other than demolition, below ground and building core works, details of design implementation, maintenance and management of the sustainable drainage scheme in respect of Plot C shall be submitted in writing to and for approval by the Local Planning Authority, those details shall include:-

i) Information about the design storm periods and intensity, discharge rates for both pre and post development, means of access for maintenance, methods used to control surface water discharge from the Plot.
ii) Any works required off site to ensure adequate discharge of surface water without causing flooding.
iii) Floodwater exceedance routes, both on and off site.
iv) Timetable for implementation.
v) A detailed management maintenance plan for the lifetime of the Plot C development, which shall include arrangements for adoption by an appropriate public body or statutory undertaker, management by Residents management company or other arrangements to secure the operation of the drainage scheme throughout the lifetime of the Plot C development.

The scheme shall be implemented, retained, managed and maintained within Plot C in accordance with the approved details.
REASON: To prevent increased risk of flooding to improve water quality and amenity to ensure future maintenance of the surface water drainage system.

C5) BREAAM – Post Occupation Certificate (LBH Carbon Management)

Six calendar months after the first non-residential occupation of the Plot, a BREEAM Post Construction Certificate in respect of the non-residential space within Plot C shall be submitted to the Local Planning Authority. The Certificate shall be issued by the Building Research Establishment (or another independent certification body). The development within Plot C shall maintain the rating in the approved Certificate thereafter unless agreed in writing with the Local Planning Authority.

REASON: In the interest of addressing climate change and to secure sustainable development

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C6) Overheating and Model Report (LBH Carbon Management)

Prior to above ground works within Plot C (excluding demolition and works to construct the building core), an Overheating Model and Report in respect of Plot C shall be submitted in writing to and for approval by the Local Planning Authority. The submission shall assess the overheating risk (using future weather temperature projections), and demonstrate how the risks have been mitigated and removed through design solutions. This assessment will use TM59 (for domestic) or TM52 (for non-domestic). Both models shall be run using the London Weather File TM49.

The submission shall include details of the design measures incorporated within the scheme within Plot C (including details of the feasibility of using external solar shading and passive cooling and ventilation) to ensure adaptation to higher temperatures are addressed, and the units do not overheat. The submission shall include the following:

A. Full listing (based on unit number relating to planning drawings) of units modelled and the overheating risk before measures are installed;

B. The measures installed to reduce overheating risk:

i. the standard and the impact of the solar control glazing;
ii. that all heating pipework is appropriately insulated
iii. that passive cooling and ventilation features have been included
iv. highlight the mitigation strategies to overcome any overheating risk
v. that there is space for pipe work or localised building services and that this is designed in to the building to allow the retrofitting of centralised or localised cooling and ventilation equipment if needed.

The submission shall preclude the use of air conditioning unless exceptional justification is given for design based upon current weather projection (CIBSE DSY 1). The development within Plot C shall be constructed in accordance with the approved submission.

REASON: In the interest of adapting to climate change and to secure sustainable development.

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C7) Biodiversity Plan (LBH Carbon Management)

Prior to the installation of the measures listed in items i to v below within Plot C, details of a Biodiversity Plan in respect of the development within Plot C shall be submitted in writing to and for approval by the Local Planning Authority. The Plan shall detail:

i. Details on the number, and location of the bird brick boxes (or other) - including orientation and links to habitats that would be needed to support the identified bird species;
ii. Details on the bird brick box (or other) design and for what bird species would they serve;
iii. The lighting measures and ongoing management to reduce the impact on recorded bat populations;
iv. The number, and location of the bat brick boxes; and
v. The number, and location of the insect hotels.

The development within Plot C shall be constructed in accordance with the approved Plan and the approved measures incorporated prior to the occupation of the development within Plot C. The approved biodiversity infrastructure should where possible preclude impacts by amenity uses and access should be permitted only for maintenance, repair or escape in an emergency.

REASON: To ensure that the development provides the maximum provision towards the creation of habitats for biodiversity and supports the water retention on site during rainfall.

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C8) Green/living Roof Plan (LBH Carbon Management)

Prior to installation of green/living roofs, a Green/Living Roof Plan in respect of the development within Plot C shall be submitted in writing to and for approval by the Local Planning Authority. The Plan shall include:

- A roof(s) plan identifying where the living roofs will be located;
- Confirmation of the substrates depth ranges;
- Details on the diversity of substrate depths across the roof to provide contours of substrate;
- Details on the diversity of substrate types and sizes;
- Details on bare areas of substrate to allow for self colonisation of local windblown seeds and invertebrates;
- Details on the range of native species of wildflowers and herbs planted to benefit native wildlife precluding a overreliance on sedum;
- Details of the location of log piles / flat stones for invertebrates; and
- Schedule of ongoing maintenance and management

The measures should be incorporated prior to the occupation of the development within Plot C. The development within Plot C shall be carried out in accordance with the approved Plan and maintained thereafter.

REASON: To ensure that the development provides the maximum provision towards the creation of habitats for biodiversity and supports the water retention on site during rainfall.

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C9) Boiler Details (LBH Environmental Health/Carbon Management)

Prior to above ground works within Plot C (excluding demolition and works to construct the building core), details of the boiler facilities and associated infrastructure within the Plot, shall be submitted to and approved in writing by the Local Planning Authority. The details shall include:

a) location of the energy centre;
b) specification of equipment and pipework;
c) details of all the flue arrangements and chimney heights calculations, diameters and locations;
d) confirmation that the boilers to be provided for space heating and domestic hot water shall have dry NOx emissions not exceeding 40 mg/kWh;
e) confirmation that the site wide heating and hot water network has been designed and shall be constructed following the CIBSE / ADE Heat Networks Code of Practice
f) operation/management strategy;
g) the method of how the facility and infrastructure shall be designed to allow for the future connection to any neighbouring heating network (including the proposed connectivity location, space for extra equipment, punch points and large enough route of the link); and
h) the route from the Energy Centre to the red line boundary with installed pipe specification to serve all heat loads.

The development within Plot C shall be constructed in accordance with the approved details and maintained thereafter.

REASON: To protect air quality, ensure future district energy connection and protect the amenity of the locality.

C10) Accessible Parking Demarcated (LBH Transportation)

Prior to the occupation of the Plot C development, all accessible car parking spaces within that Plot shall be marked as such and retained permanently.

REASON: In order to ensure that a reasonable number of parking spaces are located conveniently for use by people with disabilities.

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C11) Cycle Parking (LBH Transportation)

Prior to the occupation of the Plot C development, full details of the long stay cycle parking (including the type, dimensions and method of security and access), in line with the London Cycle Design Standards (LCDS, October 2016) within that Plot shall be submitted in writing to and approved by the Local Planning Authority. Cycle parking within the Plot shall be installed in accordance with the approved details.

REASON: To promote sustainable transport.

C12) Service and Delivery Plan (LBH Transportation)

Part A

Prior to the residential occupation of the Plot C development, a full Residential Service and Delivery Plan (SDP) in respect of the development within Plot C shall be submitted in writing to and for approval by the Local Planning Authority. The Plan should provide details on how servicing and deliveries will take place. The plan shall demonstrate how deliveries and servicing are coordinated to avoid the AM and PM peak periods. Servicing and deliveries within Plot C shall be undertaken in accordance with the approved plan.

Part B

Prior to the occupation of the non-residential floorspace within Plot C, a full Service and Delivery Plan (SDP) for the non-residential uses within Plot C shall be submitted in writing to and for approval by the Local Planning Authority. The Plan should provide details on how servicing and deliveries will take place. The plan shall demonstrate how deliveries and servicing are coordinated to avoid the AM and PM peak periods. Servicing and deliveries within Plot C shall be undertaken in accordance with the approved plan.

REASON: To reduce traffic and congestion on the transportation and highways network.

C13) Noise Level Testing Details (LBH Environmental Health – Noise)

Prior to the occupation of the Plot C development, testing details (the scope of which shall be agreed with the Local Planning Authority prior to submission) confirming the noise levels cited in Site Wide condition 12 above have been met shall be submitted in writing to and for approval by the Local Planning Authority. The approved noise level shall be maintained within Plot C thereafter.

REASON: To protect the amenity of occupiers.

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C14) Sound Insulation Between Residential and Commercial Properties (LBH Environmental Health – Noise)

Prior to the commencement of the building works for the fit-out of the commercial units within Plot C, details of a Sound Insulation Scheme to be installed between the commercial premises and residential premises within Plot C shall be submitted in writing to and for approval by the Local Planning Authority. The scheme shall be submitted following consultation with the Council's Environmental Health Officer (Noise). The scheme shall be installed as approved prior to any commercial occupation of Plot C and shall be maintained thereafter.

REASON: to protect the amenity of the locality.

C15) Secure by Design Accreditation (Metropolitan Police)

Part A

Prior to carrying out above ground works within Plot C (excluding demolition and works to construct the building core) details shall be submitted to, and approved in writing by the Local Planning Authority to demonstrate that the Plot (and building(s) contained therein) has incorporated the principles and practices of Secured by Design where these can be practically achieved. Where the principles cannot be achieved, then justification for this will be required. The development within Plot C shall be implemented in accordance with the approved details.

Part B

Prior to first occupation of each building or part of a building or use within Plot C, details shall be submitted to, and approved in writing by the Local Planning Authority to demonstrate that such Plot (and building(s) contained therein) has delivered the principles and practices of Secured by Design, and as agreed by the Local Planning Authority in the discharge of Part A.

REASON: To ensure safe and secure development and reduce crime.

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C16) Site Levels (LBH Development Management)

No development shall proceed within Plot C (excluding above ground demolition) until details of all existing and proposed levels on the Plot in relation to the adjoining properties have been submitted to and approved by the Local Planning Authority. The Plot C development shall be built in accordance with the approved details.

REASON: In order to ensure that any works in conjunction with the permission hereby granted respects the height of adjacent properties through suitable levels on the site.

C17) Open Space Management & Maintenance Plan (LBH Development Management)

Prior to the occupation of the Plot C development, an Open Space Management & Maintenance Plan in respect of the development within Plot C shall be submitted to and approved in writing by the Local Planning Authority The Plan shall include details of the following:

i) Long-term management and maintenance responsibilities for all private, communal play spaces/amenity spaces and all publicly accessible open spaces
ii) Soft landscaping management and maintenance arrangements to ensure positive contribution to biodiversity

Spaces within Plot C shall be managed and maintained in accordance with the approved Plan and maintained thereafter.

REASON: to ensure high quality open space

C18) Child Playspace Strategy (LBH Development Management)

Prior to the residential occupation of Plot C, a Child Play Space Strategy in respect of the development within Plot C shall be submitted in writing to and for approval by the Local Planning Authority. The Strategy shall provide detail of child play spaces in accordance with the London Plan (2016) and the London Plan SPG Play and Informal Recreation (2012). The development within Plot C shall be implemented in accordance with the Strategy and maintained thereafter.

REASON: to ensure high quality development

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C19) Monitoring and Maintenance Plan – Contamination (Environment Agency)

The Plot C development hereby permitted may not commence other than for investigative works until a monitoring and maintenance plan in respect of contamination within Plot C, including a timetable of monitoring and submission of reports to the Local Planning Authority, has been submitted to, and approved in writing by, the Local Planning Authority. Reports as specified in the approved plan, including details of any necessary contingency action arising from the monitoring, shall be submitted to, and approved in writing by, the Local Planning Authority.

REASON: To ensure that the site does not pose any further risk to human health or the water environment by managing any ongoing contamination issues and completing all necessary long-term remediation measures. This is in line with paragraph 170 of the National Planning Policy Framework. To prevent deterioration of groundwater within the principal chalk aquifer.

C20) Contamination Not Previously Identified (Environment Agency)

If during development, contamination not previously identified is found to be present at Plot C then no further development in respect of that Plot (unless otherwise agreed in writing with the Local Planning Authority) shall be carried out until a remediation strategy detailing how this contamination will be dealt with has been submitted to and approved in writing by the Local Planning Authority. The remediation strategy shall be implemented as approved within Plot C.

REASONS: To ensure that the development is not contributing to, put at unacceptable risk from, or adversely affected by, unacceptable levels of water pollution from previously unidentified contamination sources at the development site in line with paragraph 170 of the National Planning Policy Framework. To prevent deterioration of groundwater within the principal chalk aquifer.

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C21) Written Consent for Piling or Other Intrusive Ground Works (Environment Agency)

Piling or other intrusive ground works (investigation boreholes, tunnel shafts, ground source heating and cooling systems) using penetrative methods which breach the base of the London Clay or where the London Clay is absent shall not be carried out other than with the written consent of the local planning authority. The development within Plot C shall be carried out in accordance with the approved details.

REASON: To ensure that the proposed piling activities through potentially contaminated land is not contributing to, put at unacceptable risk from, or adversely affected by unacceptable levels of water pollution caused by mobilised contaminants in line with paragraph 170 of the National Planning Policy Framework and the Environment Agency's approach to groundwater protection. To prevent deterioration of groundwater within the principal chalk aquifer.

C22) Method of Piling (LBH Environmental Health)

(1) No piling or; (2) other intrusive ground works which breach the base of the London Clay or occur in areas where the London Clay is absent within Plot C shall take place until a Piling Impact Study has been undertaken in respect of Plot C. The Piling Impact Study shall include the method of piling foundations and shall be submitted to and approved in writing by the Local Planning Authority. Piling or any other foundation design using penetrative methods shall not be permitted within Plot C except for those parts of Plot C where it has been demonstrated that there is no resultant unacceptable risk to ground water."

REASON: To prevent the contamination of the underlying groundwater aquifer

C23) Written Scheme of Investigation (WSI) – Historic England (GLAAS)

No demolition or development (apart from demolition to slab level) shall take place within Plot C until a stage 1 written scheme of investigation (WSI) in respect of Plot C has been submitted to and approved by the local planning authority in writing. For land that is included within the WSI, no demolition or development (apart from demolition to slab level) shall take place within Plot C other than in accordance with the agreed WSI, and the programme and methodology of site evaluation and the nomination of a competent person(s) or organisation to undertake the agreed works.

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If heritage assets of archaeological interest are identified by stage 1 then for those parts of the site which have archaeological interest a stage 2 WSI shall be submitted to and approved by the local planning authority in writing. For land that is included within the stage 2 WSI, no demolition/development (apart from demolition to slab level) shall take place within Plot C other than in accordance with the agreed stage 2 WSI which shall include:

A. The statement of significance and research objectives, the programme and methodology of site investigation and recording and the nomination of a competent person(s) or organisation to undertake the agreed works

B. The programme for post-investigation assessment and subsequent analysis, publication & dissemination and deposition of resulting material. This part of the condition shall not be discharged until these elements have been fulfilled in accordance with the programme set out in the stage 2 WSI.

REASON: To protect the Historic Environment

C24) Contaminated Land – Part 1 (LBH Environmental Health)

Prior to the commencement of the development on Plot C (other than for investigative work):

a) Using the information obtained from the previous assessments, an additional site investigation, sampling and analysis shall be undertaken at the Plot as appropriate. The investigation must be comprehensive enough to enable:-

i) A risk assessment to be undertaken,
ii) Refinement of the Conceptual Model, and
ii) The development of a Method Statement detailing the remediation requirements.

The risk assessment and refined Conceptual Model shall be submitted, along with the site investigation report, to the Local Planning Authority.

b) If the risk assessment and refined Conceptual Model indicate any risk of harm, a Method Statement detailing the remediation requirements in respect of the Plot, using the information obtained from the site investigation, and also detailing any post remedial monitoring shall be submitted to, and approved in writing by, the Local Planning Authority prior to that remediation being carried out on the Plot.

REASON: To ensure the development can be implemented and occupied with adequate regard for environmental and public safety.

C25) Contaminated Land – Part 2 (LBH Environmental Health)

Where the contaminated land condition above demonstrates that remediation of contamination on the Plot is required, completion of the remediation detailed in the Method Statement shall be carried out and a report that provides verification that the required works have been carried out, shall be submitted to, and approved in writing by the Local Planning Authority before the development is occupied within Plot C.

REASON: To ensure the development can be implemented and occupied with adequate regard for environmental and public safety.

C26) Development Near Subsurface Potable Water Infrastructure (Thames Water)

No construction shall take place within 5m of the water main unless otherwise agreed in writing with the Local Planning Authority in consultation with Thames Water. Information detailing how the developer intends to divert the asset / align the Plot C development, so as to prevent the potential for damage to subsurface potable water infrastructure, must be submitted to and approved in writing by the local planning authority in consultation with Thames Water. Any construction must be undertaken in accordance with the terms of the approved information. Unrestricted access must be available at all times for the maintenance and repair of the asset during and after the construction works.

REASON: The proposed works will be in close proximity to underground strategic water main, utility infrastructure. The works have the potential to impact on local underground water utility infrastructure.

C27) Central Satellite Dish/Receiving System (LBH Development Management)

Prior to the residential occupation of the Plot C development, details of a Central Satellite Dish/Receiving System in respect of Plot C shall be submitted in writing to and for approval by the Local Planning Authority. The System shall be implemented in accordance with approved details and maintained thereafter.

REASON: To protect the amenity of the locality.

C28) Satellite Dish or Television Antenna (LBH Development Management)

The placement of any satellite dish or television antenna on any external surface of any building in the Plot is not permitted, excepting the approved central dish/receiving system noted in the condition above, unless agreed in writing with the Local Planning Authority.

REASON: To protect the amenity of the locality.

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C29) Demolition/Construction Environmental Management Plans (LBH Development Management)

Part A

Demolition works shall not commence within Plot C until a Demolition Environmental Management Plan (DEMP) in respect of Plot C has been submitted to and approved in writing by the local planning authority.

Part B

Development shall not commence within Plot C (other than demolition) until a Construction Environmental Management Plan (CEMP) in respect of Plot C has been submitted to and approved in writing by the local planning authority.

The following applies to both Parts A and B above:

a) The DEMP/CEMP shall include a Construction Logistics Plan (CLP) and Air Quality and Dust Management Plan (AQDMP) in respect of Plot C.

b) The DEMP/CEMP shall provide details of how demolition/construction works in respect of Plot C are to be undertaken respectively and shall include:

i. A construction method statement which identifies the stages and details how works will be undertaken;
ii. Details of working hours, which unless otherwise agreed with the Local Planning Authority shall be limited to 08.00 to 18.00 Monday to Friday and 08.00 to 13.00 on Saturdays;
iii. Details of plant and machinery to be used during demolition/construction works;
iv. Details of an Unexploded Ordnance Survey;
v. Details of the waste management strategy;
vi. Details of community engagement arrangements;
vii. Details of any acoustic hoarding;
viii. A temporary drainage strategy and performance specification to control surface water runoff and Pollution Prevention Plan (in accordance with Environment Agency guidance);
ix. Details of external lighting; and,
x. Details of any other standard environmental management and control measures to be implemented.

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c) The CLP will be in accordance with Transport for London's Construction Logistics Plan Guidance (July 2017) and shall provide details on:

i. Monitoring and joint working arrangements, where appropriate;
ii. Site access and car parking arrangements;
iii. Delivery booking systems;
iv. Agreed routes to/from the Plot;
v. Timing of deliveries to and removals from the Plot (to avoid peak times, as agreed with Highways Authority, 07.00 to 9.00 and 16.00 to 18.00, where possible); and
vi. Travel plans for staff/personnel involved in demolition/construction works to detail the measures to encourage sustainable travel to the Plot during the demolition/construction phase; and
vii. Joint arrangements with neighbouring developers for staff parking, Lorry Parking and consolidation of facilities such as concrete batching.

d) The AQDMP will be in accordance with the Greater London Authority SPG Dust and Emissions Control (2014) and shall include:

i. Mitigation measures to manage and minimise demolition/construction dust emissions during works;
ii. Details confirming the Plot has been registered at http://nrmm.london;
iii. Evidence of Non-Road Mobile Machinery (NRMM) and plant registration shall be available on site in the event of Local Authority Inspection;
iv. An inventory of NRMM currently on site (machinery should be regularly serviced and service logs kept on site, which includes proof of emission limits for equipment for inspection);
v. A Dust Risk Assessment for the works; and
vi. Lorry Parking, in joint arrangement where appropriate.

The development on Plot C shall be carried out in accordance with the approved details.

Additionally, the site or Contractor Company must be registered with the Considerate Constructors Scheme. Proof of registration must be sent to the Local Planning Authority prior to any works being carried out.

Reason: To safeguard residential amenity, reduce congestion and mitigate obstruction to the flow of traffic, protect air quality and the amenity of the locality.

C30) Details of Roof Top PV Panels (LBH Development Management)

Prior to the occupation of Plot C for residential purposes, details of the layout and specification of the PV solar panel installation in respect of Plot C shall be submitted in writing to and for approval by the Local Planning Authority. The installation within Plot C shall be constructed in accordance with the approved details and maintained thereafter.

REASON: To ensure sustainable development and mitigate the impacts of climate change.

C31) Installation of Roof Top Structures (LBH Development Management)

Prior to the installation of any access ladders or building cleaning equipment at the roof level of Plot C, details shall be submitted in writing to and for approval by the Local Planning Authority. The installation within Plot C shall be constructed in accordance with the approved details and maintained thereafter.

REASON: To ensure that the building has a satisfactory appearance

C32) Health Centre Operation and Parking Plan (LBH Development Management)
Prior to the operation of the health centre, a Health Centre Operation and Parking Management Plan shall be submitted in writing to and for approval by the Local Planning Authority. The Plan shall address ambulance and GP parking. The plan shall be implemented as approved.

REASON: to protect the amenity of the locality.

C33) Opaque Glazing to non-residential units

Prior to the installation of any opaque glazing on the ground floor non-residential units of Plot C, details shall be submitted in writing to and for approval by the Local Planning Authority. The installation within Plot C shall be constructed in accordance with the approved details and maintained thereafter.

REASON: To ensure that the building has a satisfactory appearance

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C34) Overheating (Great London Authority Energy)

Prior to the residential occupation of the Plot C development, a Building User Guide for new residential occupants shall be submitted in writing to and for approval by the Local Planning Authority. The Building User Guide will advise residents how to operate their property during a heatwave, setting out a cooling hierarchy in accordance with London Plan (2016) Policy 5.9 with passive measures being considered ahead of cooling systems. The Building User Guide will be issued to residential occupants upon first occupation.

REASON: In the interest of adapting to climate change and to secure sustainable development.

C35) Heat Network (Great London Authority Energy)

Prior to the occupation of the non-residential floorspace within Plot C, a Building User Guide for new non-residential tenants shall be submitted in writing to and for approval by the Local Planning Authority. The Building User Guide shall explain that valved connections have been made available to each tenant, for the purpose of their primary heating and hot water generation. The Building User Guide will be issued to non-residential tenants upon first occupation.

REASON: In the interest of adapting to climate change and to secure sustainable development.

C36) CO2 (Great London Authority Energy)

Prior to the occupation of each non-residential unit within Plot C, details demonstrating that a Seasonal Energy Efficiency Ratio (SEER) of 7.0 can be achieved shall be submitted in writing to and for approval by the Local Planning Authority. The development shall be occupied in accordance with the approved details.

REASON: In the interest of adapting to climate change and to secure sustainable development.

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D. CONDITIONS RELATING TO ASHLEY ROAD WEST (PLOT D)

D1) Materials Samples (LBH Development Management)

Prior to the installation of materials on the external surfaces on the building(s) within Plot D, samples of materials to be used for the external surfaces of the building(s) hereby approved within Plot D, shall be submitted in writing to and for approval by the Local Planning Authority. Samples shall include type and shade of cladding, window frames and balcony frames, sample panels or brick types and a roofing material sample combined with a schedule of the exact product references. The development shall be constructed of the approved materials and maintained thereafter.

REASON: In order for the Local Planning Authority to retain control over the exact materials to be used for the proposed development and to assess the suitability of the samples submitted in the interests of visual amenity.

D2) Waste Management Plan (LBH Waste Management)

Prior to the residential occupation of Plot D, a Residential Waste Management Plan in respect of Plot D shall be submitted in writing to and for approval by the Local Planning Authority.

Prior to the occupation of the Plot D non-residential floorspace, a Commercial Waste Management Plan in respect of Plot D shall be submitted in writing to and for approval by the Local Planning Authority.
The plans shall demonstrate as necessary:

- Any distances between waste storage areas and collection vehicles further than 10 metres are mitigated by appropriate management measures.
- Installed dropped kerbs relevant to servicing access have gradients no greater than 1:20
- Suitable pest control of waste storage areas.
- Separate commercial and residential waste storage and disposal
- In respect of the non-residential units, arrangements for a scheduled waste collection with a Commercial Waste Contractor
- A cleansing schedule and measures to ensure waste is contained at all times.

The development within Plot D shall be implemented in accordance with the approved Plan and maintained thereafter.

REASON: To protect the amenity of the locality

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D3) Drainage – Attenuation Details (LBH Local Lead Flood Authority)

Prior to the commencement of the Plot D development other than demolition, below ground and building core works, full details of the drainage attenuation in respect of Plot D shall be submitted in writing to and for approval by the local Planning Authority.

Attenuation measures shall demonstrate compliance with the relevant London Plan (2016) Standards, in relation to greenfield runoff rate, and the approved details shall then be implemented as approved and maintained thereafter.
REASON: to mitigate flood risk.

D4) Drainage - Design Implementation, Maintenance Management (LBH Local Lead Flood Authority)

Prior to commencement of the Plot D development other than demolition, below ground and building core works, details of design implementation, maintenance and management of the sustainable drainage scheme in respect of Plot D shall be submitted in writing to and for approval by the Local Planning Authority, those details shall include:-

i) Information about the design storm periods and intensity, discharge rates for both pre and post development, means of access for maintenance, methods used to control surface water discharge from the Plot.
ii) Any works required off site to ensure adequate discharge of surface water without causing flooding.
iii) Floodwater exceedance routes, both on and off site.
iv) Timetable for implementation.
v) A detailed management maintenance plan for the lifetime of the Plot D development, which shall include arrangements for adoption by an appropriate public body or statutory undertaker, management by Residents management company or other arrangements to secure the operation of the drainage scheme throughout the lifetime of the Plot D development.

The scheme shall be implemented, retained, managed and maintained within Plot D in accordance with the approved details.

REASON: To prevent increased risk of flooding to improve water quality and amenity to ensure future maintenance of the surface water drainage system.

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D5) BREAAM – Post Occupation Certificate (LBH Carbon Management)

Six calendar months after the first non-residential occupation of the Plot, a BREEAM Post Construction Certificate in respect of the non-residential space within Plot D shall be submitted to the Local Planning Authority. The Certificate shall be issued by the Building Research Establishment (or another independent certification body). The development within Plot D shall maintain the rating in the approved Certificate thereafter unless agreed in writing with the Local Planning Authority.

REASON: In the interest of addressing climate change and to secure sustainable development

D6) Overheating and Model Report (LBH Carbon Management)

Prior to above ground works within Plot D (excluding demolition and works to construct the building core), an Overheating Model and Report in respect of Plot D shall be submitted in writing to and for approval by the Local Planning Authority. The submission shall assess the overheating risk (using future weather temperature projections), and demonstrate how the risks have been mitigated and removed through design solutions. This assessment will use TM59 (for domestic) or TM52 (for non-domestic). Both models shall be run using the London Weather File TM49.

The submission shall include details of the design measures incorporated within the scheme within Plot D (including details of the feasibility of using external solar shading and passive cooling and ventilation) to ensure adaptation to higher temperatures are addressed, and the units do not overheat. The submission shall include the following:

A. Full listing (based on unit number relating to planning drawings) of units modelled and the overheating risk before measures are installed;
B. The measures installed to reduce overheating risk:

i. the standard and the impact of the solar control glazing;
ii. that all heating pipework is appropriately insulated
iii. that passive cooling and ventilation features have been included
iv. highlight the mitigation strategies to overcome any overheating risk
v. that there is space for pipe work or localised building services and that this is designed in to the building to allow the retrofitting of centralised or localised cooling and ventilation equipment if needed.

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The submission shall preclude the use of air conditioning unless exceptional justification is given for design based upon current weather projection (CIBSE DSY 1). The development within Plot D shall be constructed in accordance with the approved submission.

REASON: In the interest of adapting to climate change and to secure sustainable development.

D7) Biodiversity Plan (LBH Carbon Management)

Prior to the installation of the measures listed in items i to v below within Plot D, details of a Biodiversity Plan in respect of the development within Plot D shall be submitted in writing to and for approval by the Local Planning Authority. The Plan shall detail:

i. Details on the number, and location of the bird brick boxes (or other) - including orientation and links to habitats that would be needed to support the identified bird species;
ii. Details on the bird brick box (or other) design and for what bird species would they serve;
iii. The lighting measures and ongoing management to reduce the impact on recorded bat populations;
iv. The number, and location of the bat brick boxes; and
v. The number, and location of the insect hotels.

The development within Plot D shall be constructed in accordance with the approved Plan and the approved measures incorporated prior to the occupation of the development within Plot D. The approved biodiversity infrastructure should where possible preclude impacts by amenity uses and access should be permitted only for maintenance, repair or escape in an emergency.

REASON: To ensure that the development provides the maximum provision towards the creation of habitats for biodiversity and supports the water retention on site during rainfall.

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D8) Green/living Roof Plan (LBH Carbon Management)

Prior to installation of green/living roofs, a Green/Living Roof Plan in respect of the development within Plot D shall be submitted in writing to and for approval by the Local Planning Authority. The Plan shall include:

- A roof(s) plan identifying where the living roofs will be located;
- Confirmation of the substrates depth ranges;
- Details on the diversity of substrate depths across the roof to provide contours of substrate;
- Details on the diversity of substrate types and sizes;
- Details on bare areas of substrate to allow for self colonisation of local windblown seeds and invertebrates;
- Details on the range of native species of wildflowers and herbs planted to benefit native wildlife precluding a overreliance on sedum;
- Details of the location of log piles / flat stones for invertebrates; and
- Schedule of ongoing maintenance and management

The measures should be incorporated prior to the occupation of the development within Plot D. The development within Plot D shall be carried out in accordance with the approved Plan and maintained thereafter.

REASON: To ensure that the development provides the maximum provision towards the creation of habitats for biodiversity and supports the water retention on site during rainfall.

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D9) Boiler Details (LBH Environmental Health/Carbon Management)

Prior to above ground works within Plot D (excluding demolition and works to construct the building core), details of the boiler facilities and associated infrastructure within the Plot, shall be submitted to and approved in writing by the Local Planning Authority. The details shall include:

a) location of the energy centre;
b) specification of equipment and pipework;
c) details of all the flue arrangements and chimney heights calculations, diameters and locations;
d) confirmation that the boilers to be provided for space heating and domestic hot water shall have dry NOx emissions not exceeding 40 mg/kWh;
e) confirmation that the site wide heating and hot water network has been designed and shall be constructed following the CIBSE / ADE Heat Networks Code of Practice
f) operation/management strategy;
g) the method of how the facility and infrastructure shall be designed to allow for the future connection to any neighbouring heating network (including the proposed connectivity location, space for extra equipment, punch points and large enough route of the link); and
h) the route from the Energy Centre to the red line boundary with installed pipe specification to serve all heat loads.

The development within Plot D shall be constructed in accordance with the approved details and maintained thereafter.

REASON: To protect air quality, ensure future district energy connection and protect the amenity of the locality.

D10) Accessible Parking Demarcated (LBH Transportation)

Prior to the occupation of the Plot D development, all accessible car parking spaces within that Plot shall be marked as such and retained permanently.

REASON: In order to ensure that a reasonable number of parking spaces are located conveniently for use by people with disabilities.

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D11) Cycle Parking (LBH Transportation)

Prior to the occupation of the Plot D development, full details of the long stay cycle parking (including the type, dimensions and method of security and access), in line with the London Cycle Design Standards (LCDS, October 2016) within that Plot shall be submitted in writing to and approved by the Local Planning Authority. Cycle parking within the Plot shall be installed in accordance with the approved details.

REASON: To promote sustainable transport.

D12) Service and Delivery Plan (LBH Transportation)

Part A

Prior to the residential occupation of the Plot D development, a full Residential Service and Delivery Plan (SDP) in respect of the development within Plot D shall be submitted in writing to and for approval by the Local Planning Authority. The Plan should provide details on how servicing and deliveries will take place. The plan shall demonstrate how deliveries and servicing are coordinated to avoid the AM and PM peak periods. Servicing and deliveries within Plot D shall be undertaken in accordance with the approved plan.

Part B

Prior to the occupation of the non-residential floorspace within Plot D, a full Service and Delivery Plan (SDP) for the non-residential uses within Plot D shall be submitted in writing to and for approval by the Local Planning Authority. The Plan should provide details on how servicing and deliveries will take place. The plan shall demonstrate how deliveries and servicing are coordinated to avoid the AM and PM peak periods. Servicing and deliveries within Plot D shall be undertaken in accordance with the approved plan.

REASON: To reduce traffic and congestion on the transportation and highways network.

D13) Noise Level Testing Details (LBH Environmental Health – Noise)

Prior to the occupation of the Plot D development, testing details (the scope of which shall be agreed with the Local Planning Authority prior to submission) confirming the noise levels cited in Site Wide condition 12 above have been met shall be submitted in writing to and for approval by the Local Planning Authority. The approved noise level shall be maintained within Plot D thereafter.

REASON: To protect the amenity of occupiers.

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D14) Sound Insulation Between Residential and Commercial Properties (LBH Environmental Health – Noise)

Prior to the commencement of the building works for the fit-out of the commercial units within Plot D, details of a Sound Insulation Scheme to be installed between the commercial premises and residential premises within Plot D shall be submitted in writing to and for approval by the Local Planning Authority. The scheme shall be submitted following consultation with the Council's Environmental Health Officer (Noise). The scheme shall be installed as approved prior to any commercial occupation of Plot D and shall be maintained thereafter.
REASON: to protect the amenity of the locality.

D15) Secure by Design Accreditation (Metropolitan Police)

Part A

Prior to carrying out above ground works within Plot D (excluding demolition and works to construct the building core) details shall be submitted to, and approved in writing by the Local Planning Authority to demonstrate that the Plot (and building(s) contained therein) has incorporated the principles and practices of Secured by Design where these can be practically achieved. Where the principles cannot be achieved, then justification for this will be required. The development within Plot D shall be implemented in accordance with the approved details.

Part B

Prior to first occupation of each building or part of a building or use within Plot D, details shall be submitted to, and approved in writing by the Local Planning Authority to demonstrate that such Plot (and building(s) contained therein) has delivered the principles and practices of Secured by Design, and as agreed by the Local Planning Authority in the discharge of Part A.

REASON: To ensure safe and secure development and reduce crime.

D16) Site Levels (LBH Development Management)

No development shall proceed within Plot D (excluding above ground demolition) until details of all existing and proposed levels on the Plot in relation to the adjoining properties have been submitted to and approved by the Local Planning Authority. The Plot D development shall be built in accordance with the approved details.
REASON: In order to ensure that any works in conjunction with the permission hereby granted respects the height of adjacent properties through suitable levels on the site.

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D17) Open Space Management & Maintenance Plan (LBH Development Management)

Prior to the occupation of the Plot D development, an Open Space Management & Maintenance Plan in respect of the development within Plot D shall be submitted to and approved in writing by the Local Planning Authority The Plan shall include details of the following:

i) Long-term management and maintenance responsibilities for all private, communal play spaces/amenity spaces and all publicly accessible open spaces
ii) Soft landscaping management and maintenance arrangements to ensure positive contribution to biodiversity

Spaces within Plot D shall be managed and maintained in accordance with the approved Plan and maintained thereafter.

REASON: to ensure high quality open space

D18) Child Playspace Strategy (LBH Development Management)

Prior to the residential occupation of Plot D, a Child Play Space Strategy in respect of the development within Plot D shall be submitted in writing to and for approval by the Local Planning Authority. The Strategy shall provide detail of child play spaces in accordance with the London Plan (2016) and the London Plan SPG Play and Informal Recreation (2012). The development within Plot D shall be implemented in accordance with the Strategy and maintained thereafter.

REASON: to ensure high quality development

D19) Monitoring and Maintenance Plan – Contamination (Environment Agency)

The Plot D development hereby permitted may not commence other than for investigative works until a monitoring and maintenance plan in respect of contamination within Plot D, including a timetable of monitoring and submission of reports to the Local Planning Authority, has been submitted to, and approved in writing by, the Local Planning Authority. Reports as specified in the approved plan, including details of any necessary contingency action arising from the monitoring, shall be submitted to, and approved in writing by, the Local Planning Authority.

REASON: To ensure that the site does not pose any further risk to human health or the water environment by managing any ongoing contamination issues and completing all necessary long-term remediation measures. This is in line with paragraph 170 of the National Planning Policy Framework. To prevent deterioration of groundwater within the principal chalk aquifer.

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D20) Contamination Not Previously Identified (Environment Agency)

If during development, contamination not previously identified is found to be present at Plot D then no further development in respect of that Plot (unless otherwise agreed in writing with the Local Planning Authority) shall be carried out until a remediation strategy detailing how this contamination will be dealt with has been submitted to and approved in writing by the Local Planning Authority. The remediation strategy shall be implemented as approved within Plot D.

REASON: To ensure that the development is not contributing to, put at unacceptable risk from, or adversely affected by, unacceptable levels of water pollution from previously unidentified contamination sources at the development site in line with paragraph 170 of the National Planning Policy Framework. To prevent deterioration of groundwater within the principal chalk aquifer.

D21) Written Consent for Piling or Other Intrusive Ground Works (Environment Agency)

Piling or other intrusive ground works (investigation boreholes, tunnel shafts, ground source heating and cooling systems) using penetrative methods which breach the base of the London Clay or where the London Clay is absent shall not be carried out other than with the written consent of the local planning authority. The development within Plot D shall be carried out in accordance with the approved details.

REASON: To ensure that the proposed piling activities through potentially contaminated land is not contributing to, put at unacceptable risk from, or adversely affected by unacceptable levels of water pollution caused by mobilised contaminants in line with paragraph 170 of the National Planning Policy Framework and the Environment Agency's approach to groundwater protection. To prevent deterioration of groundwater within the principal chalk aquifer.

D22) Method of Piling (LBH Environmental Health)

(1) No piling; or (2) other intrusive ground works which breach the base of the London Clay or occur in areas where the London Clay is absent within Plot D shall take place until a Piling Impact Study has been undertaken in respect of Plot D. The Piling Impact Study shall include the method of piling foundations and shall be submitted to and approved in writing by the Local Planning Authority. Piling or any other foundation design using penetrative methods shall not be permitted within Plot D except for those parts of Plot D where it has been demonstrated that there is no resultant unacceptable risk to ground water."

REASON: To prevent the contamination of the underlying groundwater aquifer

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D23) Written Scheme of Investigation (WSI) – Historic England (GLAAS)

No demolition or development (apart from demolition to slab level) shall take place within Plot D until a stage 1 written scheme of investigation (WSI) in respect of Plot D has been submitted to and approved by the local planning authority in writing. For land that is included within the WSI, no demolition or development (apart from demolition to slab level) shall take place within Plot D other than in accordance with the agreed WSI, and the programme and methodology of site evaluation and the nomination of a competent person(s) or organisation to undertake the agreed works.

If heritage assets of archaeological interest are identified by stage 1 then for those parts of the site which have archaeological interest a stage 2 WSI shall be submitted to and approved by the local planning authority in writing. For land that is included within the stage 2 WSI, no demolition/development (apart from demolition to slab level) shall take place within Plot D other than in accordance with the agreed stage 2 WSI which shall include:

A. The statement of significance and research objectives, the programme and methodology of site investigation and recording and the nomination of a competent person(s) or organisation to undertake the agreed works

B. The programme for post-investigation assessment and subsequent analysis, publication & dissemination and deposition of resulting material. This part of the condition shall not be discharged until these elements have been fulfilled in accordance with the programme set out in the stage 2 WSI.

REASON: To protect the Historic Environment

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D24) Contaminated Land – Part 1 (LBH Environmental Health)

Prior to the commencement of the development on Plot D (other than for investigative work):

a) Using the information obtained from the previous assessments, an additional site investigation, sampling and analysis shall be undertaken at the Plot as appropriate. The investigation must be comprehensive enough to enable:-

i) A risk assessment to be undertaken,
ii) Refinement of the Conceptual Model, and
ii) The development of a Method Statement detailing the remediation requirements.

The risk assessment and refined Conceptual Model shall be submitted, along with the site investigation report, to the Local Planning Authority.

b) If the risk assessment and refined Conceptual Model indicate any risk of harm, a Method Statement detailing the remediation requirements in respect of the Plot, using the information obtained from the site investigation, and also detailing any post remedial monitoring shall be submitted to, and approved in writing by, the Local Planning Authority prior to that remediation being carried out on the Plot.

REASON: To ensure the development can be implemented and occupied with adequate regard for environmental and public safety.

D25) Contaminated Land – Part 2 (LBH Environmental Health)

Where the contaminated land condition above demonstrates that remediation of contamination on the Plot is required, completion of the remediation detailed in the Method Statement shall be carried out and a report that provides verification that the required works have been carried out, shall be submitted to, and approved in writing by the Local Planning Authority before the development is occupied within Plot D.

REASON: To ensure the development can be implemented and occupied with adequate regard for environmental and public safety.

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D26) Development Near Subsurface Potable Water Infrastructure (Thames Water)

No construction shall take place within 5m of the water main unless otherwise agreed in writing with the Local Planning Authority in consultation with Thames Water. Information detailing how the developer intends to divert the asset / align the Plot D development, so as to prevent the potential for damage to subsurface potable water infrastructure, must be submitted to and approved in writing by the local planning authority in consultation with Thames Water. Any construction must be undertaken in accordance with the terms of the approved information. Unrestricted access must be available at all times for the maintenance and repair of the asset during and after the construction works.

REASON: The proposed works will be in close proximity to underground strategic water main, utility infrastructure. The works have the potential to impact on local underground water utility infrastructure.

D27) Central Satellite Dish/Receiving System (LBH Development Management)

Prior to the residential occupation of the Plot D development, details of a Central Satellite Dish/Receiving System in respect of Plot D shall be submitted in writing to and for approval by the Local Planning Authority. The System shall be implemented in accordance with approved details and maintained thereafter.

REASON: To protect the amenity of the locality.

D28) Satellite Dish or Television Antenna (LBH Development Management)

The placement of any satellite dish or television antenna on any external surface of any building in the Plot is not permitted, excepting the approved central dish/receiving system noted in the condition above, unless agreed in writing with the Local Planning Authority.

REASON: To protect the amenity of the locality.

D29) Demolition/Construction Environmental Management Plans

Part A

Demolition works shall not commence within Plot D until a Demolition Environmental Management Plan (DEMP) in respect of Plot D has been submitted to and approved in writing by the local planning authority.

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Part B

Development shall not commence within Plot D (other than demolition) until a Construction Environmental Management Plan (CEMP) in respect of Plot D has been submitted to and approved in writing by the local planning authority.

The following applies to both Parts A and B above:

a) The DEMP/CEMP shall include a Construction Logistics Plan (CLP) and Air Quality and Dust Management Plan (AQDMP) in respect of Plot D.

b) The DEMP/CEMP shall provide details of how demolition/construction works in respect of Plot D are to be undertaken respectively and shall include:
   i. A construction method statement which identifies the stages and details how works will be undertaken;
   ii. Details of working hours, which unless otherwise agreed with the Local Planning Authority shall be limited to 08.00 to 18.00 Monday to Friday and 08.00 to 13.00 on Saturdays;
   iii. Details of plant and machinery to be used during demolition/construction works;
   iv. Details of an Unexploded Ordnance Survey;
   v. Details of the waste management strategy;
   vi. Details of community engagement arrangements;
   vii. Details of any acoustic hoarding;
   viii. A temporary drainage strategy and performance specification to control surface water runoff and Pollution Prevention Plan (in accordance with Environment Agency guidance);
   ix. Details of external lighting; and,
   x. Details of any other standard environmental management and control measures to be implemented.

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c) The CLP will be in accordance with Transport for London's Construction Logistics Plan Guidance (July 2017) and shall provide details on:

i. Monitoring and joint working arrangements, where appropriate;
ii. Site access and car parking arrangements;
iii. Delivery booking systems;
iv. Agreed routes to/from the Plot;
v. Timing of deliveries to and removals from the Plot (to avoid peak times, as agreed with Highways Authority, 07.00 to 9.00 and 16.00 to 18.00, where possible); and
vi. Travel plans for staff/personnel involved in demolition/construction works to detail the measures to encourage sustainable travel to the Plot during the demolition/construction phase; and
vii. Joint arrangements with neighbouring developers for staff parking, Lorry Parking and consolidation of facilities such as concrete batching.

d) The AQDMP will be in accordance with the Greater London Authority SPG Dust and Emissions Control (2014) and shall include:

i. Mitigation measures to manage and minimise demolition/construction dust emissions during works;
ii. Details confirming the Plot has been registered at http://nrmm.london;
iii. Evidence of Non-Road Mobile Machinery (NRMM) and plant registration shall be available on site in the event of Local Authority Inspection;
iv. An inventory of NRMM currently on site (machinery should be regularly serviced and service logs kept on site, which includes proof of emission limits for equipment for inspection);
v. A Dust Risk Assessment for the works; and
vi. Lorry Parking, in joint arrangement where appropriate.

The development on Plot D shall be carried out in accordance with the approved details.

Additionally, the site or Contractor Company must be registered with the Considerate Constructors Scheme. Proof of registration must be sent to the Local Planning Authority prior to any works being carried out.

REASON: To safeguard residential amenity, reduce congestion and mitigate obstruction to the flow of traffic, protect air quality and the amenity of the locality.

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D30) Details of Roof Top PV Panels (LBH Development Management)

Prior to the occupation of Plot D for residential purposes, details of the layout and specification of the PV solar panel installation in respect of Plot D shall be submitted in writing to and for approval by the Local Planning Authority. The installation within Plot D shall be constructed in accordance with the approved details and maintained thereafter.

REASON: To ensure sustainable development and mitigate the impacts of climate change.

D31) Installation of Roof Top Structures (LBH Development Management)

Prior to the installation of any access ladders or building cleaning equipment at the roof level of Plot D, details shall be submitted in writing to and for approval by the Local Planning Authority. The installation within Plot D shall be constructed in accordance with the approved details and maintained thereafter.

REASON: To ensure that the building has a satisfactory appearance

D32) Ashley Road Façade (LBH Development Management)

Prior to above ground works on Plot D (excluding demolition and works to construct the building Core within Plot D), detailed elevation drawings of the Ashley Road façade shall be submitted in writing to and for approval by the Local Planning Authority. The development within Plot D shall be carried out in accordance with the approved details.

REASON: To ensure that the building has a satisfactory appearance.

D33) Hale Road Gable Opportunity (LBH Development Management)

Prior to the residential occupation of Plot D, details of the finish to the Hale Road gable façade shall be submitted in writing to and for approval by the Local Planning Authority. The development on Plot D shall be carried out in accordance with the approved details and maintained until any redevelopment of the adjacent site to the west of the Plot commences unless otherwise agreed in writing with the Local Planning Authority.

REASON: To ensure that the building has a satisfactory appearance.

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D34) Opaque Glazing to Non-Residential Units (LBH Development Management)

Prior to the installation of any opaque glazing on the ground floor non-residential units of Plot D, details shall be submitted in writing to and for approval by the Local Planning Authority. The installation within Plot D shall be constructed in accordance with the approved details and maintained thereafter.

REASON: To ensure that the building has a satisfactory appearance

D35) Overheating (Great London Authority Energy)

Prior to the residential occupation of the Plot D development, a Building User Guide for new residential occupants shall be submitted in writing to and for approval by the Local Planning Authority. The Building User Guide will advise residents how to operate their property during a heatwave, setting out a cooling hierarchy in accordance with London Plan (2016) Policy 5.9 with passive measures being considered ahead of cooling systems. The Building User Guide will be issued to residential occupants upon first occupation.

REASON: In the interest of adapting to climate change and to secure sustainable development.

D36) Heat Network (Great London Authority Energy)

Prior to the occupation of the non-residential floorspace within Plot D, a Building User Guide for new non-residential tenants shall be submitted in writing to and for approval by the Local Planning Authority. The Building User Guide shall explain that valved connections have been made available to each tenant, for the purpose of their primary heating and hot water generation. The Building User Guide will be issued to non-residential tenants upon first occupation.

REASON: In the interest of adapting to climate change and to secure sustainable development.

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D37) CO2 (Great London Authority Energy)

Prior to the occupation of each non-residential unit within Plot D, details demonstrating that a Seasonal Energy Efficiency Ratio (SEER) of 7.0 can be achieved shall be submitted in writing to and for approval by the Local Planning Authority. The development shall be occupied in accordance with the approved details.

REASON: In the interest of adapting to climate change and to secure sustainable development.

E. CONDITIONS RELATING TO ASHLEY ROAD EAST (PLOT E)

E1) Materials Samples (LBH Development Management)

Prior to the installation of materials on the external surfaces on the building(s) within Plot E, samples of materials to be used for the external surfaces of the building(s) hereby approved within Plot E, shall be submitted in writing to and for approval by the Local Planning Authority. Samples shall include type and shade of cladding, window frames and balcony frames, sample panels or brick types and a roofing material sample combined with a schedule of the exact product references. The development shall be constructed of the approved materials and maintained thereafter.

REASON: In order for the Local Planning Authority to retain control over the exact materials to be used for the proposed development and to assess the suitability of the samples submitted in the interests of visual amenity.

E2) Waste Management Plan (LBH Waste Management)

Prior to the residential occupation of Plot E, a Residential Waste Management Plan in respect of Plot E shall be submitted in writing to and for approval by the Local Planning Authority.

Prior to the occupation of the Plot E non-residential floorspace, a Commercial Waste Management Plan in respect of Plot E shall be submitted in writing to and for approval by the Local Planning Authority.

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The plans shall demonstrate as necessary:

- Any distances between waste storage areas and collection vehicles further than 10 metres are mitigated by appropriate management measures.
- Installed dropped kerbs relevant to servicing access have gradients no greater than 1:20
- Suitable pest control of waste storage areas.
- Separate commercial and residential waste storage and disposal
- In respect of the non-residential units, arrangements for a scheduled waste collection with a Commercial Waste Contractor
- A cleansing schedule and measures to ensure waste is contained at all times.

The development within Plot E shall be implemented in accordance with the approved Plan and maintained thereafter.

REASON: To protect the amenity of the locality

E3) Drainage – Attenuation Details (LBH Local Lead Flood Authority)

Prior to the commencement of the Plot E development other than demolition, below ground and building core works, full details of the drainage attenuation in respect of Plot E shall be submitted in writing to and for approval by the local Planning Authority.

Attenuation measures shall demonstrate compliance with the relevant London Plan (2016) Standards, in relation to greenfield runoff rate, and the approved details shall then be implemented as approved and maintained thereafter.

REASON: to mitigate flood risk.

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E4) Drainage - Design Implementation, Maintenance Management (LBH Local Lead Flood Authority)

Prior to commencement of the Plot E development other than demolition, below ground and building core works, details of design implementation, maintenance and management of the sustainable drainage scheme in respect of Plot E shall be submitted in writing to and for approval by the Local Planning Authority, those details shall include:-

i) Information about the design storm periods and intensity, discharge rates for both pre and post development, means of access for maintenance, methods used to control surface water discharge from the Plot.
ii) Any works required off site to ensure adequate discharge of surface water without causing flooding.
iii) Floodwater exceedance routes, both on and off site.
iv) Timetable for implementation.
v) A detailed management maintenance plan for the lifetime of the Plot E development, which shall include arrangements for adoption by an appropriate public body or statutory undertaker, management by Residents management company or other arrangements to secure the operation of the drainage scheme throughout the lifetime of the Plot E development.

The scheme shall be implemented, retained, managed and maintained within Plot E in accordance with the approved details.
REASON: To prevent increased risk of flooding to improve water quality and amenity to ensure future maintenance of the surface water drainage system.

E5) BREAAM – Post Occupation Certificate (LBH Carbon Management)

Six calendar months after the first non-residential occupation of the Plot, a BREEAM Post Construction Certificate in respect of the non-residential space within Plot E shall be submitted to the Local Planning Authority. The Certificate shall be issued by the Building Research Establishment (or another independent certification body). The development within Plot E shall maintain the rating in the approved Certificate thereafter unless agreed in writing with the Local Planning Authority.
REASON: In the interest of addressing climate change and to secure sustainable development

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E6) Overheating and Model Report (LBH Carbon Management)

Prior to above ground works within Plot E (excluding demolition and works to construct the building core), an Overheating Model and Report in respect of Plot E shall be submitted in writing to and for approval by the Local Planning Authority. The submission shall assess the overheating risk (using future weather temperature projections), and demonstrate how the risks have been mitigated and removed through design solutions. This assessment will use TM59 (for domestic) or TM52 (for non-domestic). Both models shall be run using the London Weather File TM49.

The submission shall include details of the design measures incorporated within the scheme within Plot E (including details of the feasibility of using external solar shading and passive cooling and ventilation) to ensure adaptation to higher temperatures are addressed, and the units do not overheat. The submission shall include the following:

A. Full listing (based on unit number relating to planning drawings) of units modelled and the overheating risk before measures are installed;

B. The measures installed to reduce overheating risk:

i. the standard and the impact of the solar control glazing;
ii. that all heating pipework is appropriately insulated
iii. that passive cooling and ventilation features have been included
iv. highlight the mitigation strategies to overcome any overheating risk
v. that there is space for pipe work or localised building services and that this is designed in to the building to allow the retrofitting of centralised or localised cooling and ventilation equipment if needed.

The submission shall preclude the use of air conditioning unless exceptional justification is given for design based upon current weather projection (CIBSE DSY 1). The development within Plot E shall be constructed in accordance with the approved submission.

REASON: In the interest of adapting to climate change and to secure sustainable development.

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E7) Biodiversity Plan (LBH Carbon Management)

Prior to the installation of the measures listed in items i to v below within Plot E, details of a Biodiversity Plan in respect of the development within Plot E shall be submitted in writing to and for approval by the Local Planning Authority. The Plan shall detail:

i. Details on the number, and location of the bird brick boxes (or other) - including orientation and links to habitats that would be needed to support the identified bird species;
ii. Details on the bird brick box (or other) design and for what bird species would they serve;
iii. The lighting measures and ongoing management to reduce the impact on recorded bat populations;
iv. The number, and location of the bat brick boxes; and
v. The number, and location of the insect hotels.

The development within Plot E shall be constructed in accordance with the approved Plan and the approved measures incorporated prior to the occupation of the development within Plot E. The approved biodiversity infrastructure should where possible preclude impacts by amenity uses and access should be permitted only for maintenance, repair or escape in an emergency.
REASON: To ensure that the development provides the maximum provision towards the creation of habitats for biodiversity and supports the water retention on site during rainfall.

E8) Green/living Roof Plan (LBH Carbon Management)

Prior to installation of green/living roofs, a Green/Living Roof Plan in respect of the development within Plot E shall be submitted in writing to and for approval by the Local Planning Authority. The Plan shall include:

- A roof(s) plan identifying where the living roofs will be located;
- Confirmation of the substrates depth ranges;
- Details on the diversity of substrate depths across the roof to provide contours of substrate;
- Details on the diversity of substrate types and sizes;
- Details on bare areas of substrate to allow for self colonisation of local windblown seeds and invertebrates;
- Details on the range of native species of wildflowers and herbs planted to benefit native wildlife precluding a overreliance on sedum;
- Details of the location of log piles / flat stones for invertebrates; and
- Schedule of ongoing maintenance and management

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The measures should be incorporated prior to the occupation of the development within Plot E. The development within Plot E shall be carried out in accordance with the approved Plan and maintained thereafter.
REASON: To ensure that the development provides the maximum provision towards the creation of habitats for biodiversity and supports the water retention on site during rainfall.

E9) Boiler Details (LBH Environmental Health/Carbon Management)

Prior to above ground works within Plot E (excluding demolition and works to construct the building core), details of the boiler facilities and associated infrastructure within the Plot, shall be submitted to and approved in writing by the Local Planning Authority. The details shall include:

a) location of the energy centre;
b) specification of equipment and pipework;
c) details of all the flue arrangements and chimney heights calculations, diameters and locations;
d) confirmation that the boilers to be provided for space heating and domestic hot water shall have dry NOx emissions not exceeding 40 mg/kWh;
e) confirmation that the site wide heating and hot water network has been designed and shall be constructed following the CIBSE / ADE Heat Networks Code of Practice
f) operation/management strategy;
g) the method of how the facility and infrastructure shall be designed to allow for the future connection to any neighbouring heating network (including the proposed connectivity location, space for extra equipment, punch points and large enough route of the link); and
h) the route from the Energy Centre to the red line boundary with installed pipe specification to serve all heat loads.

The development within Plot E shall be constructed in accordance with the approved details and maintained thereafter.
REASON: To protect air quality, ensure future district energy connection and protect the amenity of the locality.

E10) Accessible Parking Demarcated (LBH Transportation)

Prior to the occupation of the Plot E development, all accessible car parking spaces within that Plot shall be marked as such and retained permanently.

REASON: In order to ensure that a reasonable number of parking spaces are located conveniently for use by people with disabilities.

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E11) Cycle Parking (LBH Transportation)

Prior to the occupation of the Plot E development, full details of the long stay cycle parking (including the type, dimensions and method of security and access), in line with the London Cycle Design Standards (LCDS, October 2016) within that Plot shall be submitted in writing to and approved by the Local Planning Authority. Cycle parking within the Plot shall be installed in accordance with the approved details.

REASON: To promote sustainable transport.

E12) Service and Delivery Plan (LBH Transportation)

Part A

Prior to the residential occupation of the Plot E development, a full Residential Service and Delivery Plan (SDP) in respect of the development within Plot E shall be submitted in writing to and for approval by the Local Planning Authority. The Plan should provide details on how servicing and deliveries will take place. The plan shall demonstrate how deliveries and servicing are coordinated to avoid the AM and PM peak periods. Servicing and deliveries within Plot E shall be undertaken in accordance with the approved plan.

Part B

Prior to the occupation of the non-residential floorspace within Plot E, a full Service and Delivery Plan (SDP) for the non-residential uses within Plot E shall be submitted in writing to and for approval by the Local Planning Authority. The Plan should provide details on how servicing and deliveries will take place. The plan shall demonstrate how deliveries and servicing are coordinated to avoid the AM and PM peak periods. Servicing and deliveries within Plot E shall be undertaken in accordance with the approved plan.

REASON: To reduce traffic and congestion on the transportation and highways network.

E13) Noise Level Testing Details (LBH Environmental Health – Noise)

Prior to the occupation of the Plot E development, testing details (the scope of which shall be agreed with the Local Planning Authority prior to submission) confirming the noise levels cited in Site Wide condition 12 above have been met shall be submitted in writing to and for approval by the Local Planning Authority. The approved noise level shall be maintained within Plot E thereafter.

REASON: To protect the amenity of occupiers.

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E14) Sound Insulation Between Residential and Commercial Properties (LBH Environmental Health – Noise)

Prior to the commencement of the building works for the fit-out of the commercial units within Plot E, details of a Sound Insulation Scheme to be installed between the commercial premises and residential premises within Plot E shall be submitted in writing to and for approval by the Local Planning Authority. The scheme shall be submitted following consultation with the Council's Environmental Health Officer (Noise). The scheme shall be installed as approved prior to any commercial occupation of Plot E and shall be maintained thereafter.

REASON: to protect the amenity of the locality.

E15) Secure by Design Accreditation (Metropolitan Police)

Part A

Prior to carrying out above ground works within Plot E (excluding demolition and works to construct the building core) details shall be submitted to, and approved in writing by the Local Planning Authority to demonstrate that the Plot (and building(s) contained therein) has incorporated the principles and practices of Secured by Design where these can be practically achieved. Where the principles cannot be achieved, then justification for this will be required. The development within Plot E shall be implemented in accordance with the approved details.

Part B
Prior to first occupation of each building or part of a building or use within Plot E, details shall be submitted to, and approved in writing by the Local Planning Authority to demonstrate that such Plot (and building(s) contained therein) has delivered the principles and practices of Secured by Design, and as agreed by the Local Planning Authority in the discharge of Part A.

REASON: To ensure safe and secure development and reduce crime.

E16) Site Levels (LBH Development Management)

No development shall proceed within Plot E (excluding above ground demolition) until details of all existing and proposed levels on the Plot in relation to the adjoining properties have been submitted to and approved by the Local Planning Authority. The Plot E development shall be built in accordance with the approved details.

REASON: In order to ensure that any works in conjunction with the permission hereby granted respects the height of adjacent properties through suitable levels on the site.

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E17) Open Space Management & Maintenance Plan (LBH Development Management)

Prior to the occupation of the Plot E development, an Open Space Management & Maintenance Plan in respect of the development within Plot E shall be submitted to and approved in writing by the Local Planning Authority The Plan shall include details of the following:

i) Long-term management and maintenance responsibilities for all private, communal play spaces/amenity spaces and all publicly accessible open spaces
ii) Soft landscaping management and maintenance arrangements to ensure positive contribution to biodiversity

Spaces within Plot E shall be managed and maintained in accordance with the approved Plan and maintained thereafter.

REASON: to ensure high quality open space

E18) Child Playspace Strategy (LBH Development Management)

Prior to the residential occupation of Plot E, a Child Play Space Strategy in respect of the development within Plot E shall be submitted in writing to and for approval by the Local Planning Authority. The Strategy shall provide detail of child play spaces in accordance with the London Plan (2016) and the London Plan SPG Play and Informal Recreation (2012). The development within Plot E shall be implemented in accordance with the Strategy and maintained thereafter.

REASON: to ensure high quality development

E19) Monitoring and Maintenance Plan – Contamination (Environment Agency)

The Plot E development hereby permitted may not commence other than for investigative worksBB until a monitoring and maintenance plan in respect of contamination within Plot E, including a timetable of monitoring and submission of reports to the Local Planning Authority, has been submitted to, and approved in writing by, the Local Planning Authority. Reports as specified in the approved plan, including details of any necessary contingency action arising from the monitoring, shall be submitted to, and approved in writing by, the Local Planning Authority.

REASON: To ensure that the site does not pose any further risk to human health or the water environment by managing any ongoing contamination issues and completing all necessary long-term remediation measures. This is in line with paragraph 170 of the National Planning Policy Framework. To prevent deterioration of groundwater within the principal chalk aquifer.

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E20) Contamination Not Previously Identified (Environment Agency)

If during development, contamination not previously identified is found to be present at Plot E then no further development in respect of that Plot (unless otherwise agreed in writing with the Local Planning Authority) shall be carried out until a remediation strategy detailing how this contamination will be dealt with has been submitted to and approved in writing by the Local Planning Authority. The remediation strategy shall be implemented as approved within Plot E.

REASONS: To ensure that the development is not contributing to, put at unacceptable risk from, or adversely affected by, unacceptable levels of water pollution from previously unidentified contamination sources at the development site in line with paragraph 170 of the National Planning Policy Framework. To prevent deterioration of groundwater within the principal chalk aquifer.

E21) Written Consent for Piling or Other Intrusive Ground Works (Environment Agency)

Piling or other intrusive ground works (investigation boreholes, tunnel shafts, ground source heating and cooling systems) using penetrative methods which breach the base of the London Clay or where the London Clay is absent shall not be carried out other than with the written consent of the local planning authority. The development within Plot E shall be carried out in accordance with the approved details.

REASON: To ensure that the proposed piling activities through potentially contaminated land is not contributing to, put at unacceptable risk from, or adversely affected by unacceptable levels of water pollution caused by mobilised contaminants in line with paragraph 170 of the National Planning Policy Framework and the Environment Agency's approach to groundwater protection. To prevent deterioration of groundwater within the principal chalk aquifer.

E22) Method of Piling (LBH Environmental Health)

(1) No piling; or (2) other intrusive ground works which breach the base of the London Clay or occur in areas where the London Clay is absent within Plot E shall take place until a Piling Impact Study has been undertaken in respect of Plot E. The Piling Impact Study shall include the method of piling foundations and shall be submitted to and approved in writing by the Local Planning Authority. Piling or any other foundation design using penetrative methods shall not be permitted within Plot E except for those parts of Plot E where it has been demonstrated that there is no resultant unacceptable risk to ground water.

REASON: To prevent the contamination of the underlying groundwater aquifer

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E23) Written Scheme of Investigation (WSI) – Historic England (GLAAS)

No demolition or development (apart from demolition to slab level) shall take place within Plot E until a stage 1 written scheme of investigation (WSI) in respect of Plot E has been submitted to and approved by the local planning authority in writing. For land that is included within the WSI, no demolition or development (apart from demolition to slab level) shall take place within Plot E other than in accordance with the agreed WSI, and the programme and methodology of site evaluation and the nomination of a competent person(s) or organisation to undertake the agreed works.

If heritage assets of archaeological interest are identified by stage 1 then for those parts of the site which have archaeological interest a stage 2 WSI shall be submitted to and approved by the local planning authority in writing. For land that is included within the stage 2 WSI, no demolition/development (apart from demolition to slab level) shall take place within Plot E other than in accordance with the agreed stage 2 WSI which shall include:

A. The statement of significance and research objectives, the programme and methodology of site investigation and recording and the nomination of a competent person(s) or organisation to undertake the agreed works

B. The programme for post-investigation assessment and subsequent analysis, publication & dissemination and deposition of resulting material. This part of the condition shall not be discharged until these elements have been fulfilled in accordance with the programme set out in the stage 2 WSI.

REASON: To protect the Historic Environment

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E24) Contaminated Land – Part 1 (LBH Environmental Health)

Prior to the commencement of the development on Plot E (other than for investigative work):

a) Using the information obtained from the previous assessments, an additional site investigation, sampling and analysis shall be undertaken at the Plot as appropriate. The investigation must be comprehensive enough to enable:-

i) A risk assessment to be undertaken,
ii) Refinement of the Conceptual Model, and
ii) The development of a Method Statement detailing the remediation requirements.

The risk assessment and refined Conceptual Model shall be submitted, along with the site investigation report, to the Local Planning Authority.

b) If the risk assessment and refined Conceptual Model indicate any risk of harm, a Method Statement detailing the remediation requirements in respect of the Plot, using the information obtained from the site investigation, and also detailing any post remedial monitoring shall be submitted to, and approved in writing by, the Local Planning Authority prior to that remediation being carried out on the Plot.

REASON: To ensure the development can be implemented and occupied with adequate regard for environmental and public safety.

E25) Contaminated Land – Part 2 (LBH Environmental Health)

Where the contaminated land condition above demonstrates that remediation of contamination on the Plot is required, completion of the remediation detailed in the Method Statement shall be carried out and a report that provides verification that the required works have been carried out, shall be submitted to, and approved in writing by the Local Planning Authority before the development is occupied within Plot E.

REASON: To ensure the development can be implemented and occupied with adequate regard for environmental and public safety.

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E26) Development Near Subsurface Potable Water Infrastructure (Thames Water)

No construction shall take place within 5m of the water main unless otherwise agreed in writing with the Local Planning Authority in consultation with Thames Water. Information detailing how the developer intends to divert the asset / align the Plot E development, so as to prevent the potential for damage to subsurface potable water infrastructure, must be submitted to and approved in writing by the local planning authority in consultation with Thames Water. Any construction must be undertaken in accordance with the terms of the approved information. Unrestricted access must be available at all times for the maintenance and repair of the asset during and after the construction works.

REASON: The proposed works will be in close proximity to underground strategic water main, utility infrastructure. The works have the potential to impact on local underground water utility infrastructure.

E27) Central Satellite Dish/Receiving System (LBH Development Management)

Prior to the residential occupation of the Plot E development, details of a Central Satellite Dish/Receiving System in respect of Plot E shall be submitted in writing to and for approval by the Local Planning Authority. The System shall be implemented in accordance with approved details and maintained thereafter.

REASON: To protect the amenity of the locality.

E28) Satellite Dish or Television Antenna (LBH Development Management)

The placement of any satellite dish or television antenna on any external surface of any building in the Plot is not permitted, excepting the approved central dish/receiving system noted in the condition above, unless agreed in writing with the Local Planning Authority.

REASON: To protect the amenity of the locality.

E29) Demolition/Construction Environmental Management Plans

Part A

Demolition works shall not commence within Plot E until a Demolition Environmental Management Plan (DEMP) in respect of Plot E has been submitted to and approved in writing by the local planning authority.

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Part B

Development shall not commence within Plot E (other than demolition) until a Construction Environmental Management Plan (CEMP) in respect of Plot E has been submitted to and approved in writing by the local planning authority.

The following applies to both Parts A and B above:

a) The DEMP/CEMP shall include a Construction Logistics Plan (CLP) and Air Quality and Dust Management Plan (AQDMP) in respect of Plot E.

b) The DEMP/CEMP shall provide details of how demolition/construction works in respect of Plot E are to be undertaken respectively and shall include:
   i. A construction method statement which identifies the stages and details how works will be undertaken;
   ii. Details of working hours, which unless otherwise agreed with the Local Planning Authority shall be limited to 08.00 to 18.00 Monday to Friday and 08.00 to 13.00 on Saturdays;
   iii. Details of plant and machinery to be used during demolition/construction works;
   iv. Details of an Unexploded Ordnance Survey;
   v. Details of the waste management strategy;
   vi. Details of community engagement arrangements;
   vii. Details of any acoustic hoarding;
   viii. A temporary drainage strategy and performance specification to control surface water runoff and Pollution Prevention Plan (in accordance with Environment Agency guidance);
   ix. Details of external lighting; and,
   x. Details of any other standard environmental management and control measures to be implemented.

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c) The CLP will be in accordance with Transport for London's Construction Logistics Plan Guidance (July 2017) and shall provide details on:

i. Monitoring and joint working arrangements, where appropriate;
ii. Site access and car parking arrangements;
iii. Delivery booking systems;
iv. Agreed routes to/from the Plot;
v. Timing of deliveries to and removals from the Plot (to avoid peak times, as agreed with Highways Authority, 07.00 to 9.00 and 16.00 to 18.00, where possible); and
vi. Travel plans for staff/personnel involved in demolition/construction works to detail the measures to encourage sustainable travel to the Plot during the demolition/construction phase; and
vii. Joint arrangements with neighbouring developers for staff parking, Lorry Parking and consolidation of facilities such as concrete batching.

d) The AQDMP will be in accordance with the Greater London Authority SPG Dust and Emissions Control (2014) and shall include:

i. Mitigation measures to manage and minimise demolition/construction dust emissions during works;
ii. Details confirming the Plot has been registered at http://nrmm.london;
iii. Evidence of Non-Road Mobile Machinery (NRMM) and plant registration shall be available on site in the event of Local Authority Inspection;
iv. An inventory of NRMM currently on site (machinery should be regularly serviced and service logs kept on site, which includes proof of emission limits for equipment for inspection);
v. A Dust Risk Assessment for the works; and
vi. Lorry Parking, in joint arrangement where appropriate.

The development on Plot E shall be carried out in accordance with the approved details.

Additionally, the site or Contractor Company must be registered with the Considerate Constructors Scheme. Proof of registration must be sent to the Local Planning Authority prior to any works being carried out.

REASON: To safeguard residential amenity, reduce congestion and mitigate obstruction to the flow of traffic, protect air quality and the amenity of the locality.

E30) Details of Roof Top PV Panels

Prior to the occupation of Plot E for residential purposes, details of the layout and specification of the PV solar panel installation in respect of Plot E shall be submitted in writing to and for approval by the Local Planning Authority. The installation within Plot E shall be constructed in accordance with the approved details and maintained thereafter.

REASON: To ensure sustainable development and mitigate the impacts of climate change.

E31) Legal Agreement – Interested Parties (LBH Development Management)

Unless the local planning authority shall have first agreed in writing that it is not necessary to bind the particular interest or interests in question, no works shall be carried out under this permission on that land shown shaded yellow on plan TOT-PLAN-PLAP-06-A-P01 Rev P01 unless and until all legal and equitable interests in that land have been bound by the provisions of the section 106 agreement of even date with this permission

REASON: to secure a legal agreement with all those with an interest in the land.

E32) Installation of Roof Top Structures (LBH Development Management)

Prior to the installation of any access ladders or building cleaning equipment at the roof level of Plot E, details shall be submitted in writing to and for approval by the Local Planning Authority. The installation within Plot E shall be constructed in accordance with the approved details and maintained thereafter.

REASON: To ensure that the building has a satisfactory appearance.

E33) Updated Ecological Survey (LBH Nature Conservation)

Prior to the demolition of 1 Ashley Road, an updated Ecological Appraisal including a daytime bat survey shall be submitted in writing to and for approval by the Local Planning Authority. The Appraisal shall propose mitigation if required. The development shall be implemented in accordance with approved details.

REASON: to protect biodiversity.

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E34) Existing Business Occupier Retention (LBH Development Management)

Prior to the commencement of the Plot E development, a description of the operation of any existing business occupiers on the Plot shall be submitted to the Local Planning Authority. Details shall also be submitted setting out a description of discussions that have been held with any existing occupiers to determine if they would express an interest to take up floorspace within the Proposed Development.

In the event that as part of these discussions any existing business occupiers express an interest in taking up floorspace within the Proposed Development, the submitted details shall set out the opportunities for the existing occupiers to take up floorspace within the Proposed Development.

REASON: To provide the opportunity for existing businesses to be retained on the Site.

E35) Opaque Glazing to non-residential units

Prior to the installation of any opaque glazing on the ground floor non-residential units of Plot E, details shall be submitted in writing to and for approval by the Local Planning Authority. The installation within Plot E shall be constructed in accordance with the approved details and maintained thereafter.

REASON: To ensure that the building has a satisfactory appearance

E36) Cooling Demand

Prior to the occupation of the non-residential floorspace within Plot E, details of measures to be undertaken to minimise the non-domestic cooling demand shall be submitted in writing to and for approval by the Local Planning Authority. The measures shall be incorporated in accordance with the approved details.

REASON: In the interest of adapting to climate change and to secure sustainable development.

E37) Overheating

Prior to the residential occupation of the Plot E development, a Building User Guide for new residential occupants shall be submitted in writing to and for approval by the Local Planning Authority. The Building User Guide will advise residents how to operate their property during a heatwave, setting out a cooling hierarchy in accordance with London Plan (2016) Policy 5.9 with passive measures being considered ahead of cooling systems. The Building User Guide will be issued to residential occupants upon first occupation.

REASON: In the interest of adapting to climate change and to secure sustainable development.

E38) Heat Network

Prior to the occupation of the non-residential floorspace within Plot E, a Building User Guide for new non-residential tenants shall be submitted in writing to and for approval by the Local Planning Authority. The Building User Guide shall explain that valved connections have been made available to each tenant, for the purpose of their primary heating and hot water generation. The Building User Guide will be issued to non-residential tenants upon first occupation.

REASON: In the interest of adapting to climate change and to secure sustainable development.

E39) CO2

Prior to the occupation of each non-residential unit within Plot E, details demonstrating that a Seasonal Energy Efficiency Ratio (SEER) of 7.0 can be achieved shall be submitted in writing to and for approval by the Local Planning Authority. The development shall be occupied in accordance with the approved details.

REASON: In the interest of adapting to climate change and to secure sustainable development.

F. CONDITIONS RELATING TO THE PAVILION (PLOT F)

F1) Materials Samples (LBH Development Management)

Prior to the installation of materials on the external surfaces of Plot F, samples of materials to be used for the external surfaces of the building hereby approved within Plot F, shall be submitted in writing to and for approval by the Local Planning Authority. Samples shall include type and shade of cladding, window frames and balcony frames, sample panels or brick types and a roofing material sample combined with a schedule of the exact product references. The development shall be constructed of the approved materials and maintained thereafter.

REASON: In order for the Local Planning Authority to retain control over the exact materials to be used for the proposed development and to assess the suitability of the samples submitted in the interests of visual amenity.

F2) Waste Management Plan (LBH Waste Management)

Prior to the occupation of Plot F, a Commercial Waste Management Plan in respect of Plot F shall be submitted in writing to and for approval by the Local Planning Authority.

The plans shall demonstrate as necessary:

- Any distances between waste storage areas and collection vehicles further than 10 metres are mitigated by appropriate management measures.
- Installed dropped kerbs relevant to servicing access have gradients no greater than 1:20
- Suitable pest control of waste storage areas.
- Separate commercial and residential waste storage and disposal
- In respect of the non-residential units, arrangements for a scheduled waste collection with a Commercial Waste Contractor
- A cleansing schedule and measures to ensure waste is contained at all times.

The development within Plot F shall be implemented in accordance with the approved Plan and maintained thereafter.

REASON: To protect the amenity of the locality

F3) Drainage – Attenuation Details (LBH Local Lead Flood Authority)

Prior to the commencement of the Plot F development other than demolition, below ground and building core works, full details of the drainage attenuation in respect of Plot F shall be submitted in writing to and for approval by the local Planning Authority.

Attenuation measures shall demonstrate compliance with the relevant London Plan (2016) Standards, in relation to greenfield runoff rate, and the approved details shall then be implemented as approved and maintained thereafter.

REASON: to mitigate flood risk.

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F4) Drainage - Design Implementation, Maintenance Management (LBH Local Lead Flood Authority)

Prior to commencement of the Plot F development other than demolition, below ground and building core works, details of design implementation, maintenance and management of the sustainable drainage scheme in respect of Plot F shall be submitted in writing to and for approval by the Local Planning Authority, those details shall include:-

i) Information about the design storm periods and intensity, discharge rates for both pre and post development, means of access for maintenance, methods used to control surface water discharge from the Plot.
ii) Any works required off site to ensure adequate discharge of surface water without causing flooding.
iii) Floodwater exceedance routes, both on and off site.
iv) Timetable for implementation.
v) A detailed management maintenance plan for the lifetime of the Plot F development, which shall include arrangements for adoption by an appropriate public body or statutory undertaker, management by Residents management company or other arrangements to secure the operation of the drainage scheme throughout the lifetime of the Plot A development.

The scheme shall be implemented, retained, managed and maintained within Plot F in accordance with the approved details.

REASON: To prevent increased risk of flooding to improve water quality and amenity to ensure future maintenance of the surface water drainage system.

F5) BREAAM – Post Occupation Certificate (LBH Carbon Management)

Six calendar months after the first occupation of the Plot, a BREEAM Post Construction Certificate in respect of the non-residential space within Plot F shall be submitted to the Local Planning Authority. The Certificate shall be issued by the Building Research Establishment (or another independent certification body). The development within Plot F shall maintain the rating in the approved Certificate thereafter unless agreed in writing with the Local Planning Authority.

REASON: In the interest of addressing climate change and to secure sustainable development

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F6) Service and Delivery Plan (LBH Transportation)

Prior to the occupation of Plot F, a full Service and Delivery Plan (SDP) for the non-residential uses within Plot F shall be submitted in writing to and for approval by the Local Planning Authority. The Plan should provide details on how servicing and deliveries will take place. The plan shall demonstrate how deliveries and servicing are coordinated to avoid the AM and PM peak periods. Servicing and deliveries within Plot A shall be undertaken in accordance with the approved plan.

REASON: To reduce traffic and congestion on the transportation and highways network.

F7) Secure by Design Accreditation (Metropolitan Police)

Part A

Prior to carrying out above ground works within Plot F (excluding demolition and works to construct the building core) details shall be submitted to, and approved in writing by the Local Planning Authority to demonstrate that the Plot (and building(s) contained therein) has incorporated the principles and practices of Secured by Design where these can be practically achieved. Where the principles cannot be achieved, then justification for this will be required. The development within Plot F shall be implemented in accordance with the approved details.

Part B

Prior to first occupation of Plot F, details shall be submitted to, and approved in writing by the Local Planning Authority to demonstrate that such Plot (and building(s) contained therein) has delivered the principles and practices of Secured by Design, and as agreed by the Local Planning Authority in the discharge of Part A.

REASON: To ensure safe and secure development and reduce crime.

F8) Site Levels (LBH Development Management)

No development shall proceed within Plot F (excluding above ground demolition) until details of all existing and proposed levels on the Plot in relation to the adjoining properties have been submitted to and approved by the Local Planning Authority. The Plot F development shall be built in accordance with the approved details.

REASON: In order to ensure that any works in conjunction with the permission hereby granted respects the height of adjacent properties through suitable levels on the site.

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F9) Open Space Management & Maintenance Plan (LBH Development Management)
Prior to the occupation of the Plot F development, an Open Space Management & Maintenance Plan in respect of the development within Plot F shall be submitted to and approved in writing by the Local Planning Authority The Plan shall include details of the following:

i) Long-term management and maintenance responsibilities for all private, communal play spaces/amenity spaces and all publicly accessible open spaces
ii) Soft landscaping management and maintenance arrangements to ensure positive contribution to biodiversity

Spaces within Plot F shall be managed and maintained in accordance with the approved Plan and maintained thereafter.

REASON: to ensure high quality open space

F10) Monitoring and Maintenance Plan – Contamination (Environment Agency)

The Plot F development hereby permitted may not commence other than for investigative work until a monitoring and maintenance plan in respect of contamination within Plot F, including a timetable of monitoring and submission of reports to the Local Planning Authority, has been submitted to, and approved in writing by, the Local Planning Authority. Reports as specified in the approved plan, including details of any necessary contingency action arising from the monitoring, shall be submitted to, and approved in writing by, the Local Planning Authority.

REASON: To ensure that the site does not pose any further risk to human health or the water environment by managing any ongoing contamination issues and completing all necessary long-term remediation measures. This is in line with paragraph 170 of the National Planning Policy Framework. To prevent deterioration of groundwater within the principal chalk aquifer.

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F11) Contamination Not Previously Identified (Environment Agency)

If during development, contamination not previously identified is found to be present at Plot F then no further development in respect of that Plot (unless otherwise agreed in writing with the Local Planning Authority) shall be carried out until a remediation strategy detailing how this contamination will be dealt with has been submitted to and approved in writing by the Local Planning Authority. The remediation strategy shall be implemented as approved within Plot F.

REASON: To ensure that the development is not contributing to, put at unacceptable risk from, or adversely affected by, unacceptable levels of water pollution from previously unidentified contamination sources at the development site in line with paragraph 170 of the National Planning Policy Framework. To prevent deterioration of groundwater within the principal chalk aquifer.

F12) Written Consent for Piling or Other Intrusive Ground Works (Environment Agency)

Piling or other intrusive ground works (investigation boreholes, tunnel shafts, ground source heating and cooling systems) using penetrative methods which breach the base of the London Clay or where the London Clay is absent shall not be carried out other than with the written consent of the local planning authority. The development within Plot F shall be carried out in accordance with the approved details.

REASON: To ensure that the proposed piling activities through potentially contaminated land is not contributing to, put at unacceptable risk from, or adversely affected by unacceptable levels of water pollution caused by mobilised contaminants in line with paragraph 170 of the National Planning Policy Framework and the Environment Agency's approach to groundwater protection. To prevent deterioration of groundwater within the principal chalk aquifer.

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F13) Method of Piling (LBH Environmental Health)

(1) No piling; or (2) other intrusive ground works which breach the base of the London Clay or occur in areas where the London Clay is absent within Plot F shall take place until a Piling Impact Study has been undertaken in respect of Plot F. The Piling Impact Study shall include the method of piling foundations and shall be submitted to and approved in writing by the Local Planning Authority. Piling or any other foundation design using penetrative methods shall not be permitted within Plot F except for those parts of Plot F where it has been demonstrated that there is no resultant unacceptable risk to ground water.

REASON: To prevent the contamination of the underlying groundwater aquifer

F14) Written Scheme of Investigation (WSI) – Historic England (GLAAS)

No demolition or development (apart from demolition to slab level) shall take place within Plot F until a stage 1 written scheme of investigation (WSI) in respect of Plot F has been submitted to and approved by the local planning authority in writing. For land that is included within the WSI, no demolition or development (apart from demolition to slab level) shall take place within Plot F other than in accordance with the agreed WSI, and the programme and methodology of site evaluation and the nomination of a competent person(s) or organisation to undertake the agreed works.

If heritage assets of archaeological interest are identified by stage 1 then for those parts of the site which have archaeological interest a stage 2 WSI shall be submitted to and approved by the local planning authority in writing. For land that is included within the stage 2 WSI, no demolition/development (apart from demolition to slab level) shall take place within Plot F other than in accordance with the agreed stage 2 WSI which shall include:

A. The statement of significance and research objectives, the programme and methodology of site investigation and recording and the nomination of a competent person(s) or organisation to undertake the agreed works

B. The programme for post-investigation assessment and subsequent analysis, publication & dissemination and deposition of resulting material. This part of the condition shall not be discharged until these elements have been fulfilled in accordance with the programme set out in the stage 2 WSI.

REASON: To protect the Historic Environment

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F15) Contaminated Land – Part 1 (LBH Environmental Health)

Prior to the commencement of the development on Plot F (other than for investigative work):

a) Using the information obtained from the previous assessments, an additional site investigation, sampling and analysis shall be undertaken at the Plot as appropriate. The investigation must be comprehensive enough to enable:-

i) A risk assessment to be undertaken,
ii) Refinement of the Conceptual Model, and
ii) The development of a Method Statement detailing the remediation requirements.

The risk assessment and refined Conceptual Model shall be submitted, along with the site investigation report, to the Local Planning Authority.

b) If the risk assessment and refined Conceptual Model indicate any risk of harm, a Method Statement detailing the remediation requirements in respect of the Plot, using the information obtained from the site investigation, and also detailing any post remedial monitoring shall be submitted to, and approved in writing by, the Local Planning Authority prior to that remediation being carried out on the Plot.

REASON: To ensure the development can be implemented and occupied with adequate regard for environmental and public safety.

F16) Contaminated Land – Part 2 (LBH Environmental Health)

Where the contaminated land condition above demonstrates that remediation of contamination on the Plot is required, completion of the remediation detailed in the Method Statement shall be carried out and a report that provides verification that the required works have been carried out, shall be submitted to, and approved in writing by the Local Planning Authority before the development is occupied within Plot F.

REASON: To ensure the development can be implemented and occupied with adequate regard for environmental and public safety.

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F17) Development Near Subsurface Potable Water Infrastructure (Thames Water)

No construction shall take place within 5m of the water main unless otherwise agreed in writing with the Local Planning Authority in consultation with Thames Water. Information detailing how the developer intends to divert the asset / align the Plot F development, so as to prevent the potential for damage to subsurface potable water infrastructure, must be submitted to and approved in writing by the local planning authority in consultation with Thames Water. Any construction must be undertaken in accordance with the terms of the approved information. Unrestricted access must be available at all times for the maintenance and repair of the asset during and after the construction works.

REASON: The proposed works will be in close proximity to underground strategic water main, utility infrastructure. The works have the potential to impact on local underground water utility infrastructure.

F18) Satellite Dish or Television Antenna (LBH Development Management)

The placement of any satellite dish or television antenna on any external surface of the building within the Plot is not permitted unless agreed in writing with the Local Planning Authority.

REASON: To protect the amenity of the locality.

F19) Demolition/Construction Environmental Management Plans

Part A

Demolition works shall not commence within Plot F until a Demolition Environmental Management Plan (DEMP) in respect of Plot F has been submitted to and approved in writing by the local planning authority.

Part B

Development shall not commence within Plot F (other than demolition) until a Construction Environmental Management Plan (CEMP) in respect of Plot F has been submitted to and approved in writing by the local planning authority.

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The following applies to both Parts A and B above:

a) The DEMP/CEMP shall include a Construction Logistics Plan (CLP) and Air Quality and Dust Management Plan (AQDMP) in respect of Plot F.

b) The DEMP/CEMP shall provide details of how demolition/construction works in respect of Plot F are to be undertaken respectively and shall include:

i. A construction method statement which identifies the stages and details how works will be undertaken;
ii. Details of working hours, which unless otherwise agreed with the Local Planning Authority shall be limited to 08.00 to 18.00 Monday to Friday and 08.00 to 13.00 on Saturdays;
iii. Details of plant and machinery to be used during demolition/construction works;
iv. Details of an Unexploded Ordnance Survey;
v. Details of the waste management strategy;
vi. Details of community engagement arrangements;
vii. Details of any acoustic hoarding;
viii. A temporary drainage strategy and performance specification to control surface water runoff and Pollution Prevention Plan (in accordance with Environment Agency guidance);
ix. Details of external lighting; and,
x. Details of any other standard environmental management and control measures to be implemented.

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c) The CLP will be in accordance with Transport for London's Construction Logistics Plan Guidance (July 2017) and shall provide details on:

i. Monitoring and joint working arrangements, where appropriate;
ii. Site access and car parking arrangements;
iii. Delivery booking systems;
iv. Agreed routes to/from the Plot;
v. Timing of deliveries to and removals from the Plot (to avoid peak times, as agreed with Highways Authority, 07.00 to 9.00 and 16.00 to 18.00, where possible); and
vi. Travel plans for staff/personnel involved in demolition/construction works to detail the measures to encourage sustainable travel to the Plot during the demolition/construction phase; and
vii. Joint arrangements with neighbouring developers for staff parking, Lorry Parking and consolidation of facilities such as concrete batching.

d) The AQDMP will be in accordance with the Greater London Authority SPG Dust and Emissions Control (2014) and shall include:

i. Mitigation measures to manage and minimise demolition/construction dust emissions during works;
ii. Details confirming the Plot has been registered at http://nrmm.london;
iii. Evidence of Non-Road Mobile Machinery (NRMM) and plant registration shall be available on site in the event of Local Authority Inspection;
iv. An inventory of NRMM currently on site (machinery should be regularly serviced and service logs kept on site, which includes proof of emission limits for equipment for inspection);
v. A Dust Risk Assessment for the works; and
vi. Lorry Parking, in joint arrangement where appropriate.

The development on Plot F shall be carried out in accordance with the approved details.

Additionally, the site or Contractor Company must be registered with the Considerate Constructors Scheme. Proof of registration must be sent to the Local Planning Authority prior to any works being carried out.

REASON: To safeguard residential amenity, reduce congestion and mitigate obstruction to the flow of traffic, protect air quality and the amenity of the locality.

F20) Details of Roof Top PV Panels

Prior to the occupation of Plot F, details of the layout and specification of the PV solar panel installation in respect of Plot F shall be submitted in writing to and for approval by the Local Planning Authority. The installation within Plot F shall be constructed in accordance with the approved details and maintained thereafter.

REASON: To ensure sustainable development and mitigate the impacts of climate change.

F21) Installation of Roof Top Structures (LBH Development Management)

Prior to the installation of any access ladders or building cleaning equipment at the roof level of Plot F, details shall be submitted in writing to and for approval by the Local Planning Authority. The installation within Plot F shall be constructed in accordance with the approved details and maintained thereafter.

REASON: To ensure that the building has a satisfactory appearance

F22) Pavilion Signage Strategy (LBH Development Management)

Prior to the occupation of Plot F, details of a signage strategy for the Pavilion shall be submitted in writing to and for approval by the Local Planning Authority. All signage to be fixed to the Pavilion shall be in accordance with the approved signage strategy.

REASON: To ensure that the building has a satisfactory appearance.

F23) Opaque Glazing to Non-Residential Units

Prior to the installation of any opaque glazing on the ground floor non-residential units of Plot F, details shall be submitted in writing to and for approval by the Local Planning Authority. The installation within Plot F shall be constructed in accordance with the approved details and maintained thereafter.

REASON: To ensure that the building has a satisfactory appearance

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F24) Heat Network (Great London Authority Energy)

Prior to the occupation of the non-residential floorspace within Plot F, a Building User Guide for new non-residential tenants shall be submitted in writing to and for approval by the Local Planning Authority. The Building User Guide shall explain that valved connections have been made available to each tenant, for the purpose of their primary heating and hot water generation. The Building User Guide will be issued to non-residential tenants upon first occupation.

REASON: In the interest of adapting to climate change and to secure sustainable development.

F25) CO2 (Great London Authority Energy)

Prior to the occupation of each non-residential unit within Plot F, details demonstrating that a Seasonal Energy Efficiency Ratio (SEER) of 7.0 can be achieved shall be submitted in writing to and for approval by the Local Planning Authority. The development shall be occupied in accordance with the approved details.

REASON: In the interest of adapting to climate change and to secure sustainable development.

INFORMATIVES

1) Working With the Applicant (LBH Development Management)

INFORMATIVE: In dealing with this application, the London Borough of Haringey has implemented the requirements of the National Planning Policy Framework and of the Town and Country Planning (Development Management Procedure) (England) Order 2015 to foster the delivery of sustainable development in a positive and proactive manner.

2) Community Infrastructure Levy (LBH Development Management)

INFORMATIVE: The Community Infrastructure Levy will be collected by Haringey after/should the scheme is/be implemented and could be subject to surcharges for failure to assume liability, for failure to submit a commencement notice and/or for late payment, and subject to indexation in line with the construction costs index.

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3) Hours of Construction Work (LBH Development Management)

INFORMATIVE: The applicant is advised that under the Control of Pollution Act 1974, construction work which will be audible at the site boundary will be restricted to the following hours:

- 8.00am - 6.00pm Monday to Friday
- 8.00am - 1.00pm Saturday
- and not at all on Sundays and Bank Holidays

4) Party Wall Act (LBH Development Management)

INFORMATIVE: Party Wall Act: The applicant's attention is drawn to the Party Wall Act 1996 which sets out requirements for notice to be given to relevant adjoining owners of intended works on a shared wall, on a boundary or if excavations are to be carried out near a neighbouring building.

5) Development Numbering (LBH Land Charges)

INFORMATIVE: The new development will require numbering. The applicant should contact the Local Land Charges at least six weeks before the development is occupied (tel. 020 8489 5573) to arrange for the allocation of a suitable address.

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6) Site Constraints (Environment Agency)

INFORMATIVE: The EA have no issues on flood risk grounds but would refer the applicant to our Flood Risk Standing Advice (FRSA).

The previous use of the proposed development site as a landfill presents a high risk of contamination that could be mobilised during construction to pollute controlled waters. Controlled waters are considered to be particularly sensitive in this location because the proposed development site is;

- Sited on the regionally important principal chalk aquifer and the Thanet Sands deposit which are considered to be in continuity at this site.
- Within a source protection zone 2 for a public drinking water supply abstraction.

The Environmental Statement and associated Non-Technical Summary Dated July 2018 submitted in support of this planning application provides the EA with confidence that it will be possible to suitably manage the risks posed to controlled waters by this development. However, further detailed information will be required before built development is undertaken. It is our opinion that it would place an unreasonable burden on the developer to ask for more detailed information prior to the granting of planning permission but respect that this is a decision for the Local Planning Authority. In light of the above, the proposed development will be acceptable if the planning conditions listed above are invoked and a remediation strategy carried out by a competent person in line with paragraph 180 of the National Planning Policy Framework.

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7) Advice to Applicant on Model Procedures and Good Practice (Environment Agency)

INFORMATIVE: EA recommends that developers should:

- Follow the risk management framework provided in CLR11, Model Procedures for the Management of Land Contamination, when dealing with land affected by contamination.
- Refer to the Environment Agency Guiding principles for land contamination for the type of information that we required in order to assess risks to controlled waters from the site. The Local Authority can advise on risk to other receptors, such as human health.

- Consider using the National Quality Mark Scheme for Land Contamination Management which involves the use of competent persons to ensure that land contamination risks are appropriately managed.

- Refer to the contaminated land pages on GOV.UK for more information.

A Detailed Quantitative Risk Assessment (DQRA) for the principal chalk aquifer using the results of the site investigations with consideration of the hydrogeology of the site and the degree of any existing groundwater and surface water pollution should be carried out. This increased provision of information by the applicant reflects the potentially greater risk to the water environment. We feel that a DQRA for environmental health purposes should be sufficient to characterise near surface deposits.

In the absence of any applicable on-site data, a range of values should be used to calculate the sensitivity of the input parameter on the outcome of the risk assessment. Where groundwater has been impacted by contamination on site, the default compliance point for Principal and Secondary aquifers is 50m. Following the DQRA, a Remediation Options Appraisal to determine the Remediation Strategy in accordance with CRL11. The remediation strategy should address the procedure for dealing with waste arising from piling activities in the historic landfill and appropriate materials management plan for reuse of suitable materials onsite.

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The verification plan should include proposals for a groundwater-monitoring programme to encompass regular monitoring for a period before, during and after ground works. E.g. monthly monitoring before, during and for at least the first quarter after completion of ground works, and then quarterly for the remaining 9-month period. Where SUDs are proposed; infiltration SUDs should not be located in unsuitable and unstable ground conditions such as land affected by contamination or solution features. As the site is a former landfill it may not be a practical options to use infiltration techniques for dealing with surface water and appropriate connections to the public sewer are expected. Where infiltration SuDS are to be used for surface run-off from roads, car parking and public or amenity areas, they should have a suitable series of treatment steps to prevent the pollution of groundwater.
For the immediate drainage catchment areas used for handling and storage of chemicals and fuel, handling and storage of waste and lorry, bus and coach parking or turning areas, infiltration SuDS are not permitted without an environmental permit. Further advice is available in the updated CIRIA SUDs manual.
http://www.ciria.org/Resources/Free_publications/SuDS_manual_C753.aspx

8) Waste on Site and Reuse of Materials (Environment Agency)

INFORMATIVE: The CLAIRE Definition of Waste: Development Industry Code of Practice provides operators with a framework for determining whether or not excavated material arising from site during remediation and/or land development works are waste or have ceased to be waste. Under the Code of Practice, excavated materials that are recovered via a treatment operation can be re-used on-site providing they are treated to a standard such that they fit for purpose and unlikely to cause pollution treated materials can be transferred between sites as part of a hub and cluster project. Some naturally occurring clean material can be reused directly onsite.

It will not be acceptable to reuse historic landfill material on site as this will remain waste and will need to be disposed in accordance with the relevant protocols. Developers should ensure that all contaminated materials are adequately characterised both chemically and physically, and that the permitting status of any proposed on site operations are clear. If in doubt, the Environment Agency should be contacted for advice at an early stage to avoid any delays.

The Environment Agency recommends that developers should refer to: the position statement on the Definition of Waste: Development Industry Code of Practice and the Environmental regulations page on GOV.UK.

9) Advice to applicant on Review of Further Documents (Environment Agency)

INFORMATIVE: If you would like EA to review a technical report or document, outside of a statutory consultation, and/or meet to discuss EA position, this will be chargeable in line with EA planning advice service.

If you wish to request a meeting, or document review, please contact EA team email address at HNLsustainableplaces@environment-agency.gov.uk
Further information on our charged planning advice service is available at:

https://www.gov.uk/government/publications/planning-advice-environment-agency-standard-terms-and-conditions
Decision notice: EA records the outcome of planning applications and request that the decision notice is sent to hnlsustainableplaces@environment-agency.gov.uk

10) Suitably Qualified Professional – WSI (Historic England – GLAAS)

INFORMATIVE: Written schemes of investigation will need to be prepared and implemented by a suitably qualified professionally accredited archaeological practice in accordance with Historic England's Guidelines for Archaeological Projects in Greater London.

11) Deemed Discharge - Written Scheme of Investigation (Historic England – GLAAS)

INFORMATIVE: The Condition addressing a Written Scheme of Investigation (WSI) is exempt from deemed discharge under schedule 6 of The Town and Country Planning (Development Management Procedure) (England) Order 2015.

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12) Evaluation - Written Scheme of Investigation (Historic England – GLAAS)

INFORMATIVE: Historic England GLAAS envisages that archaeological fieldwork would comprise the following:

Geoarchaeological Assessment and Coring

Geoarchaeology is the application of earth science principles and techniques to the understanding of thearchaeological record. Coring involves boreholes drilled into the buried deposits to record (and sample) their characteristics, extent and depth. It can assist in identifying buried landforms and deposits of archaeological interest, usually by using the results in deposit models. Coring is often undertaken when the deposits of interest are too deep for conventional digging, or when large areas need to be mapped. It is only rarely used in isolation usually forming part of either an archaeological evaluation to inform a planning decision or the excavation of a threatened heritage asset.

Evaluation

An archaeological field evaluation involves exploratory fieldwork to determine if significant remains are present on a site and if so to define their character, extent, quality and preservation. Field evaluation may involve one or more techniques depending on the nature of the site and its archaeological potential. It will normally include excavation of trial trenches. A field evaluation report will usually be used to inform a planning decision (pre-determination evaluation) but can also be required by condition to refine a mitigation strategy after permission has been granted.
The scope of the archaeological mitigation will depend on the results of the above phases of work. You can find more information on archaeology and planning in Greater London on our website This response only relates to archaeology. You should also consult Historic England's Development Management on statutory matters.

13) Asbestos Survey (LBH Environmental Health)

INFORMATIVE: Prior to demolition of existing buildings, an asbestos survey should be carried out to identify the location and type of asbestos containing materials. Any asbestos containing materials must be removed and disposed of in accordance with the correct procedure prior to any demolition or construction works carried out.

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14) Positive Pumped Device (Thames Water)

INFORMATIVE Thames Water requests that the Applicant should incorporate within their proposal, protection to the property by installing a positive pumped device (or equivalent reflecting technological advances) to avoid the risk of backflow at a later date, on the assumption that the sewerage network may surcharge to ground level during storm conditions. Fitting only a non-return valve could result in flooding to the property should there be prolonged surcharge in the public sewer.

15) Groundwater Risk Management Permit (Thames Water)

INFORMATIVE: If as part of the basement development there is a proposal to discharge ground water to the public network, this would require a Groundwater Risk Management Permit from Thames Water. Any discharge made without a permit is deemed illegal and may result in prosecution under the provisions of the Water Industry Act 1991.

Thames Water would expect the developer to demonstrate what measures he will undertake to minimise groundwater discharges into the public sewer. Permit enquiries should be directed to Thames Water's Risk Management Team by telephoning 02035779483 or by emailing wwqriskmanagement@thameswater.co.uk. Application forms should be completed on line via www.thameswater.co.uk/wastewaterquality

16) Minimum Pressure (Thames Water)

INFORMATIVE: Thames Water will aim to provide customers with a minimum pressure of 10m head (approx 1 bar) and a flow rate of 9 litres/minute at the point where it leaves Thames Waters pipes. The developer should take account of this minimum pressure in the design of the proposed development.

17) Water Mains Crossing or Close to Development (Thames Water)

INFORMATIVE: There are water mains crossing or close to development. Thames Water do NOT permit the building over or construction within 3m of water mains. If applicant is planning significant works near TW mains (within 3m) TW need to check that development doesn't reduce capacity, limit repair or maintenance activities during and after construction, or inhibit the services we provide in any other way. The applicant is advised to read our guide working near or diverting our pipes.
https://developers.thameswater.co.uk/Developing-a-large-site/Planning-yourdevelopment/Working-near-or-diverting-our-pipes

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18) Development within 15m of Thames Water Assets (Thames Water)

INFORMATIVE: The applicant is advised to read TW guide 'working near our assets' to ensure your workings will be in line with the necessary processes you need to follow if you're considering working above or near our pipes or other structures. https://developers.thameswater.co.uk/Developing-a-large-site/Planning-yourdevelopment/Working-near-or-diverting-our-pipes. Should you require further information please contact Thames Water. Email: developer.services@thameswater.co.uk.

19) Ground Water Source Protection Strategies (Thames Water)

INFORMATIVE: More detailed information regarding Source Protection Strategies can be obtained from Thames Waters' Groundwater Resources Team email GroundwaterResources@Thameswater.co.uk Tel: 0203 577 3603.

20) Network Rail Asset Protection (Network Rail)

INFORMATIVE: Network Rail strongly recommends the developer contacts Network Rail Asset Protection London South East Asset Protection anglia@networkrail.co.uk prior to any works commencing on site, and also to agree an Asset Protection Agreement with us to enable approval of detailed works. More information can also be obtained from our website at www.networkrail.co.uk/aspx/1538.aspx.

21) Safe Operation of the Railway (Network Rail)

INFORMATIVE: The Developer must ensure that their proposal, both during construction and after completion of works on site, does not:

- Encroach onto Network Rail land
- Affect the safety, operation or integrity of the company's railway and its infrastructure
- Undermine its support zone
- Damage the company's infrastructure
- Place additional load on cuttings
- Adversely affect any railway land or structure
- Over-sail or encroach upon the air-space of any Network Rail land
- Cause to obstruct or interfere with any works or proposed works or Network Rail development both now and in the future

The developer should comply with the following comments and requirements for the safe operation of the railway and the protection of Network Rail's adjoining land.

22) Safe Operation of the Railway - Future Maintenance (Network Rail)

INFORMATIVE: The development must ensure any future maintenance can be conducted solely on the applicant's land. The applicant must ensure that any construction and any subsequent maintenance can be carried out to any proposed buildings or structures without adversely affecting the safety of, or encroaching upon Network Rail's adjacent land and air-space, and therefore all/any building should be situated at least 2 metres (3m for overhead lines and third rail) from Network Rail's boundary.

The reason for the 2m (3m for overhead lines and third rail) stand off requirement is to allow for construction and future maintenance of a building and without requirement for access to the operational railway environment which may not necessarily be granted or if granted subject to railway site safety requirements and special provisions with all associated railway costs charged to the applicant. Any less than 2m (3m for overhead lines and third rail) and there is a strong possibility that the applicant (and any future resident) will need to utilise Network Rail land and air-space to facilitate works.

The applicant / resident would need to receive approval for such works from Network Rail Asset Protection, the applicant / resident would need to submit the request at least 20 weeks before any works were due to commence on site and they would be liable for all costs (e.g. all possession costs, all site safety costs, all asset protection presence costs). However, Network Rail is not required to grant permission for any third party access to its land. No structure/building should be built hard-against Network Rail's boundary as in this case there is an even higher probability of access to Network Rail land being required to undertake any construction / maintenance works. Equally any structure/building erected hard against the boundary with Network Rail will impact adversely upon our maintenance teams' ability to maintain our boundary fencing and boundary treatments.

23) Safe Operation of the Railway - Drainage (Network Rail)

INFORMATIVE: Storm/surface water must not be discharged onto Network Rail's property or into Network Rail's culverts or drains except by agreement with Network Rail. Suitable drainage or other works must be provided and maintained by the Developer to prevent surface water flows or run-off onto Network Rail's property. Proper provision must be made to accept and continue drainage discharging from Network Rail's property; full details to be submitted for approval to Network Rail Asset Protection.

Suitable foul drainage must be provided separate from Network Rail's existing drainage. Soakaways, as a means of storm/surface water disposal must not be constructed near/within 10 – 20 metres of Network Rail's boundary or at any point which could adversely affect the stability of Network Rail's property. After the completion and occupation of the development, any new or exacerbated problems attributable to the new development shall be investigated and remedied at the applicants' expense.

24) Safe Operation of the Railway – Plant and Materials (Network Rail)

INFORMATIVE: All operations, including the use of cranes or other mechanical plant working adjacent to Network Rail's property, must at all times be carried out in a "fail safe" manner such that in the event of mishandling, collapse or failure, no plant or materials are capable of falling within 3.0m of the boundary with Network Rail.

25) Safe Operation of the Railway – Scaffolding (Network Rail)

INFORMATIVE: Any scaffold which is to be constructed within 10 metres of the railway boundary fence must be erected in such a manner that at no time will any poles over-sail the railway and protective netting around such scaffold must be installed. The applicant/applicant's contractor must consider if they can undertake the works and associated scaffold/access for working at height within the footprint of their property boundary.

26) Safe Operation of the Railway – Piling (Network Rail)

INFORMATIVE: Where vibro-compaction/displacement piling plant is to be used in development, details of the use of such machinery and a method statement should be submitted for approval to Network Rail Asset Protection prior to the commencement of works and the works shall only be carried out in accordance with the approved method statement.

27) Safe Operation of the Railway – Fencing (Network Rail)

INFORMATIVE: In view of the nature of the development, it is essential that the developer provide (at their own expense) and thereafter maintain a substantial, trespass proof fence along the development side of the existing boundary fence, to a minimum height of 1.8 metres. The 1.8m fencing should be adjacent to the railway boundary and the developer/applicant should make provision for its future maintenance and renewal without encroachment upon Network Rail land.

Network Rail's existing fencing / wall must not be removed or damaged and at no point either during construction or after works are completed on site should the foundations of the fencing or wall or any embankment therein, be damaged, undermined or compromised in any way. Any vegetation on Network Rail land and within Network Rail's boundary must also not be disturbed. Any fencing installed by the applicant must not prevent Network Rail from maintaining its own fencing/boundary treatment.

28) Safe Operation of the Railway – Lighting (Network Rail)

INFORMATIVE: Any lighting associated with the development (including vehicle lights) must not interfere with the sighting of signalling apparatus and/or train drivers vision on approaching trains. The location and colour of lights must not give rise to the potential for confusion with the signalling arrangements on the railway. The developers should obtain Network Rail's approval of their detailed proposals regarding lighting.

29) Safe Operation of the Railway – Noise and Vibration (Network Rail)

INFORMATIVE: The potential for any noise/ vibration impacts caused by the proximity between the proposed development and any existing railway must be assessed in the context of the National Planning Policy Framework which hold relevant national guidance information. The current level of usage may be subject to change at any time without notification including increased frequency of trains, night time train running and heavy freight trains.

30) Safe Operation of the Railway – Vehicle Incursion (Network Rail)

INFORMATIVE: Where a proposal calls for hard standing area / parking of vehicles area near the boundary with the operational railway, Network Rail would recommend the installation of a highways approved vehicle incursion barrier or high kerbs to prevent vehicles accidentally driving or rolling onto the railway or damaging lineside fencing.

31) Asset Protection Agreement (Network Rail)

INFORMATIVE: Network Rail strongly recommends the developer contacts Network Rail Asset Protection London South East at AssetProtectionanglia@networkrail.co.uk prior to any works commencing on site, and also to agree an Asset Protection Agreement with us to enable approval of detailed works. More information can also be obtained from our website at www.networkrail.co.uk/aspx/1538.aspx.

32) Commercial Waste Disposal (LBH Waste Management)

INFORMATIVE: Commercial Business must ensure all waste produced on site are disposed of responsibly under their duty of care within Environmental Protection Act 1990. It is for the business to arrange a properly documented process for waste collection from a licensed contractor of their choice. Documentation must be kept by the business and be produced on request of an authorised Council Official under Section 34 of the Act. Failure to do so may result in a fixed penalty fine or prosecution through the criminal Court system.

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33) Noise Receptors (LBH Environmental Health – Noise)

INFORMATIVE: To effectively protect the existing noise sensitive receptors from adverse levels of noise and vibration, the principal contactor shall be encouraged to apply for prior consent under Section 61 of the Control of Pollution Act 1974 for this development.

34) Phasing for CIL Purposes (LBH Development Management)

INFORMATIVE: For the avoidance of doubt, this planning permission is not a phased planning permission for the purposes of the Community Infrastructure Levy Regulations 2010 (as amended)



27/03/2019

Dean Hermitage
Head of Development Management and Planning Enforcement
Planning Service

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Appendix B
Landscape Planting Plans.

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N

0 5 1:250 10 15

Metres

LEGEND

TREE PLANTING

SHRUB PLANTING

MAINTENANCE AND IMPLEMENTATION

GENERAL

All planting tree and shrub planting to be certified British stock or have been kept in a UK nursery for at least 1no. growing season. All trees and shrubs to comply with BS 3936. All plants shall be transported and manouvred in accordance with the Code of Practice for Plant Handling (CPSE).

Handling should be to HTS 'Handling and Establishing Landscape Plants'

Planting shall be carried out between October and March. The soil condition should be moist, friable and (excepting aquatic/marginal planting) not waterlogged.

Planting should be set out in a staggered grid pattern to avoid bare areas. Contractor should allow for 10% over purchase to ensure suitable coverage is met.

Compacted soil should be ripped through before topsoiling.

Percolation tests should be carried out prior to trees and shrub planting, to ensure the soils is not prone to waterlogging.

All planting to be set out on site as directed by the project landscape architect

NOTE

Root barrier locations to be coordinated with utilities on site. Utilities can pass adjacent to the root barrier to engineer's specification.

NOTE

1. TO BE READ IN CONJUNCTION WITH TH-IS-00-001-L-3248-91-700 PLANT SCHEDULE

Rev	Date	By	Notes
P01	15/12/2023	FY	S3 ISSUE
T03	22/08/2023	FY	RE-UPLOAD
T02	23/02/2023	FY	S4 ISSUE

Client
ARGENT SERVICES LLP

Project
FERRY ISLAND
TOTTENHAM HALE

Title
PLANTING PLAN GROUND FLOOR

Status
S3 SUITABLE FOR REVIEW AND COMMENT

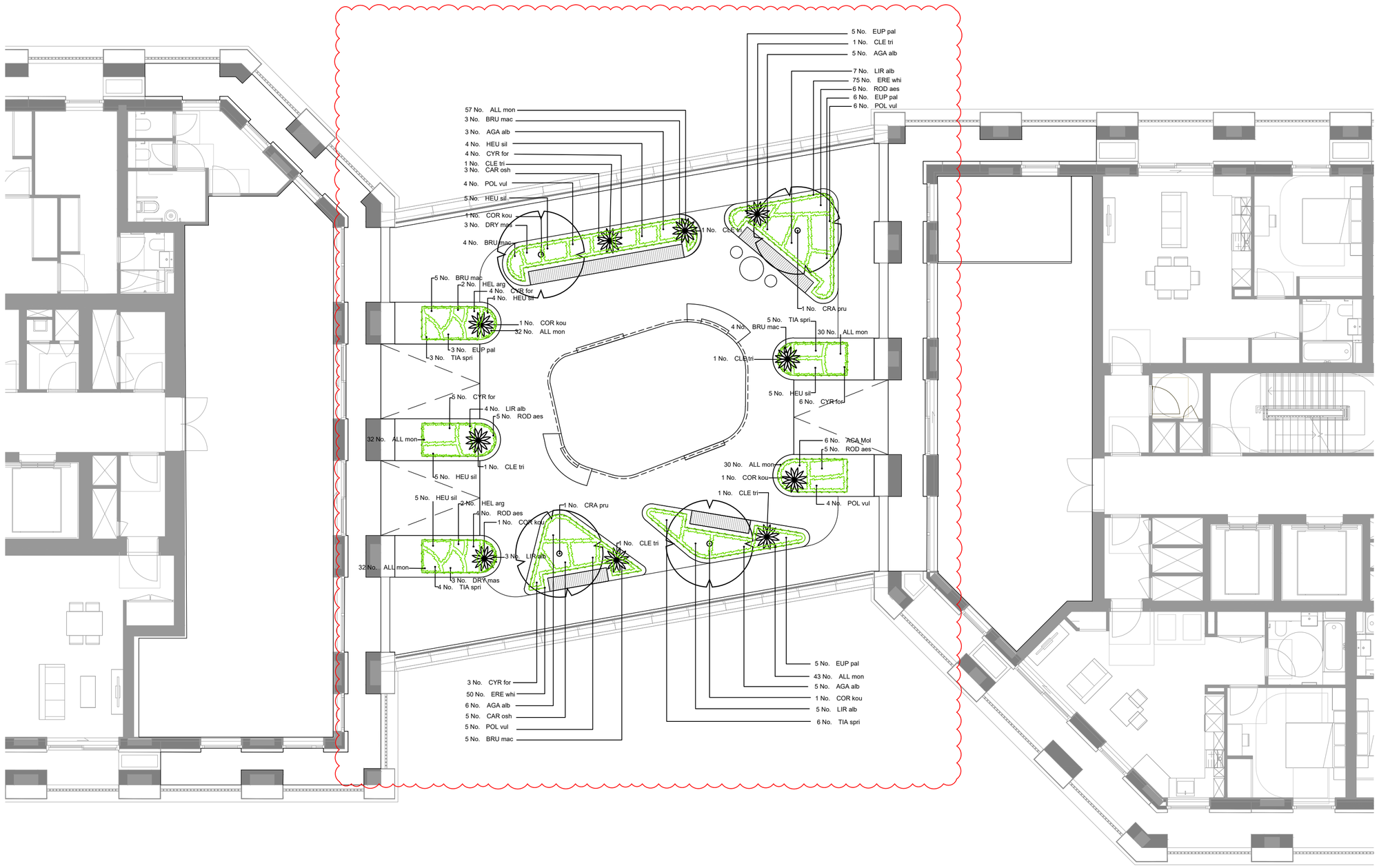
Drawing No. TH-IS-00-001-L-3248-91-100 | Scale 1:250@A2

Drawn ML | Date JAN 23 | Checked AW

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N

0 1:100 5

Metres

LEGEND

PROPOSED TREE

PROPOSED SPECIMEN PLANTING

PROPOSED ORNAMENTAL PLANTING

NOTE
1. TO BE READ IN CONJUNCTION WITH TH-IS-01-001-L-3248-91-700 PLANT SCHEDULE

MAINTENANCE AND IMPLEMENTATION

GENERAL
All planting tree and shrub planting to be certified British stock or have been kept in a UK nursery for at least 1no. growing season. All trees and shrubs to comply with BS 3936. All plants shall be transported and manouvred in accordance with the Code of Practice for Plant Handling (CPSE).

Handling should be to HTS 'Handling and Establishing Landscape Plants'

Planting shall be carried out between October and March. The soil condition should be moist, friable and (excepting aquatic/marginal planting) not waterlogged.

Planting should be set out in a staggered grid pattern to avoid bare areas. Contractor should allow for 10% over purchase to ensure suitable coverage is met.

Compacted soil should be ripped through before topsoiling.

Percolation tests should be carried out prior to trees and shrub planting, to ensure the soils is not prone to waterlogging.

All planting to be set out on site as directed by the project landscape architect

Rev	Date	By	Notes
P01	15.12.2023	FY	S3 ISSUE
T02	25.08.2023	HM	S3 FOR COMMENT
T01	23/02/2023	FY	S4 ISSUE

Client
ARGENT SERVICES LLP

Project
FERRY ISLAND
TOTTENHAM HALE

Title
PLANTING PLAN BUILDING 01 LEVEL 07

Status
S3 SUITABLE FOR REVIEW AND COMMENT

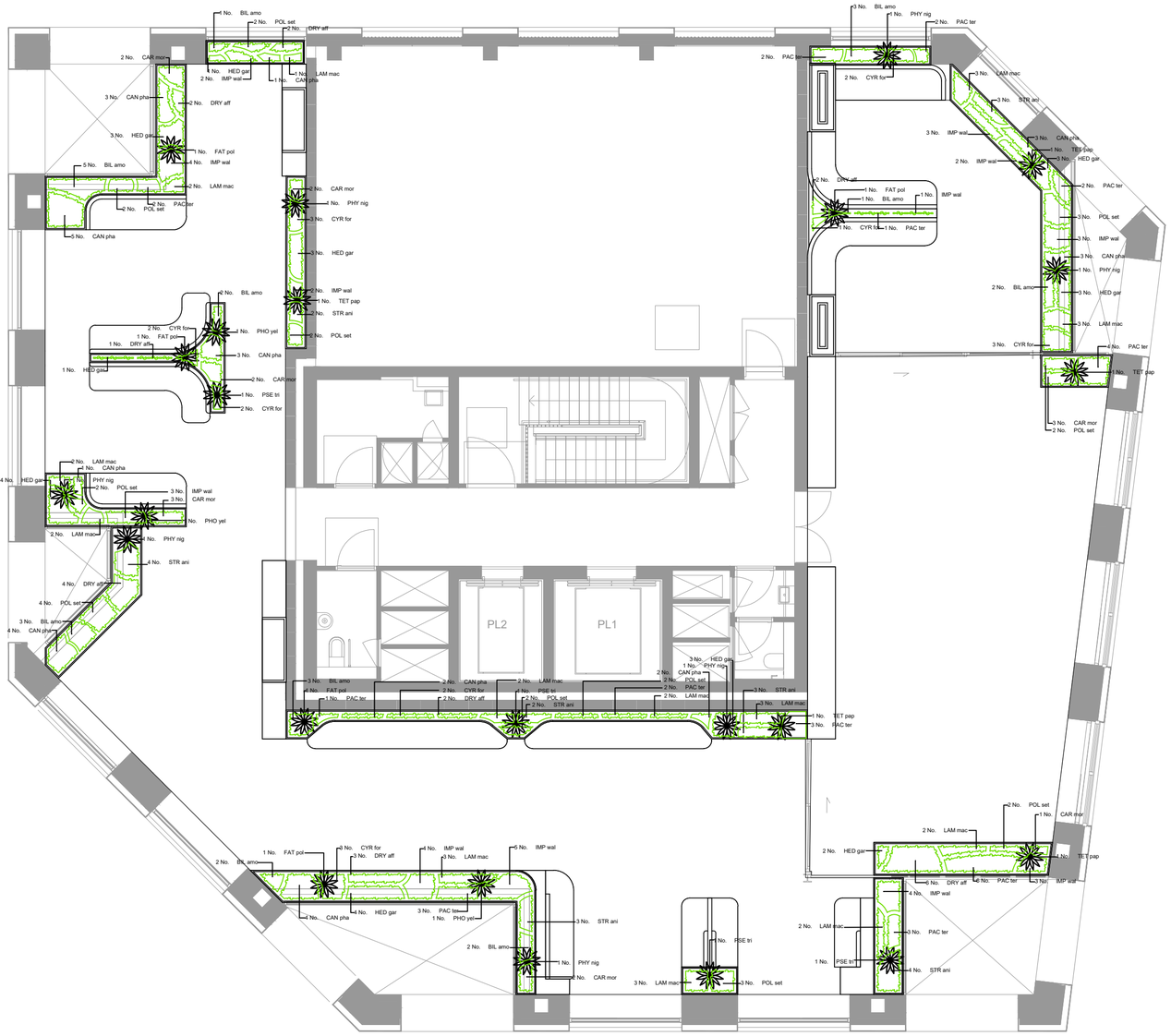
Drawing No. TH-IS-01-001-L-3248-91-100
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Date FEB 2023
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1:100

0 5

Metres

LEGEND

PROPOSED SPECIMEN PLANTING

PROPOSED ORNAMENTAL PLANTING

NOTE
1. TO BE READ IN CONJUNCTION WITH TH-IS-01-001-L-3248-91-701 PLANTING SCHEDULE

MAINTENANCE AND IMPLEMENTATION

GENERAL
All planting tree and shrub planting to be certified British stock or have been kept in a UK nursery for at least 1no. growing season. All trees and shrubs to comply with BS 3936. All plants shall be transported and manouvred in accordance with the Code of Practice for Plant Handling (CPSE).

Handling should be to HTS 'Handling and Establishing Landscape Plants'

Planting shall be carried out between October and March. The soil condition should be moist, friable and (excepting aquatic/marginal planting) not waterlogged.

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Compacted soil should be ripped through before topsoiling.

Percolation tests should be carried out prior to trees and shrub planting, to ensure the soils is not prone to waterlogging.

All planting to be set out on site as directed by the project landscape architect

Rev	Date	By	Notes
P01	15.12.2023	FY	S3 ISSUE
T02	25.08.2023	FY	S3 FOR COMMENT
T01	23/02/2023	FY	S4 ISSUE

Client
ARGENT SERVICES LLP

Project
FERRY ISLAND
TOTTENHAM HALE

Title
PLANTING PLAN BUILDING 01 LEVEL 19

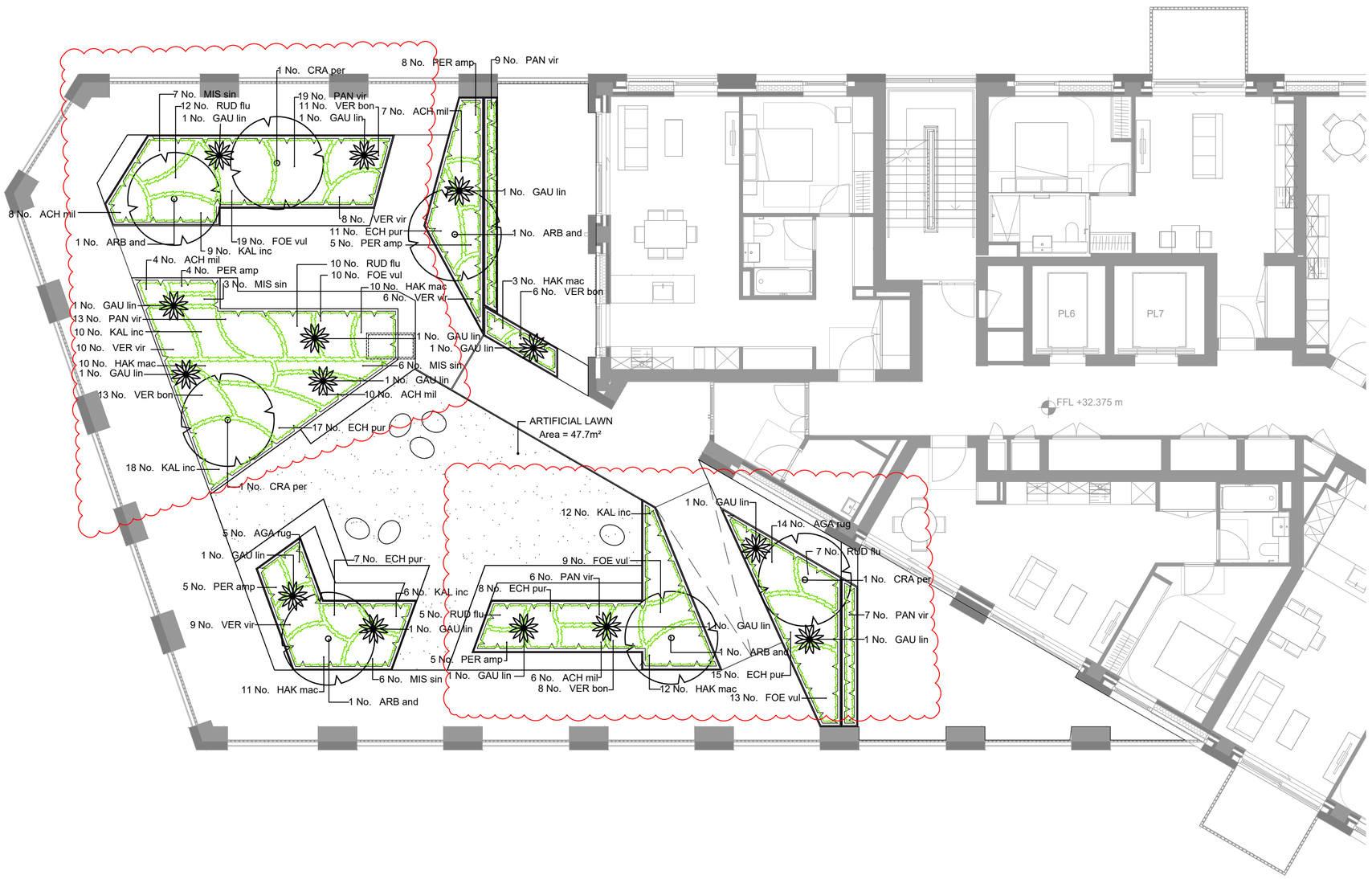
Status
S3 SUITABLE FOR REVIEW AND COMMENT

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Metres

LEGEND

- PROPOSED TREE
- PROPOSED SPECIMEN PLANTING
- PROPOSED ORNAMENTAL PLANTING
- PROPOSED ARTIFICIAL LAWN

NOTE
1. TO BE READ IN CONJUNCTION WITH TH-IS-02-001-L-3248-91-700 PLANT SCHEDULE

MAINTENANCE AND IMPLEMENTATION

GENERAL
All planting tree and shrub planting to be certified British stock or have been kept in a UK nursery for at least 1no. growing season. All trees and shrubs to comply with BS 3936. All plants shall be transported and manouvred in accordance with the Code of Practice for Plant Handling (CPSE).

Handling should be to HTS 'Handling and Establishing Landscape Plants'

Planting shall be carried out between October and March. The soil condition should be moist, friable and (excepting aquatic/marginal planting) not waterlogged.

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All planting to be set out on site as directed by the project landscape architect

Rev	Date	By	Notes
P01	15/12/2023	FY	S3 ISSUE
T01	23/02/2023	FY	S4 ISSUE

Client
ARGENT SERVICES LLP

Project
FERRY ISLAND
TOTTENHAM HALE

Title
PLANTING PLAN
BUILDING 02 LEVEL 07

Status
S3 SUITABLE FOR REVIEW AND COMMENT

Drawing No.
TH-IS-02-001-L-3248-91-100

Scale
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Drawn
ML

Date
FEB 2023

Checked
AW

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Appendix C
Capping Layer Soil Import Specification.

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Note: The removal of the Made Ground during excavation of the basement, dewatering and treatment will aid the betterment of the groundwater at the site. The risk to Controlled Waters is considered to be low, therefore the capping import specification is protective of human health only.

Appendix C. Maximum Permissible Concentrations for Imported Capping Layer Soils

Determinant		Residential without Plant Uptake Human Health Generic Assessment Criteria (mg/kg)	Suggested Capping Import Maximum permissible concentration[1] (mg/kg)[2]	Selection of Import Criteria[11]
		6% SOM	6% SOM	
Arsenic		30	30[4]	GAC[4] to be used
Beryllium		1.7	1.7[4]	GAC[4] to be used
Boron (water soluble)		10,800	5[5]	More stringent lower limit for potential phytotoxic effect to be used
Cadmium		85.3	85.3[4]	GAC[4] to be used
Chromium (III)		887	887[4]	GAC[4] to be used
Chromium (VI)		5.75	5.75[4]	GAC[4] to be used
Lead		310	310[4]	C4SL[10] to be used
Mercury		75.3	75.3[4]	GAC[4] to be used
Selenium		596	596[4]	GAC[4] to be used
Copper		7,130	135[3]	More stringent specification for Topsoil value to be used
Nickel		182	75[3]	More stringent specification for Topsoil value to be used
Zinc		40,400	200[3]	More stringent specification for Topsoil value to be used
Vanadium		651	651[4]	GAC[4] to be used
Benzo(a)pyrene		3.2	3.2[4]	GAC[4] to be used
Benzo(a)anthracene		15	15[4]	GAC[4] to be used
Benzo(b)fluoranthene		4.06	4.06[4]	GAC[4] to be used
Benzo(k)fluoranthene		107	107[4]	GAC[4] to be used
Chrysene		31.9	31.9[4]	GAC[4] to be used
Dibenzo(a,h)anthracene		0.34	0.34[4]	GAC[4] to be used
Indeno(1,2,3-cd)pyrene		46.2	46.2[4]	GAC[4] to be used
Naphthalene		12.4	12.4[4]	GAC[4] to be used
TPH aliphatic[6]	EC5-6	107	107[4]	GAC[4] to be used
	EC>6-8	328	328[4]	GAC[4] to be used
	EC>8-10	87.7	87.7[4]	GAC[4] to be used
	EC>10-12	453	453[4]	GAC[4] to be used
	EC>12-16	2,970	750[7]	More stringent assessment criteria[7] to be used
	EC>16-35	12,900	750[7]	More stringent assessment criteria[7] to be used
TPH aromatic[6]	EC5-7	1.42	1.42[4]	GAC[4] to be used
	EC>7-8	3,860	750[7]	More stringent assessment criteria[7] to be used
	EC>8-10	144	144[4]	GAC[4] to be used
	EC>10-12	720	720[4]	GAC[4] to be used
	EC>12-16	2,060	750[7]	More stringent assessment criteria[7] to be used
	EC>16-21	1,940	750[7]	More stringent assessment criteria[7] to be used
	EC>21-35	1,940	750[7]	More stringent assessment criteria[7] to be used
Sum of TPH aliphatic & aromatic C5-C10		4,528	< 750[7]	More stringent assessment criteria[7] to be used
Sum of TPH aliphatic & aromatic C10+		22,983	< 750[7]	
pH		5-10	5-10	
Monohydric Phenols		2,310[4]	750[7]	GAC[4] to be used
Free Cyanide		34[4]	34[4]	GAC[10] to be used
Asbestos			No detectable fibres[8]	

Notes:

1. These maximum permissible concentrations (MPCs) are import criteria only and are not necessarily appropriate for human health risk assessment.
2. In mg/kg dry soil except pH and asbestos.
3. British Standard BS3882:2015 Specification for Topsoil and requirements for use. Table 1. Values taken for pH 6-7.

4. Generic Assessment Criteria generated 'in-house' based on CLEA model Version 1.071.
5. Nable, Banuelos and Paul. (1997). *Boron Toxicity*. Plant and Soil, **Vol. 193**, pp1 81-198. Lower limit for potential phytotoxic effect
6. Speciated TPH values must not exceed individual GAC. The listed GAC consider risks to human health, but it is possible that some of the values for heavy-end TPH could pose a risk to controlled waters. As such, a lower import criterion for these fractions is recommended.
7. Assessment criteria of 750mg/kg is noted to be more stringent than Site Specific Assessment Criteria/GAC using CLEA and should the material be excavated in the future, should prevent it being classified as hazardous waste.
8. Laboratory screen by microscopy may be required subject to source of material.
9. Published C4SL for lead (DEFRA, 2014)
10. GAC for free cyanide derived by Atkins based on acute exposure for a 0-6 year old child
11. Requirement for British Standard for Topsoil and Subsoil, or landscaping specification to be met. All other material to be imported as a product.

Appendix D
Planning Approval (B19 and B24).

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14 August 2023

TOWN AND COUNTRY PLANNING ACT 1990
TOWN AND COUNTRY PLANNING (DEVELOPMENT MANAGEMENT PROCEDURE) (ENGLAND) ORDER 2015
NOTICE OF PLANNING PERMISSION

Case Reference	**HGY/2022/0779**
Location	**Strategic Development Partnership (SDP) Sites, Welbourne, North Island, Ferry Island, Ashley Road East and Ashley Road West, Station Road, London, N17**
Proposal	**Application for the approval of details pursuant to conditions B19 (Monitoring and Maintenance Plan - Contamination - Environment Agency) and B24 (Contaminated Land - Part 1 - LBH Environmental Health) in relation to Plot B (Ferry Island site) of the Tottenham Hale Centre planning permission (LPA ref: HGY/2018/2223) dated 27 March 2019**
Received	**23 March 2022**

In pursuance of their powers under the above Act and Order, Haringey Council as Local Planning Authority hereby GRANT their approval of this application received on the above date.

Title	Description	Date
Geotechnical + Geo-environmental Interpretative Report_Part5		24 March 2022
Geo-environmental Assessment Report - Part 4		24 March 2022
Geo-environmental Assessment Report - Part 2		24 March 2022
Geo-environmental Assessment Report - Part 3		24 March 2022
Geotechnical + Geo-environmental Interpretative Report_Part4		24 March 2022
ApplicationFormRedacted		24 March 2022
Geotechnical + Geo-environmental Interpretative Report_Part1		24 March 2022
Geotechnical + Geo-environmental Interpretative Report_Part6		24 March 2022
Geo-environmental Assessment Report - Part 1		24 March 2022
Covering Letter		24 March 2022
Geotechnical + Geo-environmental Interpretative Report_Part2		24 March 2022
Geotechnical + Geo-environmental Interpretative Report_Part8		24 March 2022
Geotechnical + Geo-environmental Interpretative Report_Part7		24 March 2022
ApplicationForm		24 March 2022
Cover Note to Geo-environmental Investigation report		24 March 2022

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Geotechnical + Geo-environmental Interpretative Report_Part3	24 March 2022
Comments from LBH Lead Officer - Pollution	22 April 2022
Comments from the Environment Agency	27 April 2022
FER-WPP-JRL-PW-0001 rev 02 Ferry Island Tottenham CFA Piles	18 July 2023
CG39277A_FerryIsland PlotB_RAMS_Novemeber2022	18 July 2023
CG39277A_FerryIsland PlotB_EA Letter_November2022	18 July 2023
CG38277A_FerryIsland PlotB_TN_Novemebr2022	18 July 2023
223722 GIR-F01 Ferry Island Rv00	18 July 2023
T22001-Ferry Island-CFA Piling SSOW#001 Rev01	18 July 2023
CG39277A_Ferry Island PlotB_RCIS LR_Jun23	19 July 2023



Robbie McNaugher
Head of Development Management and Planning Enforcement
Planning Service

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Informatives:

The applicant is required to to address the issue in relation to the importation criteria as raised by the Environment Agency prior to Condition B24 being discharged in full.

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Appendix E
Planning Approval (B29).

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Planning Service

Rob Krzyszowski Assistant Director Planning, Building Standards & Sustainability Service

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W1F 0EQ

On behalf of
Midgard Ltd
C/O Agent

Planning Application Reference No. **HGY/2022/2460**

TOWN AND COUNTRY PLANNING ACT 1990
TOWN AND COUNTRY PLANNING (GENERAL PERMITTED DEVELOPMENT) (ENGLAND) ORDER 2015

NOTICE OF DECISION ON DETAILS SUBMISSION

Location: **Strategic Development Partnership (SDP) SitesWelbourne, North Island, Ferry Island, Ashley Road East and Ashley Road West, Station Road N17**

Proposal: **Application for the part approval of details pursuant to condition B29 (Demolition/Construction Environmental Management Plans) in relation to Plot B (Ferry Island site) of the Tottenham Hale Centre planning permission (LPA ref: HGY/2018/2223) dated 27 March 2019.**

In pursuance of their powers under the above Act and Order, Haringey Council as Local Planning Authority hereby **GRANT** their approval of this application dated 23/09/2022 and drawing numbers: Covering letter prepared by Quod dated 23.09.2022; Application Form; Ferry Island Construction Environmental Management Plan with Construction Logistics Plan Included prepared by JR Midgard dated (15.10.2022); Cass Allen Noise Monitoring - Station Road elevation (2); CCS document; Ferry Island - Proposed Logistics Overview P09 Rev 2; Non-Road Mobile Machinery (NRMM) Register - Ferry Island; RAMS01 - 22461 - R0 - Risk Assessment Method Statement - Ferry Island, London.

24/11/2022

Robbie McNaugher

Robbie McNaugher
Head of Development Management and Planning Enforcement
Planning Service

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Appendix F
Planning Approval (B24).

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Planning, Building Standards &
Sustainability Service

Haringey LONDON

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13 March 2024

TOWN AND COUNTRY PLANNING ACT 1990
TOWN AND COUNTRY PLANNING (DEVELOPMENT MANAGEMENT PROCEDURE) (ENGLAND) ORDER 2015
NOTICE OF PLANNING PERMISSION

Case Reference	**HGY/2023/2212**
Location	**Strategic Development Partnership (SDP) Sites, Welbourne, North Island, Ferry Island, Ashley Road East and Ashley Road West, Station Road, London, N17**
Proposal	**Approval of details pursuant to condition B24 (Contaminated Land) in relation to Plot B (Ferry Island site) of the Tottenham Hale Centre planning permission (LPA ref: HGY/2018/2223) dated 27 March 2019**
Received	**15 August 2023**

In pursuance of their powers under the above Act and Order, Haringey Council as Local Planning Authority hereby GRANT their approval of this application received on the above date.

Title	Description	Date
AppC_Capping Import Spec_Aug2023.pdf	Other relevant information	15 August 2023
Covering Letter - B24 Full - 15.08.23.pdf	Covering letter	15 August 2023
CG39277A_FerryIslandPlotBRMS_LR_January2024		25 January 2024

Robbie McNaugher

Robbie McNaugher
Head of Development Management and Planning Enforcement
Planning Service

Planning Service
6th Floor, River Park House,
225 High Road, Wood Green,
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Informatives:

The details approved under this grant should be read in conjunction with the details approved under ref: HGY/2022/0779 where the other parts of Condition B24 were approved.

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Appendix G
CEMP.

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Construction Environmental Management Plan (CEMP)

Ferry Island



15/08/22	03/02/25	03/02/25	03/02/25
Alice Dear	Laura Cabeza Escobar	Brian Hallinan	Donal Reale
Sustainability Manager	Environmental Manager	Shell & Core Director	Project Director
Prepared By	Revision Author	Category 3 Checked	Approved

Current Version

Suitability	Revision	Security	Date	Author	Notes
A1	C06	Public	03/02/25	LE	Document reviewed and updated

Version History

Suitability	Revision	Security	Date	Author	Notes
A1	C01	Public	15/08/22	AD	First Issue
A1	C02	Public	21/09/23	AD	Updated format & programme dates
A1	C03	Public	06/02/24	LE	Updated to incorporate Environmental and Sustainable Procurement Policies 2024; changes within site team management and programme dates
A1	C04	Public	02/07/24	LE	Document reviewed to incorporate the merge of environmental team with H&S team
A1	C05	Public	18/10/24	LE	Document reviewed to update changes within site management

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1.0 Introduction

The JRL Group has a sustainable vision for all its construction sites based upon eco-efficient practices and eco-effective behaviour. Fundamental to its vision are the continual improvements in environmental performance throughout its sites and an understanding of their corporate responsibility to the communities it works within. The JRL Group environmental management procedure sets out the objective to achieve environmental and sustainable development simultaneously with a view to continuously improve the service, quality and commitment it provides.

This Construction Environmental Management Plan (CEMP) document has been produced in outline format. As a live and dynamic document, additions may be made to this plan as the project evolves.

1.1 Pre-Commencement Planning Condition no. B29

The initial development of this CEMP has been produced prior to commencement of any works on site in line with planning condition no. B29 (HGY/2018/2223) –

"Development shall not commence within Plot B (other than demolition) until a Construction Environmental Management Plan (CEMP) in respect of Plot B has been submitted to and approved in writing by the local planning authority.

a) The CEMP shall include a Construction Logistics Plan (CLP) and Air Quality and Dust Management Plan (AQDMP) in respect to Plot B.
b) The CEMP shall provide details of how construction works in respect of Plot B are to be undertaken respectively and shall include:
    i. A construction method statement which identified the stages and details how works will be undertaken - throughout
    ii. Details of working hours, which unless otherwise agreed with the Local Planning Authority shall be limited to 08:00 to 18:00 Monday to Friday and 08:00 to 13:00 on Saturdays – section 5.1
    iii. Details of plant and machinery to be used during construction works – section 5.3
    iv. Details of an unexploded ordnance survey – section 9.7
    v. Details of the waste management strategy – section 6.0
    vi. Details of community engagement arrangements – section 13.0
    vii. Details of any acoustic hoarding – section 5.3 and 8.3
    viii. A temporary drainage strategy and performance specification to control surface water runoff and Pollution Prevention Plan (in accordance with Environment Agency guidance) – section 7.0
    ix. Details of external lighting – section 5.4 and 10.6
    x. Details of any other standard environmental management and control measures to be implemented. – section 4.0, 9.0, 10.0 and 11.0
c) The CLP will be in accordance with Transport for London's Construction Logistics Plan Guidance (July 2017) and shall provide details on:
    i. Monitoring and joint working arrangements, where appropriate
    ii. Site access and car parking arrangements
    iii. Delivery booking systems
    iv. Agreed routes to/from the Plot
    v. Timing of deliveries to and removals from the Plot (to avoid peak times, as agreed with Highways Authority, 07 to 09:00 and 16:00 to 18:00 where possible) – section 8.5

vi. Travel plans for staff/personnel involved in demolition/construction works to detail construction phase – section 8.6
vii. Joint arrangements with neighbouring developers for staff parking, lorry parking and consolidation of facilities such as concrete batching.

d) The AQDMP will be in accordance with the Greater London Authority SPG Dust and Emissions Control (2014) and shall include:
i. Mitigation measures to manage and minimise demolition/construction dust emissions during works – section 5.3 and 16.0
ii. Details confirming the Plot has been registered at http://nrmm.london – section 8.8
iii. Evidence of Non-Road Mobile Machinery (NRMM) and plant registration shall be available on site in the event of Local Authority Inspection – section 8.8
iv. An inventory of NRMM currently on site (machinery should be regularly services and service logs kept on site, which includes proof of emission limits for equipment for inspection) - – section 8.8
v. A dust risk assessment for the works – section 5.2
vi. Lorry parking, in joint arrangements where appropriate

Additionally, the site of Contractor Company must be registered with the Considerate Constructors Scheme. Proof of registration must be sent to the Local Planning Authority prior to any works being carried out. "

2.0 Environmental Management System

JRL Group's environmental policy has been developed in accordance with the nature, scale and environmental impacts of the company's activities. This policy provides a broad framework for setting environmental objectives and targets and delivering sustainable development and has the full support and commitment of the Board of Directors. Our environmental policy includes a commitment to continual improvement in the prevention of pollution and to compliance with the relevant environmental legislation, regulations and requirements. The Policy is updated annually and forms part of the EMS, which is certified to ISO 14001: 2015 standard.

It is the responsibility of the Project Manager to ensure effective implementation and understanding of the environmental management system. This should be undertaken with the support of environment manager, advisor, specialists and other suitably qualified personnel. It must also be made clear to all site personnel that each individual has a responsibility to ensure no environmental incidents occur.

The following outlines the processes and plans to be implemented on site to ensure all environmental aspects and impacts are identified and sufficient measures are put in place to reduce risks associated with the works.

2.1 Aspects & Impacts Register

In line with JRL Group Ltd. procedures, an Aspects and Impacts Register and Risk Assessment has been completed for the project in order to reduce the environmental impact of our site activities. This register also includes the control measures which will be put in place to minimise our environmental impacts. The Project Manager is responsible for ensuring that the control measures are fully implemented and monitored. The Risk Assessment is scored by analysing whether the aspects are regulated by legislation, are a contractual requirement and according to the likelihood and severity of the aspect occurring.

The significant environmental aspects which have been identified for this project are:

- Noise
- Dust
- Vibration
- Vehicle movements

2.2 Project Details

The Ferry Island development forms part of the Tottenham Hale development being carried out by Argent Related. The development will comprise the construction of a new shared basement, two residential buildings (7 to 38 storeys) and associated public realm space. Building 1 will include 376 build to rent apartments with ground floor shell and core retail units. Building 2 will include 108 private for sale apartments, also with shell and core retail units within the ground floor.

2.3 Site Location

Ferry Island is in the London Borough of Haringey. The address for the development is Ferry Island, Tottenham Hale, London, N17 9FR.

The Ferry Island site is bounded by the TfL bus station to the east, along with Tottenham Hale tube station. Residential and business buildings are located on the north side of Station Road. Ferry Lane is to the south of the development.



Figure 1: Site Location

2.4 Scope of Works

Programme Dates	Scope of Works
01/11/22 – 31/01/23	Site establishment and enabling works
07/09/23 – 17/06/24	Substructure, piling and basement excavation
22/04/24 – 13/05/25	Superstructure
11/07/24 – 11/11/25	Façade
05/08/24 – 07/04/26	Internal fit-out
27/06/25 – 14/07/26	External works

2.5 Subcontractors on Site

Midgard Ltd have been appointed principal contractor for Ferry Island. In addition, the following JRL Group companies, which are also audited against the ISO 14001 EMS, are included within the design and build process:

- JRL Drylining
- Ark Mechanical & Electrical
- J Reddington
- JRL Civil Engineering
- London Tower Crane Hire & Sale
- McMullen Facades

All subcontractors appointed are expected to comply with the requirements of this CEMP and the JRL Group environmental procedures.

3.0 Project Team Roles and Responsibilities

All members of the Project team are responsible for the effective planning, implementation, management, monitoring and review of all environmental control measures identified in this plan.

It is the responsibility of the Project Manager to ensure that team members are aware of their environmental responsibilities and that they are suitably trained as necessary.

Name	Responsibilities
Donal Reale **Project Director**	*To inform subcontractors and suppliers of significant environmental impacts and control measures required to minimise them.* *To request, review and comment on the subcontractors' method statements.* *To notify the Environmental Manager of any environmental incidents on site* *To encourage near miss reporting.*

Laura Cabeza Escobar **Environmental Manager**	*To write and maintain the CEMP.* *To complete the Environmental Aspects and Impacts Register.* *To manage and control all of the environmental documentation produced on this project.* *To carry out formal environmental management system audits.* *To carry out incident investigations and reporting if required.* *To liaise with the Council's Environmental Health Department and any other regulatory authorities including the EA.* *To advise the project team on environmental queries.* *To collate monthly environmental data provided by the Environmental Champion.* *To ensure all plant is registered on the Mayor of London's NRMM portal.* *To assist the site in preparation for Considerate Constructor Scheme visits.* *To champion and promote environmental best practices on site.*
Georgiana Radu **HSE Manager/Advisor**	*To carry out monthly HS&E site inspections.* *To support incident investigations and reporting if required.* *To champion environmental best practices and the considerate constructors scheme on site.* *To conduct on-site environmental training with the workforce (eg. spill kit training).*
Lucy Akinlosotu **Social Value Lead**	*To assist the site with maintaining a good relationship with local residents.* *To organise resident meetings when required and publish quarterly newsletters.* *To arrange events with local charities, schools etc.* *To maintain a complaints and enquiries log for the project.*
Richie Butler **Environmental Champion**	*To carry out weekly SHE 6E environmental checklist.* *To check waste transfer notes are compliant and collate in the site file.* *To check timber delivery notes are compliant and collate in the site file.* *To collate material delivery notes in the site file.* *To provide water and electricity meter readings and photos of meters to the Environmental Manager* *To provide fuel consumption figures to the Environmental Advisor.* *To provide the NRMM details for all plant on site to the Environmental Manager.* *To promote awareness of the RMP among the workforce.* *To enforce waste segregation on site (i.e. separate hazardous waste streams in separate Hazibags).* *To conduct at least two monthly environmental toolbox talk to raise environmental awareness amongst the workforce.*

4.0 Environmental Contractual Requirements

Requirements	Summary of Requirements
Client Reporting Requirements	Monthly client reporting • Noise, dust and vibration monitoring • eKPIs – electricity, fuel, water consumption and related carbon emissions • Carbon emissions from site deliveries – Datascope Considerate Constructors Scheme – project ref. 132492

Contractual Obligations	Planning Consent – HGY/2018/2223 Section 106 Agreement (27 March 2019) BREEAM New Construction 2018 'Very Good' Argent Related Code of Practice
Specific local authority agreements	Section 61 valid until 30/11/25
Requirements from previous studies or/and reports	The following tender documents have been reviewed as part of the CEMP production and their recommendations have been incorporated within this document: • Baseline Vibration Report (Sandy Brown, June 2018) • Ecology Appraisal (RPS, July 2018) • Environmental Noise Survey Report (Sandy Brown, June 2018) • Geotechnical Interpretative Report (Wood Thilsted, August 2018) • Geo-environmental Interpretive Report – 2020 (Langan, November 2021) • Risk Assessment for German Air-dropped UXO (Buro Happold, April 2018)
Other Statutory Authority Requirements	Thames Water Trade Effluent/Groundwater Discharge Licence Transport for London's Ultra Low Emission Zone Mayor of London's Non-Road Mobile Machinery – Central Activity Zone and Opportunity Areas The Mayor of London's publication "The Control of Dust and Emissions During Construction and Demolition" BRE Publication "Controlling Particles, Vapour and Noise Pollution from Construction Sites"

The JRL Group will comply with all key environmental legislation and guidance as outlined in the company's Environmental Legislation Register *BO-JRLG-EM-XX-RG-Z-0001*.

5.0 Nuisance

Nuisance for the purposes of this document is broken into four sections, namely dust, noise, vibration and lighting. The following section detail activities and control methods to be implemented on the project.

Sensitive receptors likely to be affected by construction nuisance as identified in consultation with the local authority include:

- Premier Inn London Tottenham Hale Hotel
- Residents along Station Road
- Hale Gardens residents

5.1 Site Operating Hours

Site operating hours are Monday to Friday, 08:00 to 18:00 and Saturday from 08:00 to 13:00. There will be no works carried out on Sundays or Bank holidays. This is confirmed by application and agreement of a Section 61 of the Control of Pollution Act 1974 by London Borough of Haringey Council.

Should works outside the normal hours of working be required, these will be subject to prior approval by London Borough of Haringey Council, under section 61 of the Control of Pollution Act 1974, unless these are emergency works. As relevant, Midgard will make an application to by London Borough of Haringey Council as soon as reasonably practicable and not less than 14 days before the relevant Works are to take place.

5.2 Dust Mitigation

Appropriate preventative measures to control dust emissions can significantly reduce the potential for dust generation. A robust site specific dust mitigation strategy can be found Section 17.0; this will be adhered to at all times and briefed to all workers on induction and via Tool box talks. The table below outlines how we aim to avoid impacts rising from dust that could affect our neighbours and the local environment.

Risk	Mitigation
Construction Traffic	• All construction traffic will follow specifically designated routes. • Speed limits will be put into place on site for all vehicular movements. • All vehicles carrying loose material will be covered. • Wheel wash facility to be used for vehicles leaving site.
Vehicles & Equipment	• Wet materials that have the potential to leak from the vehicle shall be transported in sealed vehicles. • All vehicles associated with the construction site shall comply with the standard of the London Low Emission Zone. For HGVs, the standard is Euro 6 for NO_x and PM. For heavier vans and mini buses the standard is Euro 6. • Prior to construction movements commencing, the developer/applicant is to register any Non-Road Mobile Machinery (NRMM) of a power rating between 37kW and 560kW at https://nrmm.london/ to help monitor the use of such equipment across London. NRMM used on the site shall be required to meet the following standards (EU Directive 97/68/EC): From 1st September 2020: Stage IIIB of the Directive as a minimum, within Greater London; Stage IV of the Directive as a minimum, within the Central Activity Zone. From 1st January 2025: Stage IV throughout London. From 1st January 2030: Stage V throughout London. • No idling when vehicles are stationary. The engines of vehicles and plant on site shall be not left running unnecessarily. • Avoid the use of diesel powered generators and use mains electricity or battery powered equipment, where possible. Diesel powered generators shall only be used if mains electricity or battery powered equipment is not available.

Highways	• Where appropriate, use of road sweepers will be incorporated to ensure highways remain clear of dust and mud. • Road edges and pathways will be swept by hand and damped down as necessary.
Stockpiles	• To be sealed or sprayed as required. • Location of stockpiles away from any sensitive receptors.
Dust Suppression	• Mobile bowsers to be deployed on site at regular intervals. Activity to be increased during significantly dry and windy periods. • Appropriate hoardings shall be provided around the whole working area to ensure reduction in dust migration. • Deliveries of significantly dusty materials to be sprayed to reduce dust potential. • All cutting and grinding operations to be conducted in ways to reduce risk of dust migration (wet cutting techniques etc). • Site preparation: - Appropriate hoarding shall be provided around the whole working area to reduce dust dispersion; - The name and contact details of person(s) accountable for air quality pollutant emissions and dust issues shall be displayed on the site boundary; - Hoardings, fencing, barriers and scaffolding shall be regularly cleaned using wet methods (not blowing with compressed air lines) to prevent re-suspension of particulate matter. - All the appropriate spill kit cleans up and containment materials shall be available in strategic locations on site and they shall be utilized immediately in the event of a spillage occurring; - A stakeholder communications plan shall be developed and implement, including community engagement before work commences on site. • On-site activities: - Dust producing plant shall be kept as far away as possible from sensitive areas (and may be screened). A physical distance and/or barrier shall be created between dust/emission generating activities and receptors; - Stockpiles shall be covered or seeded to prevent wind whipping, and loose materials shall be removed as soon as possible; - The materials with the potential to produce dust (i.e. sand and other aggregates) shall be kept away from working area boundaries and shall be ensured that are stored in bunded areas and are not allowed to dry out unless required for a particular process and other control measures are in place; - Where practicable, re-fabrication, fabrication and dismantling of materials and machinery shall be encouraged to be undertaken off-site to reduce the need for grinding, sawing and cutting on-site. In cases where such work must take place, water-based dust control shall be used. - The site shall use cutting, grinding or sawing equipment fitted, or in conjunction with, suitable dust suppression techniques such as water sprays or local extraction; - The site shall implement the use of water to effectively suppress dust emissions;

	- An adequate supply of water shall be available at all work areas for dust suppression measures. Where practicable, used water shall be collected and reused to maximize the use of recycled and non-potable water; - All dust control equipment shall be maintained in good condition and a record of maintenance and servicing activities shall be kept; - Dust control will be maintained using sprinkler systems, and localised measures eg vacuums and wet cutting; - Drop heights shall be minimised from conveyors loading shovels, hoppers and other loading (lorries, etc.) or handling equipment, and fine water sprays shall be used on such equipment; - The site shall provide enclosing chutes and/or conveyors. The site shall use enclosed conveyors where crossing roads, other public areas and property which is not ownership or control by the site. Loaded bins and skips shall be sheeted or otherwise enclosed; - The movement of delivery materials shall be handled in a manner which minimises dust production and disturbance; - The burning of material on site shall be strictly prohibited; - The site shall use enclosures or shield areas designated for mixing large quantities of cement, bentonite, grouts and other similar materials. The location of designated areas for mixing these materials shall be remote from the site boundary and potential receptors; - The site shall ensure that bulk cement and other fine powder materials shall be delivered in enclosed tankers. For construction, for smaller supplies of fine
Respiratory Protective Equipment (RPE)	• Some work activities may result in harmful substances contaminating the air in the form of dust, mist, gas or fume. Adequate and suitable RPE will be selected to ensure the wearer is protected. For example when: cutting a material such as stone or wood, using a product containing volatile solvents, handling a dusty powder. • Two main types of RPE are respirators (filtering devices) and breathing apparatus. • Respirators must not be used in oxygen-deficient atmospheres. • RPE is the last line of protection and all other control measures should be in place. • RPE needs to be worn correctly and stored, cleaned and checked regularly to ensure it remains effective. • Face-fit tests will be carried out to ensure correct size is selected for the wearer. Site will have personnel trained to carry this out. • Ensure the assigned protection factor is above the calculated value – checking the SDS.

Dust Inspection & TBTs	• All employees shall be provided with an appropriate induction and ongoing briefings and tool box talks (TBT) regarding management of environmental issues (ie. dust mitigation measures required from the works they are carrying out, etc.); • Weekly dust site inspections shall be carried out to monitor compliance with air quality and dust control procedures, and to monitor site outside the work site; • Records of inspection results shall be maintained within the respective site offices, and make available to the local authority when asked; • When activities with a high potential to produce dust and emissions are being carried out during prolonged dry or windy conditions, daily dust inspections at the boundary of such activities shall be completed to ensure dust and emissions are controlled; • Record any exceptional occurrences causing dust episodes on or off the site and the action taken to resolve the situation; • In the event of non-compliance with the agreed thresholds, obvious visual impacts and/or complaints, the following measures shall be implemented: Immediately undertake an investigation of activities on site to ascertain whether any visible dust is emanating from the site or activities are occurring that are not in line with dust control procedures; If on-site sources are identified as breaching the agreed thresholds, the relevant activities shall be rectified and/or suspended where practicable until remedial measures can be implemented; Actions shall be recorded in a site logbook; The activity shall then be monitored to ensure that the mitigation measures are working ad that there is no repeat incident; If the cause of the alert is not related to site operations, the outcome of any investigations shall be recorded in the site logbook.
Monitoring	• Noise and dust monitors will be installed along the perimeter of the hoarding. • Ongoing visual monitoring to be undertaken by site personnel on regular basis, both on and off site to ensure no migration of dust • Regular liaison with the Council's EHO and Client to be undertaken throughout the project • Regular reviews of mitigation methodology to be undertaken by Environment Manager and Project Manager

5.3 Noise and Vibration

Noise and vibration will be managed by applying best practicable means as defined under Section 72 of the Control of Pollution Act (COPA) 1974, to all activities, including the following:

- Carefully select equipment and construction methods to reduce noise and vibration.
- Use of hoardings or screens as noise barriers.
- Locate plant as far as reasonable practicable from receptor.
- Ensure that plant is shut down when they are not in use.
- Construct temporary infrastructure (e.g. haul roads) of materials that minimise noise and vibration.
- Monitor the noise levels regularly to confirm the noise level of site activities.
- Include noise minimisation practice in induction.
- Liaise with the community to provide information of the noisy work activities and their durations.
- Arrange delivery times to suit the area.

Specific requirements will be outlined in the Section 61 once granted by London Borough of Haringey Council.

Table 1: Ambient noise levels measured during unattended survey

Date	Daytime (07:00 – 23:00) $L_{Aeq, 16h}$ dB	Night (23:00 – 07:00) $L_{Aeq, 8h}$ dB
Thursday 11th January	-	61
Friday 12th January	65	61
Saturday 13th January	65	61
Sunday 14th January	63	62
Monday 15th January	65	60
Tuesday 16th January	-	-
Average	65	61

Attended sample measurements were also undertaken to determine the existing noise levels from road traffic, pedestrians and other significant noise sources in the area. Measurements (L1 – L5) were undertake for the Island Sites on 11th, 16th and 22nd January 2018.

The dominant noise source observed at the Site during the surveys was noted to be road traffic along nearby roads which are relatively heavily trafficked carrying cars, buses, lorries and emergency vehicles throughout the day and night.

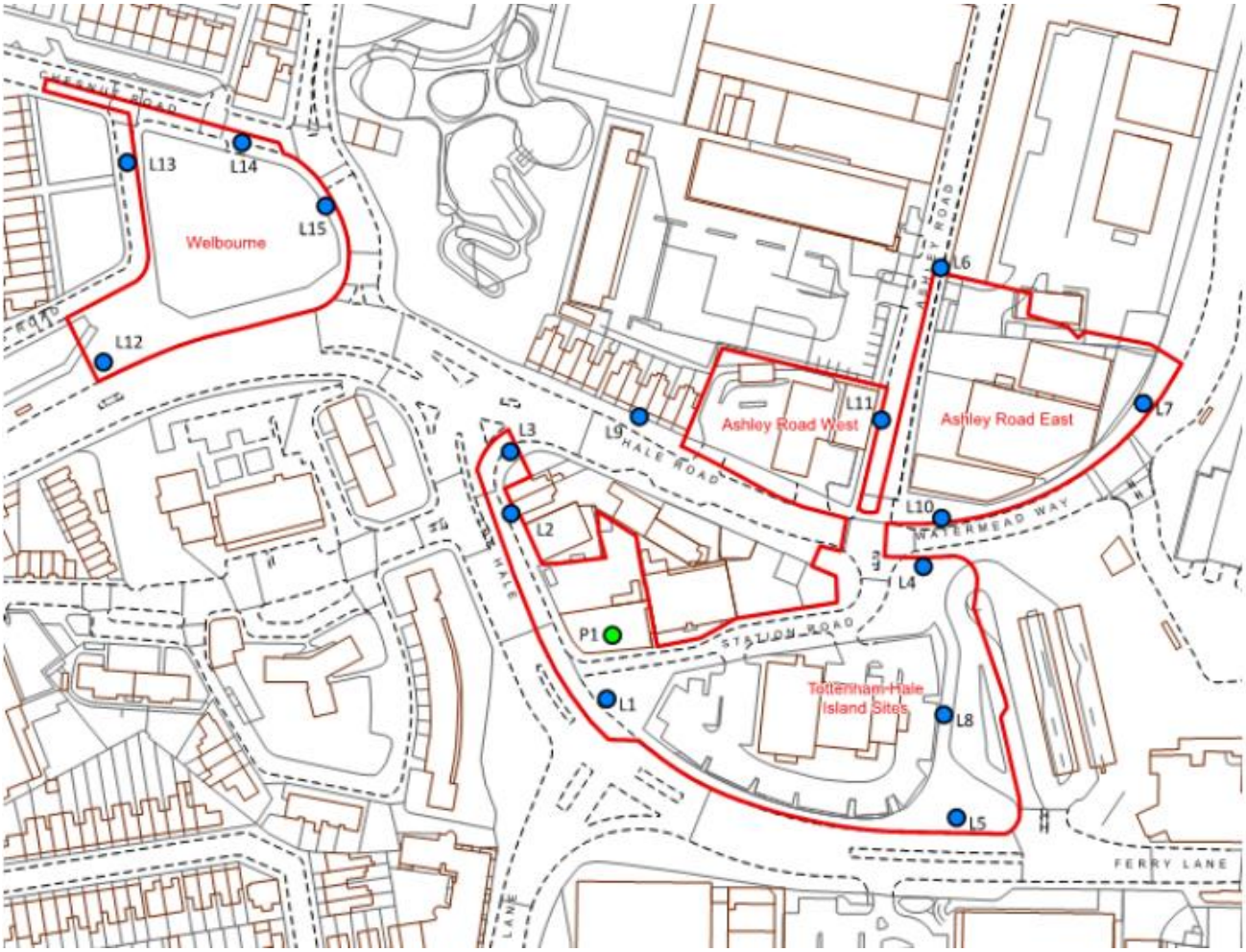


Figure 2: Attended Noise Sample Measurement Locations

The representative background sound levels from the unattended measurements were $L_{A90,\,15min}$ 58 dB during the day, and $L_{A90,\,15min}$ 49 dB during the night. Attended sample measurements indicate that typical background sound levels are the Island Sites vary between L_{A90} 58-65 dB (daytime) and L_{A90} 48-61 dB (night time).

Midgard will work towards a daily average (10 hour) noise level of 75 dB $LA_{eq,\,T}$ in line with best practice during the construction phase, aiming for no one hour periods to raise above 80 $LA_{eq,\,T}$.

The full programme length for the project is 148 weeks. Midgard have split this into key areas of development works:

- Enabling work – 13 weeks
- Substructure - 40 weeks
- Superstructure – 55 weeks
- Façade installation - 69 weeks
- Fit-Out - 87 weeks

The types of plant and machinery that are likely to be used on-site per development works activity are included in the below table. The noise levels have been taken from BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites.

	Assumptions: BS 5228 Noise Level dB(A) @10m	Percent on-times assumptions
Groundworks		
Excavator	75.0 dB(A)	30%
Generator	73.0 dB(A)	100%
9T Dump truck	79.0 dB(A)	20%
20T Tracked excavator	74.0 dB(A)	30%
7T Roller	68.0 dB(A)	30%
Concrete mixing	77.0dB(A)	60%
Concrete pump	78.0 dB(A)	30%
Deliveries and muck away	78.0 dB(A)	20%
Superstructure		
Poker Vibrator	76.0 dB(A)	40%
Petrol Saw	86.0 dB(A)	5%
50T Mobile Crane	84.0 dB(A)	60%
Concrete mixing	77.0 dB(A)	60%
Concrete pump	78.0 dB(A)	50%
Deliveries	78.0 dB(A)	20%
Hand tools and material handling	77.0 dB(A)	5%
Scaffolding		
Fork lift	76.0 dB(A)	20%
Deliveries	78.0 dB(A)	20%
Hand tools and material handling	77.0 dB(A)	5%
Roof Works		
50T Mobile Crane	84.0 dB(A)	40%
Fork lift	76.0 dB(A)	20%
Petrol Saw	86.0 dB(A)	5%
Deliveries and muck away	78.0 dB(A)	20%
Hand tools and material handling	77.0 dB(A)	5%
Façade		
Fork lift	76.0 dB(A)	20%
Chop Saw	78.0 dB(A)	5%
Deliveries	78.0 dB(A)	20%
Hand tools and material handling	77.0 dB(A)	5%
Externals		
Excavator	75.0 dB(A)	30%
Generator	73.0 dB(A)	100%
9T Dump truck	79.0 dB(A)	30%
20T Tracked excavator	74.0 dB(A)	30%
7T Roller	68.0 dB(A)	30%
Concrete mixing	77.0 dB(A)	60%

Concrete pump	78.0 dB(A)	50%
Deliveries and muck away	78.0 dB(A)	20%

Midgard will carry out 24-hour noise and dust monitoring using Class 1 noise monitors, situated across the development. This data will be reviewed regularly by the Environmental Manager and shared with the site management team. Notifications will be sent to the Environmental Manager and site team when exceedances occur. This allows the team to temporarily stop noisy works and review the noise levels and works being carried out. Using our noise monitoring data, we will undertake noise modelling to predict noise levels at the sensitive receptors highlighted in section 5.0.



Figure 3: Preliminary current noise modelling with key sensitive receptors

Midgard will commit to suitable limits for dust once background dust monitoring has been carried out. Midgard will have noise and dust monitors on site at minimum 2 weeks prior to works commencing.

To mitigate noise levels, the Midgard team will:

- Use temporary screens during construction activities which are taking place within close proximity to noise sensitive receptors.
- All machinery will be regularly maintained to control noise emissions, with particular emphasis on lubrication of bearings and the integrity of silencers.
- Site staff will be made aware that they are working adjacent to a sensitive area and avoid all unnecessary noise due to misuse of tools and equipment, unnecessary shouting and radios.
- As far as possible, the avoidance of two noisy operations occurring simultaneously in close proximity to the same sensitive receptor.
- Ensure engines are turned off when possible.

- Where reasonably practicable, plant and or methods of work likely to cause significant levels of vibration at the receptors identified will be replaced by less intrusive plant/methods of working.

Site construction methods will take into account the need to minimise vibration and be based on best practice industry practices. In the phases of works where vibration due to site activity is not anticipated and no monitoring is deemed required, Midgard will make provisions to ensure monitoring can be set up to investigate reasonable complaints from the neighbourhood.

5.4 Light Disturbance

The surrounding vicinity to the site currently creates a significant amount of light pollution. Any further task lighting required on the project is not expected to cause a nuisance. All task lighting, however, will aim to minimise the impacts of light spillage on adjacent retained habitats as far as reasonably practicable by ensuring any security lighting that is left on overnight is kept to a minimum and away from any sensitive receptors. Lighting will be timed to be off outside of normal working hours.

6.0 Waste Management System

A Resource Management Plan will be completed when we confirm our waste management suppliers. It will contain:

- Procedures and commitments for minimising non-hazardous waste
- Procedures for minimising hazardous waste
- Procedures for monitoring, measuring and reporting hazardous and non-hazardous site waste
- Procedures for sorting, reusing and recycling construction waste into defined waste groups, either on site or through a licensed external contractor
- The name or job title of the individual responsible for implementing the above
- Identification of the key refurbishment/demolition materials.
- Potential applications and any related issues for the reuse and recycling of the key refurbishment and demolition materials.
- Target of > 90% (by tonnage) of non-hazardous construction waste shall be diverted from landfill

6.1 Disposal of Non-Hazardous Waste

All non-hazardous waste will be removed from site within strict adherence to all waste legislation requirements, including Duty of Care Regulations. Prior to any agreed use of hauliers or waste disposal sites, the appropriate licences will be thoroughly checked to ensure that particular waste streams can be accepted and carrier licences are valid. This can only be undertaken by authorised personnel and copies of all necessary licences must be retained on site at all time and reviewed for expiry. No waste will leave site without appropriate waste transfer notes. It is essential that all waste transfer notes are inspected for detail and must contain the correct description of waste as well as the correct waste code, in line with the List of Waste Codes Regulations.

6.2 Disposal of Hazardous Waste

The Project Manager will ensure that the hazardous waste is segregated, stored safely and that measures are implemented to avoid contamination of other waste. This will be achieved using Powerday's mixed COSHH

bins or "Hazibags" which are flexible intermediate bulk containers (IBC) which is UN approved for Packing Groups II and III. No hazardous waste will leave the site without the correctly completed Consignment Note. The consignment notes must contain all necessary information including waste description and hazardous waste registration number. Any carriers removing hazardous waste must have appropriate licences and disposal sites must be verified to be able to accept waste being sent. These checks and signing of consignment notes can only be undertaken by authorised personnel. All hazardous waste must be stored on site in appropriate, covered or locked skips. No mixing of hazardous and non- hazardous waste is authorised.

In both instances above waste disposal options will look to ensure minimal transportation requirements where financially viable.

6.3 Waste Reporting, Records and Location

All waste transfer / consignment notes will be held on site throughout the duration of the project. It is a legal requirement for all WTNs to be kept for a minimum of two years and WCNs for a minimum of three years. Each waste transfer will be fully documented and the Resource Management Plan updated accordingly with waste carriers and disposal details.

7.0 Water

Erection of concrete structures during the construction will be monitored to prevent associated contaminated material entering any watercourses. Pre-cast work or permanent formwork will reduce the amount of in-situ concreting required. Washing out of concrete wagons or other equipment used in concreting operations will be undertaken in designated contained washout areas. These will be located away from all watercourses and drains and will be impermeable to prevent infiltration to ground.

Where stockpiles have to be located with a direct path to a watercourse a bund will be in place to reduce all pollution risks.

The positioning of fuel storage tanks and other potentially polluting materials and maintenance/refuelling facilities will be on bunded areas of hard standing with dedicated drainage systems. All fuels and oils will be secured within a bunded area and the secondary containment system must provide storage for at least 110% of the tank's maximum capacity. Stored materials on site will be checked regularly for containment integrity (both primary and secondary), quantity stored and security of storage.

Spill kits will be made available, and site operatives trained in their use, to deal with any spillages. All spill kits will be fully stocked and kept dry at all times.

8.0 Transportation and Traffic Management

The Construction Design and Management Regulations 2015 Regulations 17, 27 and 28 states that it is the responsibility of the Principal Contractor, for controlling the access onto site, vehicles, the boundary of the site and the security and the traffic routes. This project will have a Traffic Management Plan, which will have a review process at the appropriate times and continue to be a live document throughout the many changing faces of this contract

The main aim of the regulations is to ensure that by giving adequate consideration to the use of and the movement of vehicles and pedestrians at the planning stage, many of the risks posed by site traffic can be minimised or avoided. This plan will also be cross-referenced in other documents such as the:

- Traffic Management and Logistics Plan
- Construction Phase Health & Safety Plan

- The Fire and Emergency Plan.

A traffic management plan has been implemented on the site. The plan outlines timings of deliveries and routes to be taken by hauliers and workers to ensure minimal disruption to local residents and businesses. This will include potential risk for noise disturbance as well as minimising additional traffic during peak periods.

We are committed to encourage our employees to utilise active travel methods and to not travel via private car to work. There is no parking available in the nearby roads (adjoining the site) for any construction traffic related to the site.

8.1 Traffic Routes

The traffic management plan requires that the works will be organised in such a way that the traffic routes are suitable for the passage of vehicles using them with regard to locations and width of lanes.

Traffic routes will not be approved unless:

- Vehicles can use the traffic route without causing danger to themselves or other road user.
- Pedestrian access or egress is sufficiently separated from vehicle routes as will enable the pedestrian to see any approaching vehicle or plant.
- There is sufficient separation between vehicles and pedestrians, or where this is not reasonably practicable or in an emergency there are other means for the protection of pedestrians;
- There are effective means of warning of the approach of any vehicle.

All vehicular traffic will approach the project from the North along the A406 (North Circular), then down Watermead Way as the artery into the project area, partially on The Hale and then onto Ferry Lane to access the pit lane.

8.2 Vehicles

Any vehicle being used for construction work will:

- Be driven in a manner that is safe.
- Be loaded in a way that it can be driven, operated or towed safely.
- Have suitable steps taken to prevent unintended movement of the vehicle.
- Have the person in control of the vehicle the capability to give adequate warning to any person liable to be at risk from the movement of the vehicle.
- Be fully aware of weight restrictions and exclusion zones on the site.
- Be fully aware of the TM plan speed restrictions on approach to the site and speed restriction on site - 5mph.

To that end no person shall;

- Be allowed to ride on, or in a vehicle unless a proper place has been provided for that purpose.
- Be required or permitted to remain on any vehicle during the loading or unloading of any loose material, unless a safe place has been provided for that purpose.

Where any vehicle is being used in the proximity of any excavation, pile-bores, edge of ramp or embankment, suitable and sufficient measures will be taken to prevent the vehicle overrunning the edge or falling in the bore.

All vehicles will comply with the rules of London's Ultra Clean Emission Zone. Vehicles which don't meet the criteria will be charged. All JRL vehicles will comply with the following criteria:

- Diesel – Euro 6 (VI) standard or better (roughly end of 2015 onwards);
- Petrol - Euro 4 standard or better (roughly 2006 onwards);
- Gas – Euro 6 (VI) standard or better;
- Fully electric or hydrogen fuel cell – all are compliant and avoid CAZ charges;
- Hybrid electric – the diesel/petrol engine must meet the relevant criteria above.

Vehicles delivering to site should be a minimum of FORS Silver.

Anticipated traffic movements will vary throughout the programme period, as will the size and type of vehicle. As a general rule the number and size of vehicles will be greater during the earlier phases of the project whilst our scope of the ground and structural works are underway. Traffic will decrease as the internal and finishes works are carried out.

Table 2: Anticipated Vehicle Movements

Construction Phase	Programme	No. of Trips (Monthly)	Peak no. of Trips (Daily)
Site Setup	Q3 2022 – Q4 2022	550	25
Basement Excavation and Piling	Q3 2022 – Q1 2023	1,400	64
Substructure	Q1 2023 – Q3 2023	1,400	64
Superstructure	Q2 2023 – Q4 2025	1,300	59
Façade	Q1 2024 – Q3 2025	700	32
Fit-out, Testing and Commissioning	Q2 2025 – Q4 2025	700	32

8.3 Site Entrances and Security

There will initially be one access gate to Ferry Lane. Approval in principle has been granted to install a pit lane on Ferry Lane. Site will utilise 2 no. access and 2 no. egress gates during the build programme.

In addition the pedestrian access to the site is via a separate entrance gate with biometric controlled turnstiles. The pedestrian entrance will always be as close as possible to the welfare facilities to allow a safe access to these facilities for the operatives to change and ensure they have the correct Personal Protective Equipment on prior to entering the site itself. At the site entrance any visitors will be ushered through a safe segregated walkway to the site offices to meet with the site management for a site induction.

The site boundary will be secured to prevent unauthorised access by a plywood hoarding of a surface density of no less than 7 kg/m^2 of 2.4m high. Consideration will be given to the location of climbing aids, such as street furniture and utility boxes and hoarding extended where required. Hoarding licences will be obtained from London Borough of Haringey Council. Where hoarding creates poorly lit walkways, Midgard will install bulkhead lights.

The gates will be controlled all the time via the Gatemen/Traffic Marshals. When the gate is not in attendance then the gates shall be closed.

8.4 Logistics and Delivery

All delivery vehicles will drive into site with the assistance of the traffic marshal to the designated loading/unloading area. Traffic marshals will halt pedestrians and cyclists while vehicles are entering and leaving the site. Once the vehicle is unloaded or loaded, the vehicle will leave site under the Traffic Marshal's guidance.

As a general rule, construction vehicles will only be allowed to park on site for the purposes of loading and unloading. The Traffic Marshal will be responsible for the control and coordination of all aspects of material deliveries and movement. Tower cranes may be utilised to facilitate easy and quick unloading of delivery vehicles.

When vehicles are entering or leaving the site, these will be supervised by a Traffic marshal. With regard to cyclist safety, our banksman will pay special attention to any pedestrians or cyclist when vehicles are moved onto or off the site.

Mud and debris on the road is one of the main environmental nuisance and safety problems arising from construction sites. Midgard will make provisions to minimise this problem. In the early stages of the project when ground works are being carried out, the area outside the vehicle gates will be constantly swept and washed down. If necessary jet washers will be used to wash down all vehicles that enter/leave the construction site. We will also make provision for cleaning the adjoining roads daily and as required by an approved road sweeper. We will insist on all muck away lorry's be fully sheeted to minimise the risk of any mud over-spilling onto the highway.

We will consider spraying a fine spray to suppress dust on the following:

- Unpaved areas that are subject to traffic or wind.
- Sand, spoil and aggregate stockpiles.
- During loading/unloading of dust generating materials.

Key phases of the logistics plan are shown in figures 4, 5, 6, 7 and 8 below.



Figure 4: Site Logistics Plan - Weeks 1-4



Figure 5: Site Logistics Plan - Weeks 23-27



Figure 6: Site Logistics Plan - Weeks 47-64



Figure 7: Site Logistics - Week 135

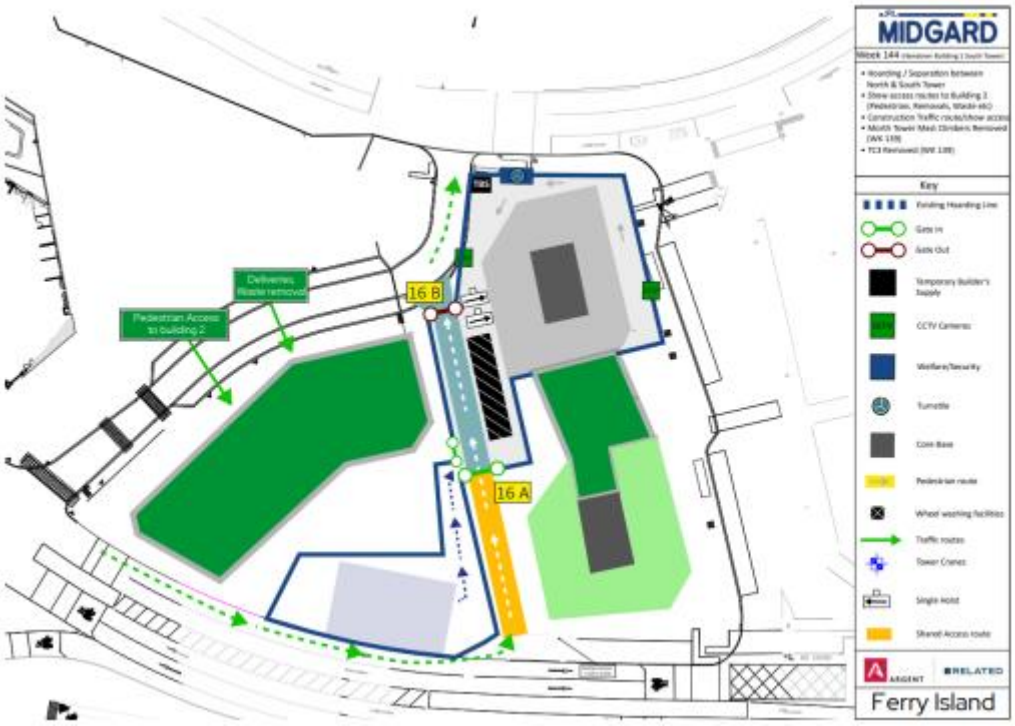


Figure 8: Site Logistics Plan - Week 144

8.5 Delivery Management System

Datascope, a site wide electronic delivery management system will be used on this project. All deliveries will be booked in advance so that they are timed to prevent a backlog of vehicles and disruption to surrounding area. Traffic Marshals will make sure, as far as practical that only booked deliveries to site are accepted and any vehicles attempting to deliver without complying with this system will be refused access, within reason.

All plant deliveries will be coordinated to be delivered out of peak times, whenever practical, to avoid any congestion and to avoid key operational periods. This policy will be communicated to our supply chains and we will check compliance with these procedures and follow up with any sub-contractors and suppliers who fail to adhere to these rules.

The delivery of all materials, plant and equipment will be pre-planned and arranged with designated times of the day according to the construction programme to minimise the impact on the local area. Vehicles will not be permitted to enter the Site before 8am, unless a specific requirements are in place, for example large abnormal loads. All goods deliveries will be to designated areas on Site where all vehicles will be unloaded with the materials taken to the appropriate storage area immediately.

8.6 CLOCS Champions and FORS

The JRL Group are committed to actively promoting and implementing the Construction Logistics and Community Safety (CLOCS) standard as CLOCS Champions. As both a principal contractor and fleet operator, we want to develop and implement the safest site and minimise the impact on the community. Site-specific Construction Traffic Management and Logistics Plans are created with each phase of the build sequence taken into account. At each phase we ensure stable loading/unloading areas, competent traffic marshals and a safe and suitable 'last mile' route. Our logistics teams on site complete gate checks of vehicles

and their drivers to monitor compliance against the CLOCS standard. The JRL Group fleet is also accredited to FORS Gold.

Primary goals of the CLOCS standard:

- Zero collisions between construction vehicles and the community
- Improved air quality and reduced emissions
- Increased efficiency
- Fewer vehicle journeys
- Reduced reputational risk

8.7 Construction Worker's Travel Plan

A robust, realistic and achievable travel plan is considered crucial in encouraging sustainable travel choices by those visiting the site. The aims of the Construction Worker's Travel Plan are to consider the safety and travel patterns of other road users and pedestrians and ensure the environmental and highway capacity impact is minimised. Reducing single occupancy private vehicle trip will support the mitigation of potential impact on the temporary increase in the number of traffic movements on the local road network during construction.

During peak travel workers on site will in large be travelling during the peak hours of 6:30 to 8:30 and 17:00 to 19:00 Monday to Friday.

Midgard are committed to encourage our employees to utilise active travel methods and to not travel via private car to work. There is no parking available on site or in the nearby roads (adjoining the site) for any construction traffic related to the site.

The development is well served by public transport, achieving a PTAL rating of 6a, with convenient access to, London Underground, Network Rail services, London Overground and a number of bus services, it is therefore expected of our workforce to utilise these.

- Tottenham Hale Underground – 170m away
- Tottenham Hale Station – 200m away
- Bruce Grove – 1000m away

Safe and secure cycle parking will be provided to promote cycling to work. There are several local roads which have been designated by TfL as roads which are appropriate for use by cyclists including Cycleway 1 and Cycleway 24.

Information on active travel methods will be shared with the workforce during the site's induction and site notice boards.

To enable specific actions to be monitored, travel surveys will be undertaken to monitor the effectiveness of the plan and to evaluate changes in travel patterns.

8.8 Non-Road Mobile Machinery (NRMM)

Similarly to the Ultra-Low Emission Zone, the Non-Road Mobile Machinery (NRMM) low emission zone requires that all engines with a power rating between 37kW and 560 kW meet an emission standard based on the engine emission "stage". The power rating can be found on the machine's Vehicle Identification Number (VIN) plates.

NRMM requirements will be met to Stage IV or above. Records will be retained by the Environmental Advisor and reported on the Mayor of London's NRMM portal.

Machines that are not staying on-site for more than 5 days, do not need to be registered. These 5 days are cumulative until the end of the project's duration.

NRMM is defined as any mobile machine, item of transportable industrial equipment, or vehicle (with or without bodywork) that is:

- Not intended for carrying passengers or goods on the road
- Installed with a combustion engine – either an internal spark ignition petrol engine or a compression ignition diesel engine.

Typical machinery required to be registered include:

- Excavators
- Dumpers
- Piling rigs
- Generators
- Mobile cranes
- MEWPs
- Static pumps
- Compressors
- Telehandlers

The plant ID and engine Type Approval Number (TAN) is required for logging the machine on the NRMM portal.

Where an emergency arises on site (eg. site flooding) a short term exemption can be applied for enabling non-compliant NRMM to remain on site for up to 30 days.

9.0 Land Contamination

Where there is potential for contaminated materials to be removed from site, stockpiling of such material will be kept to a minimum and the storage area must be secure to ensure it does not pose risk of leaching into any water courses. When disposing of any contaminated wastes, carriers and disposal sites must be verified for the type of waste stream prior to any removal being undertaken. Prior to any soils being removed from site, a comprehensive test will be carried out to determine whether the soils are inert/hazardous or non-hazardous. The results of this testing will determine which disposal route is most appropriate.

9.1 Planning Conditions

The development works will comply with the requirements of the contamination-related planning conditions (HGY/2018/2223) –

Condition B19:

"The Plot B development hearby permitted may not commence, other than for investigative work, until a monitoring and maintenance plan in respect of contamination within Plot B, including a timetable of monitoring and submission of reports to the Local Planning Authority, has been submitted to and approved in writing by, the Local Planning Authority. Reports as specified in the approved plan, including details of any

necessary contingency action arising from the monitoring, shall be submitted to, and approved in writing by, the Local Planning Authority."

Condition B20:

"If during development, contamination not previously identified is found to be present as Plot B then no further development in respect of that Plot (unless otherwise agreed in writing with the Local Planning Authority) shall be carried out until a remediation strategy detailing how this contamination will be dealt with has been submitted to and approved in writing by the Local Planning Authority. The remediation strategy shall be implemented as approved within Plot B."

Condition B24:

a) "Using the information obtained from the previous assessments, an additional site investigation, sampling and analysis shall be undertaken at the Plot as appropriate. The investigation must be comprehensive enough to enable:
   i. A risk assessment to be undertaken
   ii. Refinement of the Conceptual Model
   iii. The development of a Method Statement detailing the remediation requirements
b) If the risk assessment and refined Conceptual Model indicate any risk of harm, a Method Statement detailing the remediation requirements is respect of the Plot, using the information obtained from the site investigation, and also detailing any remedial monitoring shall be submitted to, and approved in writing by, the Local Planning Authority prior to that remediation being carried out on the Plot."

Condition B25:

"Where the contaminated land condition above demonstrates that remediation of contamination on the Plot is required, completion of the remediation detailed in the Method Statement shall be carried out and a report that provides verification that the required works have been carried out, shall be submitted to, and approved in writing by the Local Planning Authority before the development is occupied within Plot B."

9.2 Ground Conditions

The geology of the area comprises Made Ground overlying superficial deposits of Enfield Silt and River Terrace Deposits. The London Clay is at depth and in the order of 15m thick, underlain by the Lambeth Group, Thanet Sand and White Chalk.

9.3 Contamination

9.3.1 Soil

There was no olfactory or visual evidence of contamination in the soil samples inspected. The test results indicated that concentrations of metals and inorganics are generally within the range that would be expected for general Made Ground with some localised elevated lead results.

9.3.2 Groundwater

Due to the Ferry Island plot being in use by two food outlets and an electronics retailer the investigation was limited to a single borehole FI-BH03 which was installed with a shallow groundwater/gas monitoring standpipe. Elevated concentrations of chlorinated hydrocarbon volatile organic compounds (VOCs) and ammonia were identified within the single groundwater sample taken from FI-BH03. The concentrations of VOCs identified could present a risk to human health via the vapour inhalation pathway and to groundwater

receptors. The source of the contamination was unknown. Additionally a concentration of lead in Made Ground exceeded the generic assessment criteria for public open space. The presence of existing infrastructure restricted the number of exploratory holes that could be drilled at the time.

9.3.3 Ground Gas Monitoring

Ground gas monitoring results would place the plot into Characteristic Situation (CS1) which would not require gas protection measures to be installed.

9.3.4 Existing Below Ground Structures

During investigations, two boreholes EBH105 and EBH 105A were aborted at 1.10m and 0.45m depth respectively due to presence of concrete and steel tank obstruction. Two underground storage tanks, assumed to be associated with the former garage onsite were uncovered. It is understood that they could not be removed due to their location and remain in-situ. The presence of these existing below ground structures and infrastructure may have implications for the development and should be appropriately investigated and removed.

9.4 Verification

9.4.1 Watching Brief

It is expected that a watching briefed will be maintained in order to address previously unidentified contamination.

9.4.2 Imported Top Soil

A clean fill (minimum 600mm thickness) with a geotextile liner should be used in all areas of sift landscaping with verification testing provided for the O&M manual.

9.5 Environmental Management during Remedial Works

Measures to prevent the emission of contamination to air and into the wider environment to include (but not limited to):

- Damping down of dry soils/Made Ground materials;
- Odour suppression as necessary during excavation of potentially contaminated materials – damping down and / or misting as appropriate;
- Asbestos in air monitoring during earthworks (including boundary and personal monitoring);
- Use of a wheel wash or road sweeper to address mud on roads;
- Control of water including surface water run-off and water in excavations to prevent escape to adjacent properties and/or watercourses;
- Operation of works only within the times permitted under the planning permission; and
- Details of incident recording procedures.

9.6 Addressing Previously Unidentified "Hotspots" of Contamination

Should an area of contamination be identified by visual or olfactory means during development works, the following procedure shall be followed:

- Immediately stop all works in the area where contamination is suspected
- Immediately inform the Project Manager who should then contact the Environmental Manager and Environmental Consultant
- The Environmental Consultant shall provide a verbal response outlining immediate actions with regard to Site Health and Safety and to limit the potential for contaminants to migrate
- The Environmental Consultant shall judge each occurrence on merit and should it be deemed necessary the Environmental Consultant shall attend Site to oversee the removal of the 'hotspot' and collect validation samples
- Any excavated material should be isolated from all other material at the Site, on plastic sheeting and covered with plastic sheeting until the material can be tested for contamination and an appropriate disposal route can be identified
- Any 'hotspot' stockpiles and excavations should be fenced off, have appropriate signage and their locations recorded on a Site drawing
- Should any excavated material be required to be disposed of at an off-Site location, the material shall be isolated from all other material at the Site prior to disposal at a suitably licensed facility. All documentation associated with the movement and disposal of any such material shall be supplied to the Environmental Consultant shall, including waste transfer documentation;
- Subject to appropriate Site Health & Safety controls (typically comprising fencing off the excavation) the excavation will remain open until the validation has been completed. Alternatively, for Site Health & Safety reasons, it may be necessary to backfill the excavation with Site derived material. In this case, the location of the excavation will be accurately recorded and the excavation reopened if required, based on the validation results
- The Regulatory Authorities shall be informed by the Environmental Consultant shall of any remedial activities required and associated validation testing results. Representatives of these organisations may also wish to visit the Site.

9.7 Unexploded Ordnance (UXO)

Buried UXO can present a significant risk to construction works. The discovery of a suspect device during works can cause considerable disruption to operations. UXO in the UK can originate from three principle sources:

1. Munition resulting from wartime activities including German bombing in WWI and WWII, long range shelling and defensive activities
2. Munitions deposited as a result of military training and exercises
3. Munitions lost, burnt, buried or otherwise discarded either deliberately, accidentally or ineffectively.

The site has moderate risk. Site specific UXO awareness briefings will be given to all personnel conducting intrusive works. If unexploded ordnance is discovered, works should stop immediately, prevent access to the area and inform the police.

10.0 Wildlife and Natural Features

The protection of the wildlife and natural features must be adopted on site to ensure that construction activities cause the least damage to the surrounding natural environment. Our Project Team will:

- Liaise with subcontractors to ensure that their activities will not be damaging the flora and fauna on site.
- If protected species are discovered during construction, work will be stopped immediately.
- When trees are found on site, Tree Preservation Order (TPO) is applicable.

10.1 Designated Sites

10.1.1 Statutory Designated Sites

There are four sites with European or National statutory designation and one Local Nature Reserve within 2 km of the site:

- Lee Valley SPA located 0.8 km to the east
- Lee Valley RAMSAR site located 0.8 km east
- Walthamstow Marshes SSSI located 0.8 km east
- Walthamstow Reservoirs SSSI located 0.8 km east
- Springfield Park LNR located 1.8 km south

10.1.2 Non-statutory Designated Sites

There are twenty-one non-statutory designated sites within 2 km of the site. The two closest non-statutory designated sites are:

- Tottenham Railside's SINC (Borough Grade II) located 0.3 km to the east
- Down Lane Recreation Ground Site of Importance for Nature Conservation (SINC Local) located 0.4 km to the north east.

10.2 Habitats

The site is situated in a highly urbanised environment with areas of mature broadleaved trees and juvenile saplings, tall ruderals, scattered scrub, amenity grassland, bare ground with built structures and hardstanding.

10.3 Trees

There are some off-site street trees immediately adjacent to ARE and to the rear of ARW that will be retained as part of the redevelopment. The retained trees will be managed during the construction period to ensure they remain safe. All works on site near trees to be retained will be to British Standard BS 5837: 2012.

10.4 Nesting Birds

Under Part 1 of the Wildlife and Countryside Act 1981, disturbance to nesting wild birds, their nests and eggs is a criminal offence. A wild bird is defined as any bird of a species which is resident in or is a visitor to the European Territory of any member state in a wild state. Appropriate steps must be taken by the developer and contractor to ensure nesting birds, their nests and eggs are not disturbed and are protected until such time as they have left the nest. The nesting season is normally taken as being from 1st March - 30th September.

10.5 Badgers and Other Wild Mammals

Measures should be implemented to safeguard wild mammals, including badgers, should they enter or utilise the site during the construction works, and to discourage wild mammals from entering the site. This can be achieved by implementing the following mitigation measures:

- Trenches or pits left overnight should be provided with a means of escape for wild mammals should they enter such as a collapsed edge or a flat roughened stable plant (no steeper than 45°) acting as a ramp to the surface.
- Pipes should be capped off overnight to prevent animals entering and becoming trapped.
- All trenches and pits will be inspected each morning to ensure no wild mammals have become trapped overnight. Should a badger become trapped in a trench it will likely dig itself into the side of the trench. Should a trapped badger be encountered, a suitably qualified ecologist should be contacted immediately for further advice.
- The prolonged storage of uncontained and uncovered topsoil in piles on site should be carefully considered and possibly fenced-off if needed as these are readily adopted by burrowing animals such as foxes (*Vulpes vulpe*) for dens.
- Chemicals should be contained in such a way that wild animals cannot access or knock them over.
- Fires should be avoided altogether within the site.
- Loose litter and food should not be left in accessible areas of the site overnight.

10.6 Bats

During both construction and operation, lighting has the potential to disturb commuting and foraging bats. Key considerations of bat sensitive lighting strategy will be:

- Type of luminaire – low pressure or high pressure sodium lamps have the lowest impact on the bats
- Avoidance of light spill – External lighting should only be used in areas where it is required for health and safety reasons. Hoods and cowls for lamps can be installed to focus light on areas where it is required
- Height of lighting column – in general, the lower the height of lighting columns, the lower the impact on foraging and commuting bats;
- Light levels – Lighting should be at the lowest levels allowed, whilst not compromising health and safety.

11.0 Resource Use

JRL Group in line with our Sustainable Procurement Policy and Sustainable Procurement Plan will ensure, where practicable, the use of recycled or sustainable materials sourced from a responsible source, where possible BES 6001 certified. Furthermore, in line with company protocol, all concrete should be obtained from a certified sustainable source, wood must have chain of custody documentation and be FSC/PEFC certified and steel should have CARES Sustainable Constructional Steel or similar certification.

There is little space on site for the storage of bulk materials, therefore deliveries will be scheduled on a "just-in-time" basis. A dedicated area will be maintained for storage of all materials and due care and appropriate

handling will be undertaken at all times to reduce any risk of damages and wastage. Packaging of items should not be removed until required, to ensure maximum potential for returning of unused goods.

Midgard will ensure the site maintains "good housekeeping" at all times during the construction process. This will include, but not limited to:

- Open fires are prohibited at all times
- Rubbish will be removed at frequent intervals with segregation of waste streams where possible
- Site will be kept clean and tidy
- Hoarding line will be inspected, repaired and re-painted as necessary
- Welfare facilities will be kept clean with canteen/food waste disposed of within a covered skip
- A smoking and vaping area will be provided within the welfare area with suitable disposal facilities
- Public highways/pedestrian footpaths within the vicinity of site will be kept clean by use of jet washes and road sweepers
- Pest control if required.

12.0 Energy Consumption and Monitoring

The JRL Group seek to reduce the emissions of greenhouse gases from the construction process, and therefore look for ways to reduce energy use. Sources of emissions contributing to the JRL Group's carbon footprint include:

- Electricity supply for site accommodation and site works – temporary building supply (TBS) applied for at the earliest opportunity
- White diesel or alternative fuels used in site plant and generators (if required)
- Petrol and diesel used for commuting and business travel including transportation of plant and materials to site and collection of waste from the project
- Water supply and waste water treatment.

"Switch it Off" schemes and other energy saving campaigns shall be implemented on site to encourage all personnel to consider their carbon footprint. Use of car sharing and buses shall be encouraged as outlined in the CTMP. Posters shall be clearly displayed within the site offices to ensure all personnel are aware of the CTMP requirements. This shall also be covered within the site induction and regular toolbox talks held relating to the subject.

Data relating to the environmental KPIs (eKPIs) – electricity, fuel and water consumption is collected monthly and displayed on the environmental board in both technical and non-technical format.

13.0 Community Liaison

The Site Manager will take charge of all day to day liaisons, with further support from the health, safety & environmental team who will be on site on at least monthly basis. A quarterly newsletter, outlining progress, potential disturbances and contact details will be distributed to neighbouring properties, as well as displayed on the sites notice board. The site notice board will also display Contact details for the general public to be able to contact the contractor and ask questions, queries or file a complaint. Further letters will be delivered if any works are to be carried outside of normal working hours (as agreed with London Borough of Haringey Council) or are especially disruptive.

13.1 Complaints Procedure

A complaints procedure will be implemented across the site and will provide a mechanism for local stakeholders to raise the concerns about the project and to receive feedback once those complaints are investigated and closed out.

Midgard's site management team and the health, safety & environmental team will to work in collaboration with the Client and the local community. Contact details for the project's community representative will be made available on the site contact boards and regular newsletters.

Emergency out of hours contact will be the Project Director Donal Reale, 07787 515 097 and the onsite security.

When a complaint is received the following actions will be taken:

- All complaints must be forwarded to the health, safety & environmental team and to London Borough of Haringey Council as soon as they are received regardless of how they are received, the Environmental Protection team will be copied in to all complaints regarding noise, vibration, light and dust;
- The site's community representative will record complaints in a site complaint register and this will include time, date, complainant and nature of complaint, and the initial response;
- Where the complaint is in relation to noise, the works will be stopped immediately;
- The site's community representative will initially respond to the complainant within 24-hours of the complaint being raised;
- The site's community representative will review details of activities from the site logs/ from the area involved and this will include details of any site monitoring details from the environmental team;
- An initial root cause investigation will be undertaken with works restarted where the issue can be resolved immediately. Where this is not possible a revised plan of action will be initiated, which could include a modification of the task involved, a change in timing or the implementation of additional mitigation measures. Issues will be escalated to the Health, Safety & Environmental Director, Site Management and the Client where necessary; and
- The site's community representative will contact the complainant to describe what has been done and to check for further concerns.

If the complaint has been resolved, the complaint record will be closed.

The site management team and health, safety & environmental team will review the complaints register on a regular basis to identify any common trends as part of the overall environmental auditing process.

13.2 Considerate Constructors Scheme

The Site will be registered with the Considerate Constructor Scheme and through compliance with the 'Code of Considerate Practice' will develop sound relations with all stakeholders that may be affected by the work. The project is committed to achieving a score of 40+ in Considerate Constructors visits.

14.0 Site Environmental Documentation

All environmental documentation must be kept on site at all times and be available for inspection by internal and external auditors, as well as the client, council's environmental protection team and management. Where any document is amended, previous versions will be superseded and the Environment Manager notified. Site personnel will be made aware immediately, if any significant changes in works procedures are implemented.

Initial start-up documentation will include the following:

- Construction Environmental Management Pan (CEMP)
- Resource Management Plan (RMP)
- SHE 6E Site Managers Weekly Checklist
- Environmental Emergency Response Plan
- Aspects, Impacts, Risk and Opportunities Register

15.0 Auditing and Monitoring

A regular audit schedule will be set up at project start. This audit schedule will include both internal inspections and audits for the project. It is the responsibility of the site management to ensure all documentation and evidence required for audit purposes is kept up to date and freely available for inspection at all times.

A weekly site inspection using the SHE 6E Weekly Environmental Checklist will be carried out by a Site Manager to ensure environmental risks are being managed appropriately. A monthly scored audit will also be carried out by the Environmental Manager or HSE Manager/Advisor to ensure the Site Manager's inspections are being carried out correctly and the site's environmental performance is in line with company policy. The site environmental management system will be audited to the standards set out by ISO 14001: 2015.

Additional legal compliance audits will also be undertaken at inspection and audit. Any system failures will be documented and appropriate corrective actions issued and implemented. All documents will be filed and retained on site for auditing purposes. Any failure to undertake such monitoring will be deemed as a non-conformance with procedure and appropriate corrective action will be implemented. The action and time limit required shall be specified for each non-conformance and will be addressed as a matter of priority.

16.0 Training and Awareness

All personnel and subcontractors are selected by Midgard and the JRL Group with due consideration of qualifications and experience in line with the JRL Group Sustainable Procurement Plan and Policy. For all personnel, the baseline level of environmental awareness is initiated through the mandatory site-specific inductions and Construction Skills Certification Scheme (CSCS) / Construction Plant Competence Scheme (CPCS) qualification. All site personnel must have the correct CSCS/CPCS card level for their role's duties before commencing works on site.

Prior to commencement of works, a risk assessment and method statement (RAMs) will be provided by the site supervisor. These briefings will cover relevant environmental impacts of the activity to be carried out as well as the procedures that must be followed in the event of an emergency. The training will include reference to the importance of adhering to the contents of the CEMP.

Further training requirements will be identified by the health, safety & environmental team and site supervisors. This will include emergency spill response procedures and awareness training. In addition regular environmental-themed Toolbox Talks (TBTs) will be delivered on site. A minimum of two topics should be covered each month for the duration of the project with additional delivery in the event of an incident, non-conformity or complaint.

General environmental issues, legislative and regulatory requirements will be communicated internally by the issue of internal memos, meetings, training sessions and posters which can be displayed on the environmental board. Key concerns will be raised in Daily Activity Briefings (DABs) and weekly meetings.

17.0 Control of Dust and Emissions

Activity	The Control of Dust and Emissions arising from construction works at Ferry Island
Description	JRL Group intends to use Best Practicable Means BPM, to prevent dust and other pollutant emissions from being carried outside of the site boundary. This method statement is for the duration of the whole contract, but will be reviewed periodically as the contract reaches different milestone stages.
	Pre-Site Preparation All site staff will be fully trained and competent for the role they are to undertake on site. Erect solid barriers to site boundaries. Pre sit planning to ensure all Site fuel, machinery and chemical storage, and dust generating activities should not be located close to boundaries or sensitive receptors where possible. **Haul Roads** The haul roads will be inspected for potholes, puddles and dusty conditions on a daily basis, well maintained haul roads will reduce the dust levels of construction traffic. Dampening down methods will be a road sweeper on the hard stand haul road into site and the public road leading to site. **Site Entrances and Exits** Wheel washing will be in place for leaving vehicles so no fugitive dust particles are taken off site. Vehicles leaving site with dusty or loose material will all be covered before leaving site. **Excavations and Earthworks** All dusty activities should be dampened down, especially during dry and windy weather. Minimise the drop heights to control the fall of materials in the air. Stockpiling will not be required and therefore not permitted throughout the lifespan of the project. **Chutes and Skips**

Securely cover skips where dust or loose detritus can become windblown. Minimise the drop heights to control the fall of materials. Regularly dampen down surfaces within in the skips with water.

Waste Management

A site specific Resource Management Plan has been developed and workers will be briefed on what it stipulates through site inductions and tool box talks.

Hazardous or Contaminated Materials

COSHH assessments will be done for materials coming to site to take into account risks to the workforce from exposure to any harmful substances generated by work activities. All Hazardous materials/waste will be properly signed and segregated. In addition all hazardous materials to site are to have the MSDS stored and available within site office and within COSHH stores in case of emergency.

Dealing with spillages

Use bunded areas wherever practicable. Regularly inspect the site area for spillages, ensuring that spillage kits are readily available. Ensure an update to Spill Pollution Incident Report Plan (SPIRP) is posted in and around the COSHH store and ensure all staff are briefed on it. Clean the spillages using the agreed wet handling methods. These will be in the COSHH assessments once the design has established the exact materials to be used.

Inform the Environmental Agency, London Fire and Rescue Service or the Health Protection Agency [HPA] if harmful substances are spilled.

Tarmac Laying and use of Bitumen

Do not overheat bitumen as this may catch fire and cause smoke; always keep the pots covered with lids.

Use great care in all of the processes to prevent spillages and extinguish any accidental fires immediately.

Noise and CO_2 Emission Controls for Vehicles and Plant Construction Traffic, On or off site

All vehicles are to switch off engines when not in use. A strict 5mph limit will be in place through the site, where possible low sulphur fuel will be used. . All plant must have upward facing exhausts to disperse fumes effectively and equipment well and regularly maintained.

Cutting, Grinding and Sawing

Ensure that power tools have suitable and sufficient extraction or water suppression appliances near to face of the works.

Ensure that the extraction fans and filters on the plant are serviced regularly in accordance with the recommended maintenance regimes. Water suppression equipment should also be regularly maintained to ensure the proper level of protection is given.

Breaking down Piles

JRL Group shall be using a method for breaking down piles designed to crush the pile using hydraulic machine attachments, along with this all the piles will have foam inserts on each up-stand of rebar.

The crush action creates a horizontal cut and foam allows large sections of the pile to be extracted. This method will reduce the airborne dust considerably that is usually generated

	from breaking piles. The pile on occasions may need to be hand trimmed with angle grinder and light breakers. Dust control Both of the aforementioned activities will be subjected to localised water suppression supplied from reusing the ground water from the settlement tank to minimise fresh water use on site. On site soakaways are being utilised for sustainable drainage in addition to this FFP3 rated RPE shall be used by operative whilst using angle grinder.
Responsibilities	**Project Director: Donal Reale** **Environmental Manager: Laura Cabeza Escobar**
Risk Assessments	*See Risk Assessments: - (BO-JRLG-EM-XX-RA-Z-0001) to (BO-JRLG-EM-XX-RA-Z-0010) inclusive*
Controls	Procurement packages will be sent out containing the best practice guidance "The control of dusts and emission from construction and demolition" to the companies who are to make deliveries of materials and plant to site***. Along with this method statement.*** All people are to report to the security main gate for deliveries and visitors to site office. All people coming to site require a site Induction for site workers or site visitors. Site boundaries are to be inspected visually daily and a written inspection every seven days unless adverse weather, or a breach or damage has occurred to the boundary. Pre-planning of deliveries coming to site, must be a strict regime as the site entrance road will not be able to take queuing traffic. Deliveries will be turned away if they cannot be accommodated. Muck away at busy times are to be called on request from the local tip. During wet conditions on site all vehicles will be washed within the wheel wash area. A permanent road sweeper will always be in attendance on site. A site story board telling site operatives and visitors of site activities going on site of the hazards and exclusion zones within the site. Designated smoking areas on site. Smoking anywhere else on site will be instant dismissal. Spill kits will be located near fuel bowsers. Spill kit training and pollution prevention training will be given to all site operatives. If required further dust suppression measures to mitigate dust displacement will be initiated, such as covering up ground or materials, on site, increase water suppression with the use of a mist cannon. Localised dust can be dealt with at source by On-tool extraction: Local exhaust ventilation (LEV) systems can be fitted directly onto tools and works to remove **dust** as it is produced.
PPE Requirements	White Hard Hats for all site personnel with exemption of the mangers/supervisors who will have black. Yellow High Visibility coats or Surcoats to be worn by all with the exemption of traffic banksmen & crane banksmen who will wear orange ones. Steel toe-capped work boots, shoes or wellingtons with Midsole protection strip for all site personnel. Safety glasses and safety gloves are mandatory at all times also. All other PPE / RPE will be identified through risk assessments and specific safe systems of work

Emergency Arrangements	There is an emergency contingency plan that will be available and briefed at induction, but also named people are responsible for carrying out the actions when an emergency occurs. On site there will be trained people for the use of spill kits and the safe disposal. Trained fire marshals, which will assist in fire drills every six months during the contract. ***Inform the Environmental Agency, London Fire and Rescue Service or the Health Protection Agency (HPA) if harmful substances are spilled.*** Inform the London Fire and Rescue Service and Police if a fire or smoke is on site and /or going to be impacting on third parties. Access routes to nearest A&E are displayed in welfare area and on the story boards There will be named, and fully trained first Aiders on site during site hours.		
Temporary amended systems	Exclusion zones will be pre-planned and then displayed on site storyboard and instructed via briefings and clearly designated with appropriate barriers and signage when in use.		
To whom the information has been submitted	• All site personnel • The Client • All third parties should they request it		
Monitoring & Compliance	Carry out daily visual inspections of site activities for dust controls and site conditions and record in site diary. There will be an accurate log kept for complaints from third parties, with a contact number available on the site boundary. Have a five day and daily weather report with wind direction for planning purposes on dust control. Numerous site audits, for safety, environment and quality will be undertaken by JRL Group at group level and external audits will also be conducted via the various organisations that the group belong to and the client wish to audit the site (NHBC, Considerate Constructors Scheme, etc).		
Prepared by:	Laura Cabeza Escobar	**Date:**	02/07/24
Operatives / Staff carrying out these works will be informed of the contents of this method statement			
Signed by:		**Date:**	
(Person supervising the works) **For and on behalf of:**			

18.0 Appendices

18.1 Appendix A: JRL Group Environmental Policy – *BO-JRLG-BM-XX-POL-Z-0010, C09*

Environmental Policy

This statement is a declaration of the director's intent to go above and beyond the organisation's environmental compliance obligations. The JRL Group not only has a responsibility to protect and where possible, enhance the environment, but also recognises its place to influence sustainable design through an informed and engaged workforce. The JRL Group will also strive to continually improve the environmental management system and aim to enhance environmental performance in all construction activities.

The Group will:

- Employ an environment team to oversee all environmental compliance, monitor and report on environmental metrics, meet client requirements and manage, audit and report on the environmental management system to senior management.
- Ensure it has the competencies and resources to effectively implement the environmental management system across the company.
- Comply with all relevant legislation, client and other industry requirements.
- Support a company culture that promotes ownership and responsibility of environmental matters and champion best practise across the company.
- Prevent environmental pollution, with a specific focus on activities associated with fuel storage, concrete, air emissions, noise, vibration and waste management.
- Be prepared to respond immediately in the case of an environmental emergency, by establishing emergency procedures on site and allocating resources to do so.
- Reduce the environmental impacts of our projects by designing out waste and adhering to the waste hierarchy.
- Set annually reviewed measurable and realistic environmental objectives and targets to demonstrate continuous improvement across the JRL Group business.
- Work with our supply chain to source environmentally sustainable materials whilst remaining cost effective.

The Directors, senior management and Environment team are responsible for the management of environmental issues and the implementation of this policy across the company and will ensure the appropriate resources are available. This policy and our overall environmental performance will be reviewed on an annual basis, or if necessary, in light of legislative or organisational changes.

Kevin Keegan
JRL Group Director
January 2025

RN: BO-JRLG-BM-XX-POL-Z-0010	Page 1 of 1	Suitability: A1	Rev: C09
TN: BO-JRLG-BM-XX-FM-Z-0008_A1_C01			Security: Public

18.2 Appendix B: JRL Group Sustainable Procurement Policy – BO-JRLG-BM-XX-POL-Z-0023, C06

Sustainable Procurement Policy

JRL Group is committed to procuring sustainable, ethical and responsibly sourced materials, goods and services. This means JRL Group takes into account the social, economic and environmental impact purchasing has on people and communities, locally, regionally and globally.

JRL Group considers what products are made from, where they have come from, who has made them, under what conditions they are made, how they are transported and eventually how they are decommissioned, or manufactured into other products. All materials, whether for permanent or temporary use, purchased by JRL Group or through its supply chain will support the requirements of BREEAM or other sustainable schemes.

The specific sustainable procurement practices which JRL Group is committed to at all levels within the Company are as follows:

- Procure durable goods and services, which reflect up-to-date specifications or standards for environmental sustainability (e.g. BES 60001, CARES, ISO 14001, A+ BRE Green Guide rating);
- Promote a level of sustainability awareness amongst JRL Group supply chain partners and encourage them to adopt sustainable practices;
- Include sustainability issues as part of our subcontractor & supplier appointment process;
- Prohibit the use of products or processes, which are potentially damaging to the environment, such as toxic materials or refrigerants with high global warming potential, where a less environmentally damaging alternative is available;
- Reduce the purchase of new products when is possible to re-use or repair existing products;
- Where we have design responsibilities, specify products which have high recycled content and with a high recyclability factor;
- Where possible purchase local materials, products and services;
- Raise awareness of and procure ethical and Fair Trade certified products;
- Purchase only Legal and Sustainable Timber products with a valid CoC Certificate;
- Procure recycled and sustainability certified paper products;
- Reduce the procurement of single-use products and materials with excessive packaging;
- To work with suppliers who can assist the JRL Group with its aspirations to reduce its environmental impacts.

This policy statement will be communicated to all persons working for and on behalf of JRL Group.

Kevin Keegan
JRL Group Director
January 2025

RN: BO-JRLG-BM-XX-POL-Z-0023	Page 1 of 1	Suitability: A1	Rev: C06
TN: BO-JRLG-BM-XX-FM-Z-0008_A1_C01			Security: Public

18.3 Appendix C: Emergency Preparedness Plan – *TH-JRLG-EM-XX-PL-Z-0003, C01*

1.0 Scope

JRL Group's Environmental Emergency Preparedness Plan aims to minimise the environmental impact of the potential environmental incidents due to occur during the duration of the works. This document will describe the environmental risks defined as unplanned, undesired events that could result in harm to people and/or damage to the environment.

JRL Group will ensure the site activities comply with legal and contractual requirements and are developed in a way to minimise their impact to the environment and human health.

2.0 Emergency Contact Details

Role	Contact Details
Project Director	Donal Reale 07787 515 097
Emergency Services	999/112 Local Hospital: North Middlesex University Hospital 02088 872 000
Environment Agency	0370 850 6506
Health, Safety & Environmental Director	Anne Fennessy 07469 645 525
Environmental Manager	Laura Cabeza Escobar 07810 826 668

3.0 Environmental High Impact / Risks

The following environmental high impacts have been identified:

Environmental Risks	Impact / Effect	Control Measures	Response
Fire	Emissions of toxic fumes and smoke to atmosphere.	Fire drills on a regular basis. Site fire risk assessment. Firefighting equipment in agreed locations around the site. Emergency evacuation plan. Trained traffic wardens and first aiders.	Refer to JRL Group *Fire & Emergency Plan (H&S)*.
Explosion	Emissions of toxic fumes and smoke to atmosphere.	Safe storage and use of flammable substances and compressed gases.	▪ Contact the alarm. ▪ Activate emergency evacuation plan. ▪ Contact the emergency services.

Discovery of suspect site contamination	Emissions and exposure to contaminated material. Release of toxic substances to the environment.	Awareness training to the workforce.	If site contamination is suspected: ▪ Stop all work immediately. ▪ Evacuate personnel to a safe distance. ▪ If safe to do so, cordon off the area to prevent access. ▪ Inform Project Manager and/or Site Supervisor of the incident. ▪ All personnel are to remain in the vicinity (at a safe distance from suspect material) until actions are agreed. ▪ Complete the incident using the Environmental Incident Form.
Fuel/oil/chemical spillage	Release of chemicals to the environment. Toxic substances entering drainage systems or water courses. Environmental damage to aquatic life.	Hazardous waste containers clearly identified on site. Availability of spill kits to contain spillages and good housekeeping. Clear diagram of the site layout and access details, along with a schematic representation of the site drainage. Emergency spillage control team.	Refer to Section *5 Emergency Spillage Response and Control* of this plan *the Plan* below.
Pollution incident	Release of toxic substances to the environment.	Best environmental practices on site. Control measures specified in the SEMP. Environmental trainings and toolbox talks to all employees.	▪ Contain, recover, clean up and dispose of the pollution that has occurred (provided that this can be done without risk to their health or safety). Complete the incident using the Environmental Incident Form.

4.0 Training

All operatives working on the project must undertake a site induction. The induction will include information with regards to environmental aspects and impacts of the project and the preventive measures to be taken in the event of an environmental incident.

Prior commencement of the works on site a method statement briefing will be provided by the site supervisor and/or health and safety manager. These briefings will comprise the relevant environmental impacts of the activity to be carried out as well as the procedures that must be followed in the event of an emergency.

Environmental toolbox talks will be provided on a monthly basis and emergency procedures will be explained during the induction training. Emergency spillage procedures and awareness training will be regularly provided to the workforce.

Table 3: Responsibilities Matrix

Action	**Responsibility**				
	SO	SM	EM/A	H&S	PM
Identify the pollution/potential pollution incident.	✔	✔	✔	✔	✔
Conduct regular exercises to test procedures.	✔	✔	✔	✔	✔
Implement immediate pollution control measures.		✔			
Notify emergency services.	✔	✔	✔	✔	
Notify Midgard Ltd Project Manager.		✔			
Plan control/clean-up measures.		✔	✔	✔	
Carry out control/clean-up measures.	✔	✔		✔	
Investigate cause of incident and produce EIR form.			✔		
Recommend preventative action.			✔	✔	
Implement prevention action.				✔	✔
Notify EA in extreme emergency.					✔
SO – Site Operation; SM – Site Manager; EM/A Environment Manager/Advisor; H&S – Health and Safety Advisor; PM – Midgard Project Manager.					

5.0 Environmental Emergency Spillage Response & Control

5.1 Controlling Spillage

In the event of a spillage the following procedure will be carried out:

Step 1: Assess the situation

Step 2: Contain the spill and stop it spreading

Step 3: Report the incident

Step 4: Clean the spillage up

5.2 STEP 1: Assess the situation

It is important to assess the situation to identify whether the spillage is safe to contain, what has happened and what to report. The following aspects must be considered:

Has anyone been injured?

Is the spillage escaping into open water (river, stream, and ditch) or drainage system?

Is spillage safe to approach or will you need assistance?

Do you have the correct PPE?

REMEMBER SAFETY FIRST!!

5.3 STEP 2: Contain the spill and stop it spreading

Should a spillage of a substance harmful to the environment occur anywhere on the site, the following actions must be carried out.

1. Remove and exclude persons from the danger area where appropriate

Assuming the spill incident is safe to approach, it is important to isolate the source and prevent the spillage's spread:

2. Stop flow from source of spill.

3. Contact the Environment Team as soon as practicable.

4. Assemble at the spillage area with appropriate clean-up equipment.

5. If spillage is escaping or is likely to enter into drains or open watercourse use absorbent material to block off flow. Request external assistance to manage effects downstream.

6. Use absorbent granules, sand or other absorbent material to contain spill.

7. When putting the absorbent material on the spill always start from the edges and work inwards.

8. Oil absorbent granules will take time to soak up oil or fuel, allow 5-10 minutes before cleaning up.

5.4 STEP 3: Report the incident

Spill incidents must be reported using the Environmental Incident Form. In most cases it is important to contain the spill first; however, any spill that involves injury, a dangerous situation or escape of material into drains or open water must be reported immediately. The report must include:

The source of the spill

The material involved

How far the spill has spread

What action has been taken so far

Contact EA/SEPA if it has reached drains or watercourses.

5.5 STEP 4: Clean up the spillage

The spill must be cleaned up as directed by the Environmental Team.

DO NOT WASH SPILLAGE AWAY INTO DRAIN

Scrape absorbent material up

Use the correct sacks, bins or skips for the disposal of absorbent material – follow disposal instructions properly (as hazardous waste).

Label containers with contents and store in compound for disposal.

5.6 Pollutant Control Table

Pollutants						
Spill Material		Concrete/Cement	Paints	Oil	Silt	Detergent
	Spill on Ground Control Measures					
	Sand	✔	✔	✔		✔
	Straw Bales			✔	✔	
	Absorbent Granules			✔		
	Geotextile	✔		✔	✔	
	Pads, Rolls, Mats			✔	✔	
	Drain Seals	✔	✔	✔	✔	✔
	Earth Bunds	✔	✔	✔	✔	✔
	Spill In Water Control Methods					
	Straw Bales			✔	✔	
	Pads, Rolls, Mats			✔		
	Booms				✔	

17.4 Appendix D: Aspects and Impacts Register -*TH-JRLG-EM-XX-RG-Z-0002, C01*

Site Activity	Aspect (Causes of Impact)	Effect (Potential Impact)	Likelihood	Severity	Gross Impact	Environmental Management Best Practices & Control Measures to minimise impact	Likelihood	Severity	Net Impact	Key Primary & Secondary Legislation (England)	Risks	Opportunities
Groundworks - Excavation & Piling Construction Phase	Noise from construction activities	Disturbance of neighbouring individuals in occupied buildings (residents & businesses). Operatives develop health problems including - hearing loss, stress related illness, high blood pressure. Disturbance to local wildlife.	3	2	**5**	Installing 24/7 noise monitoring using Class 1 noise monitors with notifications when exceeding defined limits. Use of acoustic blankets around noisy plant to minimise impact of noise. Provide hearing protection to workforce. Where feasible, carry out regular breaks during the work day where quieter works only are undertaken.	2	1	**3**	Control of Pollution Act 1974 Environmental Protection Act 1990 Noise & Statutory Nuisance Act 1993 The Noise Emissions in the Environment by Equipment for Use Outdoors Regulations 2001 as Amended 2005 The Control of Noise (Code of Practice for Construction and Open Sites) (England) Order 2015	Nuisance to neighbouring residents/businesses/fauna. Risk of fines and legal action stopping workings.	Section 61 consent can avoid fines and legal action. Implementing noise monitoring with notifications to alert site team if exceeding limits allows for changes to work process. Work in line with local council's Code of Construction Practice to ensure meeting area's best practice measures. Regular dialogue with local community via newsletters and resident's meetings to inform residents of project programme.

Groundworks - Excavation & Piling Construction Phase	Air emissions from construction activities	Increased air pollution. Destruction of ozone layer - release of PM2.5, PM10 Nuisance to neighbouring individuals in occupied buildings (residents & businesses). Operatives developing health problems including - respiratory diseases. Disturbance to local wildlife.	2	3	**5**	Installing 24/7 dust monitoring using MCERTs certified dust monitors with notifications when exceeding defined limits. Using dust extraction when cutting. Wearing the correct respirator - the higher the number, the better the protection (FFP1, FFP2, FFP3 respirators can reduce the amount of dust you breath by factors of 4, 10, 20 respectively). Dampening down of stockpiles, dusty works. Wheel washing facilities for vehicles exiting site.	2	1	**3**	Control of Pollution Act 1974 Environmental Protection Act 1990 Noise & Statutory Nuisance Act 1993 Clean Air Act 1993 Clean Neighbourhoods and Environment Act 2005 Environment Act 2021	Nuisance to neighbouring residents/businesses/fauna. Risk of fines and legal action stopping workings.	Section 61 consent can avoid fines and legal action. Implementing dust monitoring with notifications to alert site team if exceeding limits allows for changes to work process. Work in line with local council's Code of Construction Practice to ensure meeting area's best practice measures. Regular dialogue with local community via newsletters and resident's meetings to inform residents of project programme.
Groundworks - Excavation & Piling Construction Phase	Air emissions from burning on site	Increased air pollution. Destruction of ozone layer - release of PM2.5, PM10 Nuisance to neighbouring individuals in occupied buildings (residents & businesses). Operatives developing health problems	2	3	**5**	The burning of wastes is strictly forbidden on all JRL Group sites.	1	1	**2**	Control of Pollution Act 1974 Environmental Protection Act 1990 Noise & Statutory Nuisance Act 1993 Clean Air Act 1993 Clean Neighbourhoods and Environment Act 2005 Environment Act 2021	Nuisance to neighbouring residents/businesses/fauna. Risk of fines and legal action stopping workings.	Section 61 consent can avoid fines and legal action. Implementing dust monitoring with notifications to alert site team if exceeding limits allows for changes to work process. Work in line with local council's Code of Construction Practice to ensure meeting area's best practice measures.

		including - respiratory diseases. Disturbance to local wildlife.										Regular dialogue with local community via newsletters and resident's meetings to inform residents of project programme.
Groundworks - Excavation & Piling Construction Phase	Air emissions from dark smoke from plant and equipment	Increased air pollution. Destruction of ozone layer - release of PM2.5, PM10 Nuisance to neighbouring individuals in occupied buildings (residents & businesses). Operatives developing health problems including - respiratory diseases. Disturbance to local wildlife.	2	3	**5**	Conduct routine and major maintenance in accordance with manufacturer's guidance. Keep records of all inspections and maintenance works. No idling - shut down machinery when not in case or throttle down to a minimum idling speed if the former is not possible. Utilise new equipment with lower emissions - Stage V and above, and/or electric plant where available.	2	1	**3**	Control of Pollution Act 1974 Environmental Protection Act 1990 Noise & Statutory Nuisance Act 1993 Clean Air Act 1993 Clean Neighbourhoods and Environment Act 2005 Environment Act 2021	Nuisance to neighbouring residents/businesses/fauna. Risk of fines and legal action stopping workings.	Section 61 consent can avoid fines and legal action. Implementing dust monitoring with notifications to alert site team if exceeding limits allows for changes to work process. Work in line with local council's Code of Construction Practice to ensure meeting area's best practice measures. Regular dialogue with local community via newsletters and resident's meetings to inform residents of project programme.

Groundworks - Excavation & Piling	Odour release	Disturbance of neighbouring individuals in occupied buildings (residents & businesses). Release of chemicals which can be toxic. Develop health problems including - eye, nose and throat irritation, nausea, drowsiness, mental depression. Disturbance to local wildlife.	2	3	**5**	Conduct daily / weekly odour monitoring in line with site-specific documentation - sniff testing, Photo Ionisation Detector (PID) readings, tenax tube tests as necessary. Cover any stockpiles of odour-releasing materials. Misting system on site boundary hoarding.	2	1	**3**	Environmental Protection Act 1990 The Environmental Permitting (England & Wales) Regulations 2016 as Amended 2018	Nuisance to neighbouring residents/businesses/fauna. Risk of not complying with site-specific RMS requirements preventing planning condition discharge.	Implementing odour monitoring where required with result review to alert site team if exceeding limits allows for changes to work process. Work in line with site-specific remediation method statement to minimise odour release. Regular dialogue with local community via newsletters and resident's meetings to inform residents of project programme.
Groundworks - Excavation & Piling Construction Phase	Vibration	Disturbance of neighbouring individuals in occupied buildings (residents & businesses). Disturbance to local wildlife.	2	3	**5**	Installing 24/7 vibration monitors with notifications when exceeding limits. Utilising low-impact construction methods especially with groundworks such as Continuous Fight Auger (CFA) piling method. Where feasible, carry out regular breaks during the work day where lower impact works are carried out only.	2	1	**3**	Control of Pollution Act 1974 Environmental Protection Act 1990 Noise & Statutory Nuisance Act 1993	Nuisance to neighbouring residents/businesses/fauna. Risk of fines and legal action stopping workings.	Section 61 consent can avoid fines and legal action. Implementing vibration monitoring with notifications to alert site team if exceeding limits allows for changes to work process. Work in line with local council's Code of Construction Practice to ensure meeting area's best practice measures. Regular dialogue with local community via newsletters and resident's meetings to inform residents of project programme.

Groundworks - Excavation & Piling Construction Phase	Waste generation	Contamination issues when waste is disposed - land, air, water. Increase of the amount of waste to landfill within the UK. Increase of cost of disposal of waste. Use of natural resources.	3	2	**5**	Waste minimisation methods on site to reduce waste created in first instance. Reuse of materials on site including aggregates from demolition, timber formwork etc. Segregation of different waste streams at source to prevent contamination and support recycling. Selecting disposal destinations which have greater than 95% diversion from landfill as minimum. Recycling of concrete and aggregates at JRL Environmental's Silvertown yard through WRAP protocol. Use of offsite construction methods to minimise waste created on site. Regular waste collections organised from site to reduce amounts held on site. Covering skips and wagons removing waste to limit debris and air pollution. Packaging take-	1	1	**2**	Control of Pollution (Amendment) Act 1989 Environmental Protection Act 1990 Clean Neighbourhoods and Environment Act 2005 The Environmental Permitting (England & Wales) Regulations 2016 as Amended 2018 The Controlled Waste (England and Wales) Regulations 2012 The Environmental Noise, Site Waste Management Plans and Spreadable Fats etc. (Revocations and Amendments) Regulations 2013 The Waste (England & Wales) Regulation 2011 as Amended 2014 The Waste (Circular Economy) (Amendment) Regulations 2020 Environment Act 2021	Contamination to air, land and watercourses.	Circular economy statements and whole life cycle carbon assessments pushing further development of end of life strategy to waste on products, utilising waste as a resource. Selecting products with Environmental Product Declarations (EPDs) to push suppliers into reviewing end of life strategy for their products. Innovation of offsite construction methods and using s products which minimise waste generation. Segregation of wastes to increase reuse and recycling rates.

						back schemes / reusable packaging with suppliers.					

Groundworks - Excavation & Piling Construction Phase	Hazardous waste generation	Contamination issues when waste is disposed - land, air, water. Increase of the amount of waste to landfill within the UK. Increase of cost of disposal of waste.	2	3	**5**	Waste minimisation methods on site to reduce waste created in first instance. Segregation of different waste streams at source to prevent contamination and support recycling. Selecting disposal destinations which have greater than 95% diversion from landfill as minimum. Use of offsite construction methods to minimise waste created on site. Containing hazardous waste in closed bins prior to collection. Locate waste storage area away from drains. Regular waste collections organised from site to reduce amounts held on site. Covering skips and wagons removing waste to limit debris and air pollution.	2	1	**3**	The Hazardous Waste (England & Wales) Regulations 2005 as Amended 2016 The Environmental Permitting (England & Wales) Regulations 2016 as Amended 2018 The Control of Asbestos Regulations 2012 The Controlled Waste (England and Wales) Regulations 2012 Environment Act 2021	Contamination to air, land and watercourses.	Circular economy statements and whole life cycle carbon assessments pushing further development of end of life strategy to waste on products, utilising waste as a resource. Selecting products with Environmental Product Declarations (EPDs) to push suppliers into reviewing end of life strategy for their products. Innovation of offsite construction methods and using s products which minimise waste generation. Segregation of wastes to increase reuse and recycling rates.

Construction Phase - Drylining	Plasterboard waste generation	Contamination issues when waste is disposed - land, air, water. Increase of cost of disposal of waste. Use of natural resources. Separation of plasterboard which can't be disposed of in landfill.	2	3	**5**	Waste minimisation methods on site to reduce waste created in first instance. Segregation of different waste streams at source to prevent contamination and support recycling. Use of offsite construction methods to minimise waste created on site. Locate waste storage area away from drains. Regular waste collections organised from site to reduce amounts held on site. Covering skips and wagons removing waste to limit debris and air pollution. Offcuts used in other areas of the buildings to reduce wastage.	2	1	**3**	Control of Pollution (Amendment) Act 1989 Environmental Protection Act 1990 Clean Neighbourhoods and Environment Act 2005 The Environmental Permitting (England & Wales) Regulations 2016 as Amended 2018 The Controlled Waste (England and Wales) Regulations 2012 The Environmental Noise, Site Waste Management Plans and Spreadable Fats etc. (Revocations and Amendments) Regulations 2013 The Waste (England & Wales) Regulation 2011 as Amended 2014 The Waste (Circular Economy) (Amendment) Regulations 2020 Environment Act 2021	Contamination to air, land and watercourses.	Plasterboard segregation to avoid contamination fines. Circular economy statements and whole life cycle carbon assessments pushing further development of end of life strategy to waste on products, utilising waste as a resource. Selecting products with Environmental Product Declarations (EPDs) to push suppliers into reviewing end of life strategy for their products. Innovation of offsite construction methods and using s products which minimise waste generation. Segregation of wastes to increase reuse and recycling rates.

Groundworks - Excavation & Piling Construction Phase	Building on previously occupied land	Contamination issues - land, air, water. Operatives developing health problems including - respiratory diseases.	2	3	**5**	Following recommendations from geotechnical consultant and remediation method statement including watching briefs, validation testing. Appropriate training provided to individuals. Covering stockpiles where required. Dampening down of stockpiles.	2	1	**3**	Environmental Protection Act 1990 The Contaminated Land (England) Regulations 2006 as Amended 2012	Contamination to air, land and watercourses. Nuisance to neighbouring residents/businesses/fauna. Risk of fines and legal action stopping workings.	Utilising previously occupied land to reduce building on greenfield sites.
Groundworks - Excavation & Piling	Potential to uncover unknown contamination	Contamination issues - land, air, water. Operatives developing health problems including - respiratory diseases.	2	3	**5**	Following recommendations from geotechnical consultant and remediation method statement including watching briefs, validation testing. Appropriate training provided to individuals. Covering stockpiles where required. Dampening down of stockpiles.	2	1	**3**	Environmental Protection Act 1990 The Contaminated Land (England) Regulations 2006 as Amended 2012	Contamination to air, land and watercourses. Nuisance to neighbouring residents/businesses/fauna. Risk of fines and legal action stopping workings.	Using specialist consultant where required. Utilising previously occupied land to reduce building on greenfield sites.
Groundworks - Excavation & Piling Construction Phase	Soil movement	Contamination issues - land, air, water. Operatives developing health problems including - respiratory diseases.	2	3	**5**	Following recommendations from geotechnical consultant and remediation method statement including watching briefs, validation testing. Appropriate training provided to individuals. Covering stockpiles	2	1	**3**	Environmental Protection Act 1990 The Contaminated Land (England) Regulations 2006 as Amended 2012	Contamination to air, land and watercourses. Nuisance to neighbouring residents/businesses/fauna. Risk of fines and legal action stopping workings.	Using specialist consultant where required. Utilising previously occupied land to reduce building on greenfield sites.

						where required. Dampening down of stockpiles.					
Groundworks - Excavation & Piling Construction Phase	Protection of historical / listed buildings and monuments	Damage to conservation of protected buildings and cultural assets.	2	3	**5**	Fencing of protected areas to prevent workforce entering area.	2	1	**3**	Historic Building and Ancient Monuments Act 1953 Ancient Monuments and Archaeological Areas Act 1979 National Heritage Act 2002 Planning (Listed Buildings and Conservation Area) Act 1990	Risk of fines and legal action stopping workings.	Using specialist consultant where required. Utilising previously occupied land to reduce building on greenfield sites. Retained features reduce embodied carbon and new materials of future building.
Groundworks - Excavation & Piling Construction Phase	Fuel consumption	Burning of diesel / petrol fuels creates carbon emissions. Risk of fuel spillages.	2	2	**4**	Use of alternative fuels such as HVO or electric plant to reduce fuel consumption. Fuel consumption reported on a monthly basis.	1	1	**2**	Climate Change Act 2008 Climate Change Act 2008 (2050 Target Amendment) Order 2019 The Energy Savings Opportunity Scheme Regulations 2014 The Companies (Directors' Report) and Limited Liability Partnerships (Energy and Carbon Report) Regulations 2018	Contamination to air, land and watercourses. Carbon emissions leading to climate change and whole life carbon of a project.	Reductions in fuel and energy consumption equate to reduce running costs. Reduction in carbon emissions reducing whole life cycle carbon analysis results.

Groundworks - Excavation & Piling Construction Phase	Task lighting	Disturbance of neighbouring individuals in occupied buildings (residents & businesses). Light pollution. Disturbance to local wildlife.	2	1	**3**	Lighting to be installed with timeclocks to ensure all non-security lighting switched off at end of day. Lighting placement considered and installed in down-facing position.	1	1	**2**	Control of Pollution Act 1974 Environmental Protection Act 1990 Noise & Statutory Nuisance Act 1993 Clean Neighbourhoods and Environment Act 2005 Environment Act 2021	Nuisance to neighbouring residents/businesses/fauna. Risk of fines and legal action stopping workings. Contamination to air, land and watercourses. Carbon emissions leading to climate change and whole life carbon of a project.	Section 61 consent can avoid fines and legal action. Implementing time clocks and/or motion sensors to ensure all lighting turned off when areas not in use. Work in line with local council's Code of Construction Practice to ensure meeting area's best practice measures. Regular dialogue with local community via newsletters and resident's meetings to inform residents of project programme.
Groundworks - Excavation & Piling Construction Phase	Use of generators	Use of generators where no connection to mains using diesel / HVO thus creating carbon emissions. Failure of generator could lead to leak/spillage of fuel - potential contamination to ground or drainage. Generator fire causes toxic fumes, loss of fuel to ground or site drainage.	2	2	**4**	Spill kit and EnviroPads / plant nappies to be available close to the generator and bowser used for fuelling. Generator and bowser to be located on impermeable surface where feasible. Bowser to have self contained bunding - 110% capacity. Using Stage V generators within NRMM Central Activity Zone and Opportunity Area as	1	2	**3**	Control of Pollution Act 1974 Environmental Protection Act 1990 Noise & Statutory Nuisance Act 1993 Clean Neighbourhoods and Environment Act 2005 Climate Change Act 2008 Climate Change Act 2008 (2050 Target Amendment) Order 2019 The Energy Savings Opportunity Scheme Regulations 2014 The Companies (Directors' Report) and Limited Liability Partnerships (Energy	Contamination to air, land and watercourses. Carbon emissions leading to climate change and whole life carbon of a project.	Reductions in fuel and energy consumption equate to reduce running costs. Reduction in carbon emissions reducing whole life cycle carbon analysis results.

						minimum, Stage IIIB in Greater London.				and Carbon Report) Regulations 2018		
Groundworks - Excavation & Piling Construction Phase	Electricity consumption	Depletion of natural resources (fossil fuels). Carbon emissions from electricity generation.	2	2	**4**	Ensuring electricity consuming plant / lighting are switched off when not in use. Utilising energy efficient machinery.	1	2	**3**	Climate Change Act 2008 Climate Change Act 2008 (2050 Target Amendment) Order 2019 The Energy Savings Opportunity Scheme Regulations 2014 The Companies (Directors' Report) and Limited Liability Partnerships (Energy and Carbon Report) Regulations 2018	Contamination to air, land and watercourses. Carbon emissions leading to climate change and whole life carbon of a project.	Reductions in fuel and energy consumption equate to reduce running costs. Reduction in carbon emissions reducing whole life cycle carbon analysis results.

Groundworks - Excavation & Piling Construction Phase	Water consumption	Depletion of natural resources.	2	2	**4**	Water efficient equipment. Ensure no water consuming equipment left on when not in use. Leak detection to cut off supply if required.	1	2	**3**	Environmental Protection Act 1990 Water Industry Act 1991 Environment Act 2021	Contamination to air, land and watercourses. Carbon emissions leading to climate change and whole life carbon of a project.	Reductions in water consumption equate to reduce running costs. Reduction in carbon emissions reducing whole life cycle carbon analysis results.
Groundworks - Excavation & Piling Construction Phase	Vehicle movements	Disturbance of neighbouring individuals in occupied buildings (residents & businesses). Increased noise, traffic congestion. Carbon emissions from vehicles. Disturbance to local wildlife.	3	2	**5**	Using newer vehicles with less emissions - Euro 6 which are compliant with London's ULEZ and other city's similar low emission zones. JRL Group vehicles certified to FORS Gold standard. Preference of FORS Silver standard for all other vehicles delivering to site. Sites undertaking CLOCS checks at the gates. Limiting number of deliveries by sending away material/equipment on empty wagons. Booking in deliveries to prevent vehicles showing up within same delivery slot and calculate carbon emissions. Ensuring vehicles do not show up before or after site opening hours, following the	2	1	**3**	Highways Act 1980 Environmental Protection Act 1990 Environment Act 2021	Contamination to air, land and watercourses. Carbon emissions leading to climate change and whole life carbon of a project.	Reductions in fuel and energy consumption equate to reduce running costs. Reduction in carbon emissions reducing whole life cycle carbon analysis results. Section 61 consent can avoid fines and legal action. Work in line with local council's Code of Construction Practice to ensure meeting area's best practice measures. Regular dialogue with local community via newsletters and resident's meetings to inform residents of project programme.

						site's traffic management plan.					

Groundworks - Excavation & Piling	Transportation of dangerous goods including asbestos	Disturbance of neighbouring individuals in occupied buildings (residents & businesses). Increased noise, traffic congestion. Carbon emissions from vehicles. Disturbance to local wildlife.	3	2	**5**	Using newer vehicles with less emissions - Euro 6 which are compliant with London's ULEZ and other city's similar low emission zones. JRL Group vehicles certified to FORS Gold standard. Preference of FORS Silver standard for all other vehicles delivering to site. Sites undertaking CLOCS checks at the gates. Limiting number of deliveries by sending away material/equipment on empty wagons. Booking in deliveries to prevent vehicles showing up within same delivery slot and calculate carbon emissions. Ensuring vehicles do not show up before or after site opening hours, following the site's traffic management plan.	2	1	**3**	The Carriage of Dangerous Goods and use of Transportable Pressure Equipment Regulations 2009 as Amended 2011 The Control of Asbestos Regulations 2012	Contamination to air, land and watercourses. Carbon emissions leading to climate change and whole life carbon of a project.	Reductions in fuel and energy consumption equate to reduce running costs. Reduction in carbon emissions reducing whole life cycle carbon analysis results. Section 61 consent can avoid fines and legal action. Work in line with local council's Code of Construction Practice to ensure meeting area's best practice measures. Regular dialogue with local community via newsletters and resident's meetings to inform residents of project programme.

Groundworks - Excavation & Piling Construction Phase	Transportation of waste for disposal	Disturbance of neighbouring individuals in occupied buildings (residents & businesses). Increased noise, traffic congestion. Carbon emissions from vehicles. Disturbance to local wildlife.	3	2	**5**	Using newer vehicles with less emissions - Euro 6 which are compliant with London's ULEZ and other city's similar low emission zones. JRL Group vehicles certified to FORS Gold standard. Preference of FORS Silver standard for all other vehicles delivering to site. Sites undertaking CLOCS checks at the gates. Limiting number of deliveries by sending away material/equipment on empty wagons. Booking in deliveries to prevent vehicles showing up within same delivery slot and calculate carbon emissions. Ensuring vehicles do not show up before or after site opening hours, following the site's traffic management plan.	2	1	**3**	The Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations 1991 as Amended 1998 Deregulation and Contracting Out Act 1994 Finance Act 1996 as Amended 2018 Scrap Metal Dealers Act 2013 The Unauthorised Deposit of Waste (Fixed Penalties) Regulations 2016	Contamination to air, land and watercourses. Carbon emissions leading to climate change and whole life carbon of a project.	Reductions in fuel and energy consumption equate to reduce running costs. Reduction in carbon emissions reducing whole life cycle carbon analysis results. Section 61 consent can avoid fines and legal action. Work in line with local council's Code of Construction Practice to ensure meeting area's best practice measures. Regular dialogue with local community via newsletters and resident's meetings to inform residents of project programme.

Groundworks - Excavation & Piling Construction Phase	Track-out onto local road network	Disturbance of neighbouring individuals in occupied buildings (residents & businesses). Disturbance to local wildlife. Silt pollution via drainage.	3	2	**5**	Wheel washing facilities for vehicles exiting site. Use of roadsweeper on local road network around site. Drain guards installed in drains on and around site boundary.	2	1	**3**	Highways Act 1980 Environmental Protection Act 1990 Environment Act 2021	Contamination to air, land and watercourses. Nuisance to neighbouring residents/businesses/fauna. Risk of fines and legal action stopping workings.	Fines and legal implications can be avoided.
Groundworks - Excavation & Piling	Clearing of shrubbery to allow for construction of development - destruction of habitat	Risk of damage of bird nests or any structure used for shelter of a schedule 5 listed animal. Risk of uprooting or destroying schedule 8 listed plant species. Release or allow to escape into the wild any non-native animal. Risk of damage to trees subject to a tree preservation order.	2	2	**4**	Appointing an ecologist to complete a site survey prior to any works commence to ensure no nesting birds or similarly protected species are on site. Carrying out site clearance and demolition works outside of nesting bird season.	1	1	**2**	Wildlife and Countryside Act 1981 Environmental Protection Act 1990 Town and Country Planning Act 1990 Protection of Badgers Act 1992 The Conservation of Habitats and Species Regulations 2017 The Invasive Alien Species (Enforcement and Permitting) Order 2019 Environment Act 2021 Environment Act 2021	Risk of fines and legal action stopping workings.	Fines and legal implications can be avoided.

Groundworks - Excavation & Piling Construction Phase	Concrete washout - waste water disposal	Stormwater polluted with debris / chemicals from demolition / construction activities. Disturbance to local wildlife.	2	3	**5**	Recycle wastewater from washing of mixer trucks, drum mixers and similar equipment wherever practical to minimise wastewater discharge. Provide standby pumping for recycling system to avoid pollution from wastewater overflow. After treatment of surplus wastewater for silt by means of siltation tank and pH adjustment facilities to pH 6-10, discharge into foul sewer. Employ more elaborate treatment for discharge into stormwater drains. Treat all contaminated surface water from concrete operations with appropriate facilities.	2	1	**3**	Land Drainage Act 1991 Water Resources Act 1991 Flood and Water Management Act 2010	Risk of fines and legal action stopping workings. Contamination to air, land and watercourses.	Fines and legal implications can be avoided.

Groundworks - Excavation & Piling	Water discharge	Stormwater polluted with sediment from demolition / construction activities. Disturbance to local wildlife.	2	2	**4**	Use of sediment tank systems to clean water before discharge. Application of trade effluent or ground water discharge licences as required.	2	1	**3**	The Trade Effluent (Prescribed Processes and Substances) Regulations 1989 as Amended 1992 Water Industry Act 1991 as Amended 1999 The Control of Pollution (Applications, Appeals and Registers) Regulations 1996 The Groundwater (England & Wales) Regulations 2009 Water Act 2003	Risk of fines and legal action stopping workings. Contamination to air, land and watercourses.	Fines and legal implications can be avoided.
Groundworks - Excavation & Piling Construction Phase	Use and storage of Oil	Stormwater polluted with oil from demolition / construction activities. Disturbance to local wildlife. Depletion of natural resources. Contamination - land, air, water.	2	3	**5**	Storage of drums on bunds with 110% capacity. Bowsers used which are double bunded. Limiting supplies on site to what is required. Spill kits available close to storage and areas of use. EnviroPads utilised when refuelling. Disposal of used spill kits within hazardous waste bins/Hazibags.	2	2	**4**	The Control of Pollution (Oil Storage) (England) Regulations 2001	Risk of fines and legal action stopping workings. Contamination to air, land and watercourses.	Fines and legal implications can be avoided.

Groundworks - Excavation & Piling Construction Phase	Use and storage of COSHH materials	Stormwater polluted with chemicals from demolition / construction activities. Disturbance to local wildlife. Depletion of natural resources. Contamination - land, air, water.	3	3	**6**	Storage of drums on bunds with 110% capacity. Bowsers used which are double bunded. Limiting supplies on site to what is required. Spill kits available close to storage and areas of use. EnviroPads utilised when refuelling. Disposal of used spill kits within hazardous waste bins/Hazibags.	2	2	**4**	The Control of Substances Hazardous to Health Regulations 2002 as Amended 2004 The REACH Enforcement Regulations 2008 The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009	Risk of fines and legal action stopping workings. Contamination to air, land and watercourses.	Fines and legal implications can be avoided.
Groundworks - Excavation & Piling Construction Phase	Spillage of chemicals or fuel	Stormwater polluted with chemicals / fuel from demolition / construction activities. Disturbance to local wildlife. Depletion of natural resources. Contamination - land, air, water.	2	2	**4**	Storage of drums on bunds with 110% capacity. Bowsers used which are double bunded. Limiting supplies on site to what is required. Spill kits available close to storage and areas of use. EnviroPads utilised when refuelling. Disposal of used spill kits within hazardous waste bins/Hazibags.	1	2	**3**	The Control of Pollution (Oil Storage) (England) Regulations 2001 The Control of Substances Hazardous to Health Regulations 2002 as Amended 2004 The REACH Enforcement Regulations 2008 The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009	Risk of fines and legal action stopping workings. Contamination to air, land and watercourses.	Fines and legal implications can be avoided.

Construction Phase	Storage of materials	Fire hazard of cardboard packaging and combustible materials.	1	2	**3**	Creating appropriate storage areas. Just in time deliveries to prevent stockpiles of unnecessary amounts of material. Storing combustible material away from COSHH store and gas canisters.	1	1	**2**	Environmental Protection Act 1990 Environment Act 2021	Contamination to air, land and watercourses.	Fines and legal implications can be avoided.
Construction Phase	Welding - air quality	Air pollution - outputs from welding processes are welding fumes, radiation, UV light, flames and welding gas mixtures. Carbon emissions. Operatives developing health problems including - respiratory diseases.	2	2	**4**	Utilise different methods of welding which produce less fume. Use safety visor and overalls to shield from UV light. Wearing the correct respirator - the higher the number, the better the protection (FFP1, FFP2, FFP3 respirators can reduce the amount of dust you breath by factors of 4, 10, 20 respectively).	1	2	**3**	Control of Pollution Act 1974 Environmental Protection Act 1990 Noise & Statutory Nuisance Act 1993 Clean Air Act 1993 Clean Neighbourhoods and Environment Act 2005 Environment Act 2021	Nuisance to neighbouring residents/businesses/fauna. Risk of fines and legal action stopping workings.	Fines and legal implications can be avoided.
Tower Crane / Hoist Use	Poor weather conditions - limiting ability for crane/hoist use	Poor weather can result in cranes not being able to carry out works, impacting programme and potential jumping / dismantling of cranes which might have required Section 61 dispensation.	2	1	**3**	Agreeing consecutive weekends of dispensation with local authorities so a back-up is available if required.	1	1	**2**	Control of Pollution Act 1974	Nuisance to neighbouring residents/businesses/fauna. Risk of fines and legal action stopping workings.	Section 61 consent can avoid fines and legal action.

Tower Crane / Hoist Use	Noise from 24/7 switched on power / lifting services	Disturbance of neighbouring individuals in occupied buildings (residents & businesses). Operatives develop health problems including - hearing loss, stress related illness, high blood pressure. Disturbance to local wildlife.	3	2	**5**	Installing 24/7 noise monitoring using Class 1 noise monitors with notifications when exceeding defined limits. Use of acoustic blankets around noisy plant to minimise impact of noise. Provide hearing protection to workforce. Where feasible, carry out regular breaks during the work day where quieter works only are undertaken.	2	1	**3**	Control of Pollution Act 1974 Environmental Protection Act 1990 Noise & Statutory Nuisance Act 1993 The Noise Emissions in the Environment by Equipment for Use Outdoors Regulations 2001 as Amended 2005 The Control of Noise (Code of Practice for Construction and Open Sites) (England) Order 2015	Nuisance to neighbouring residents/businesses/fauna. Risk of fines and legal action stopping workings.	Section 61 consent can avoid fines and legal action. Implementing noise monitoring with notifications to alert site team if exceeding limits allows for changes to work process. Work in line with local council's Code of Construction Practice to ensure meeting area's best practice measures. Regular dialogue with local community via newsletters and resident's meetings to inform residents of project programme.

Commissioning & Handover	Air emissions	Disturbance of neighbouring individuals in occupied buildings (residents & businesses). Operatives develop health problems including - hearing loss, stress related illness, high blood pressure. Disturbance to local wildlife.	2	3	**5**	Installing 24/7 dust monitoring using MCERTs certified dust monitors with notifications when exceeding defined limits. Using dust extraction when cutting. Wearing the correct respirator - the higher the number, the better the protection (FFP1, FFP2, FFP3 respirators can reduce the amount of dust you breath by factors of 4, 10, 20 respectively). Dampening down of stockpiles, dusty works. Wheel washing facilities for vehicles exiting site.	2	1	**3**	Control of Pollution Act 1974 Environmental Protection Act 1990 Noise & Statutory Nuisance Act 1993 Clean Air Act 1993 Clean Neighbourhoods and Environment Act 2005 Environment Act 2021	Nuisance to neighbouring residents/businesses/fauna. Risk of fines and legal action stopping workings.	Fines and legal implications can be avoided.
Commissioning & Handover	Leakage of chemically-contaminated water	Consumption of chemicals for testing which could leak and cause ground contamination. Discharge of wastewater arising from sample collection. Watercourse pollution through sewer discharge.	2	3	**5**	Limiting supplies on site to what is required. Spill kits available close to storage and areas of use. EnviroPads utilised when refuelling. Disposal of used spill kits within hazardous waste bins/Hazibags.	2	1	**3**	Control of Pollution Act 1974 Environmental Protection Act 1990 Clean Neighbourhoods and Environment Act 2005 Environment Act 2021	Contamination to air, land and watercourses.	Fines and legal implications can be avoided.

Servicing of Plant and Machinery	Spillage of chemicals or fuel	Contaminants could filtrate into ground affecting microbiology of soil and surrounding landscape. Disturbance to wildlife.	2	2	**4**	Storage of drums on bunds with 110% capacity. Bowsers used which are double bunded. Limiting supplies on site to what is required. Spill kits available close to storage and areas of use. EnviroPads utilised when refuelling. Disposal of used spill kits within hazardous waste bins/Hazibags.	1	2	**3**	The Control of Substances Hazardous to Health Regulations 2002 as Amended 2004 The REACH Enforcement Regulations 2008 The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009	Contamination to air, land and watercourses.	Fines and legal implications can be avoided.
Servicing of Plant and Machinery	Cleaning of plant and machinery	Pollutant wash out entering drains or local environment. Contamination of groundwater.	2	2	**4**	Washing machinery down away from watercourses. Using drain guards to prevent silt / oil entering drainage system.	1	2	**3**	Control of Pollution Act 1974 The Control of Substances Hazardous to Health Regulations 2002 as Amended 2004 The REACH Enforcement Regulations 2008 The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009	Contamination to air, land and watercourses.	Fines and legal implications can be avoided.

Servicing of Plant and Machinery	Welding - air quality	Air pollution - outputs from welding processes are welding fumes, radiation, UV light, flames and welding gas mixtures. Carbon emissions. Operatives developing health problems including - respiratory diseases.	2	2	**4**	Utilise different methods of welding which produce less fume. Use safety visor and overalls to shield from UV light. Wearing the correct respirator - the higher the number, the better the protection (FFP1, FFP2, FFP3 respirators can reduce the amount of dust you breath by factors of 4, 10, 20 respectively).	1	2	**3**	Control of Pollution Act 1974 Environmental Protection Act 1990 Noise & Statutory Nuisance Act 1993 Clean Air Act 1993 Clean Neighbourhoods and Environment Act 2005 Environment Act 2021	Contamination to air, land and watercourses. Carbon emissions leading to climate change and whole life carbon of a project.	Fines and legal implications can be avoided.
Offices & Welfare (including canteen and WCs)	Noise from offices	Disturbance of neighbouring individuals in occupied buildings (residents & businesses). Disturbance to local wildlife.	1	1	**2**	Limiting noisy works to outside of office setting.	1	1	**2**	Control of Pollution Act 1974 Environmental Protection Act 1990 Noise & Statutory Nuisance Act 1993 The Noise Emissions in the Environment by Equipment for Use Outdoors Regulations 2001 as Amended 2005 The Control of Noise (Code of Practice for Construction and Open Sites) (England) Order 2015	Nuisance to neighbouring residents/businesses/fauna. Risk of fines and legal action stopping workings.	Regular dialogue with local community via newsletters and resident's meetings to inform residents of project programme.

Offices & Welfare (including canteen and WCs)	Waste generation	Contamination issues when waste is disposed - land, air, water. Increase of the amount of waste to landfill within the UK. Increase of cost of disposal of waste. Use of natural resources.	3	1	**4**	Waste minimisation methods on site to reduce waste created in first instance. Reuse of materials on site including aggregates from demolition, timber formwork etc. Segregation of different waste streams at source to prevent contamination and support recycling. Selecting disposal destinations which have greater than 95% diversion from landfill as minimum. Recycling of concrete and aggregates at JRL Environmental's Silvertown yard through WRAP protocol. Use of offsite construction methods to minimise waste created on site. Regular waste collections organised from site to reduce amounts held on site. Covering skips and wagons removing waste to limit debris and air pollution. Packaging take-	1	1	**2**	Control of Pollution (Amendment) Act 1989 Environmental Protection Act 1990 Clean Neighbourhoods and Environment Act 2005 The Environmental Permitting (England & Wales) Regulations 2016 as Amended 2018 The Controlled Waste (England and Wales) Regulations 2012 The Environmental Noise, Site Waste Management Plans and Spreadable Fats etc. (Revocations and Amendments) Regulations 2013 The Waste (England & Wales) Regulation 2011 as Amended 2014 The Waste (Circular Economy) (Amendment) Regulations 2020 Environment Act 2021	Contamination to air, land and watercourses.	Fines and legal implications can be avoided. Circular economy statements and whole life cycle carbon assessments pushing further development of end of life strategy to waste on products, utilising waste as a resource. Selecting products with Environmental Product Declarations (EPDs) to push suppliers into reviewing end of life strategy for their products. Innovation of offsite construction methods and using s products which minimise waste generation. Segregation of wastes to increase reuse and recycling rates.

						back schemes / reusable packaging with suppliers.						
Offices & Welfare (including canteen and WCs)	Use of refrigerant (air conditioning units)	Climate change. Depletion of ozone. Risk of leakage.	1	2	**3**	Correct commissioning and regular maintained inspections.	1	1	**2**	The Fluorinated Greenhouse Gases Regulations 2015	Contamination to air, land and watercourses.	Fines and legal implications can be avoided.

Offices & Welfare (including canteen and WCs)	Use of COSHH - cleaning products	Contamination issues when waste is disposed - land, air, water.	1	1	**2**	Storage of drums on bunds with 110% capacity. Bowsers used which are double bunded. Limiting supplies on site to what is required. Spill kits available close to storage and areas of use. EnviroPads utilised when refuelling. Disposal of used spill kits within hazardous waste bins/Hazibags.	1	1	**2**	The Control of Substances Hazardous to Health Regulations 2002 as Amended 2004 The REACH Enforcement Regulations 2008 The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009	Contamination to air, land and watercourses.	Fines and legal implications can be avoided.
Offices & Welfare (including canteen and WCs)	Spillage of chemicals - cleaning products	Disturbance to local wildlife. Depletion of natural resources. Contamination - land, air, water.	1	1	**2**	Storage of drums on bunds with 110% capacity. Bowsers used which are double bunded. Limiting supplies on site to what is required. Spill kits available close to storage and areas of use. EnviroPads utilised when refuelling. Disposal of used spill kits within hazardous waste bins/Hazibags.	1	1	**2**	The Control of Substances Hazardous to Health Regulations 2002 as Amended 2004 The REACH Enforcement Regulations 2008 The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009	Contamination to air, land and watercourses.	Fines and legal implications can be avoided.

Offices & Welfare (including canteen and WCs)	Disposal of used cooking oil	Contamination issues when waste is disposed - land, air, water. Disturbance to wildlife.	3	1	**4**	Correct disposal of oil - not down drains. Selecting environmentally friendly types of cooking oil.	1	1	**2**	The Control of Pollution (Oil Storage) (England) Regulations 2001	Contamination to air, land and watercourses.	Fines and legal implications can be avoided. Circular economy statements and whole life cycle carbon assessments pushing further development of end of life strategy to waste on products, utilising waste as a resource. Segregation of wastes to increase reuse and recycling rates.
Offices & Welfare (including canteen and WCs)	Use of paper	Use of natural resources.	3	1	**4**	Limit printing if able, double-sided printing to prevent amount used.	1	1	**2**	Environmental Protection Act 1990 Environment Act 2021	Contamination to air, land and watercourses. Carbon emissions leading to climate change and whole life carbon of a project.	Circular economy statements and whole life cycle carbon assessments pushing further development of end of life strategy to waste on products, utilising waste as a resource. Selecting products with Environmental Product Declarations (EPDs) to push suppliers into reviewing end of life strategy for their products. Innovation of offsite construction methods and using s products which minimise waste generation. Segregation of wastes to increase reuse and recycling rates.

Offices & Welfare (including canteen and WCs)	Energy consumption	Use of natural resources.	2	2	**4**	Ensuring electricity consuming equipment / lighting are switched off when not in use. Utilising energy efficient equipment.	1	1	**2**	Climate Change Act 2008 Climate Change Act 2008 (2050 Target Amendment) Order 2019 The Energy Savings Opportunity Scheme Regulations 2014 The Companies (Directors' Report) and Limited Liability Partnerships (Energy and Carbon Report) Regulations 2018	Contamination to air, land and watercourses. Carbon emissions leading to climate change and whole life carbon of a project.	Reductions in fuel and energy consumption equate to reduce running costs. Reduction in carbon emissions reducing whole life cycle carbon analysis results.
Offices & Welfare (including canteen and WCs)	Water consumption	Use of natural resources.	2	1	**3**	Water efficient equipment. Ensure no water consuming equipment left on when not in use. Leak detection to cut off supply if required.	1	1	**2**	Environmental Protection Act 1990 Water Industry Act 1991 Environment Act 2021	Contamination to air, land and watercourses. Carbon emissions leading to climate change and whole life carbon of a project.	Reductions in water consumption equate to reduce running costs. Reduction in carbon emissions reducing whole life cycle carbon analysis results.
Offices & Welfare (including canteen and WCs)	Printing services - toner use	Contamination issues when waste is disposed - land, air, water. Increase of the amount of waste to landfill within the UK. Increase of cost of disposal of waste. Use of natural resources.	3	1	**4**	Recycling toner to reduce waste to landfill.	1	1	**2**	The Waste Electrical and Electronic Equipment Regulations 2013 as Amended 2018	Risk of fines and legal action stopping workings.	Despite the resin, toner printing is, in some ways, very eco-friendly because it emits no toxins into the environment and has a high-efficiency transfer rate. Very little waste is created, and there is no ink to discard at the end of the process.

Offices & Welfare (including canteen and WCs)	Generation of waste electrical equipment	Contamination issues when waste is disposed - land, air, water. Increase of the amount of waste to landfill within the UK. Increase of cost of disposal of waste. Use of natural resources.	3	1	**4**	Selecting disposal destinations which have greater than 95% diversion from landfill as minimum. Refurbing old IT equipment rather than replacing new.	1	1	**2**	The Environmental Permitting (England & Wales) Regulations 2016 as Amended 2018 The Waste Batteries and Accumulators Regulations 2009 The Waste (England & Wales) Regulation 2011 as Amended 2014 The Controlled Waste (England and Wales) Regulations 2012 The Waste Electrical and Electronic Equipment Regulations 2013 as Amended 2018 Environment Act 2021	Risk of fines and legal action stopping workings. Contamination to air, land and watercourses. Carbon emissions leading to climate change and whole life carbon of a project.	Promote reuse and recycling of electrical equipment. Fines and legal implications can be avoided.
Offices & Welfare (including canteen and WCs)	Sewage discharge	Contamination - land, air, water. Disturbance to wildlife.	2	1	**3**	Correct treatment of wastewater prior to discharge eg. Septic tank.	1	1	**2**	The Trade Effluent (Prescribed Processes and Substances) Regulations 1989 as Amended 1992 Water Industry Act 1991 as Amended 1999 The Control of Pollution (Applications, Appeals and Registers) Regulations 1996 The Groundwater (England & Wales) Regulations 2009 Water Act 2003	Nuisance to neighbouring residents/businesses/fauna. Risk of fines and legal action stopping workings.	Fines and legal implications can be avoided.

Procurement	Timber procurement and use - temporary and permanent	Using natural resources.	3	1	**4**	Selecting timber products with FSC or PEFC certification chain of custody. Reuse of timber formwork, pallets etc where feasible.	1	1	**2**	Modern Slavery Act 2015 The Forest Law Enforcement, Governance and Trade Regulations 2012 The Timber and Timber Products (Placing on the Market) Regulations 2013 The Modern Slavery Act 2015 (Transparency in Supply Chains) Regulations 2015	Contamination to air, land and watercourses. Carbon emissions leading to climate change and whole life carbon of a project.	Selecting suppliers and products who have a certified FSC or PEFC or similar to ensure suppliers taking accountability for their own environmental processes and procedures. Selecting products with Environmental Product Declarations (EPDs) to push suppliers into reviewing end of life strategy for their products. Innovation of offsite construction methods and using s products which minimise waste generation.
Procurement	Non-certified material procurement (sustainable certifications)	Using natural resources. Not taking responsibility for material selection.	3	1	**4**	Selecting suppliers and products who have a certified ISO14001 EMS and BES 6001 or similar to ensure suppliers taking accountability for their own environmental processes and procedures. Selecting products with Environmental Product Declarations (EPDs) to push suppliers into reviewing end of life strategy for their products.	1	1	**2**	Modern Slavery Act 2015 The Forest Law Enforcement, Governance and Trade Regulations 2012 The Timber and Timber Products (Placing on the Market) Regulations 2013 The Modern Slavery Act 2015 (Transparency in Supply Chains) Regulations 2015	Contamination to air, land and watercourses. Carbon emissions leading to climate change and whole life carbon of a project.	Selecting suppliers and products who have a certified ISO14001 EMS and BES 6001 or similar to ensure suppliers taking accountability for their own environmental processes and procedures. Selecting products with Environmental Product Declarations (EPDs) to push suppliers into reviewing end of life strategy for their products. Innovation of offsite

						Innovation of offsite construction methods and using s products which minimise waste generation.					construction methods and using s products which minimise waste generation.
Procurement	Sourcing materials with low embodied carbon	Using natural resources. Not taking responsibility for material selection.	3	1	**4**	Selecting products with Environmental Product Declarations (EPDs) to push suppliers into reviewing end of life strategy for their products. Innovation of offsite construction methods and using s products which minimise waste generation.	1	1	**2**	Modern Slavery Act 2015 The Forest Law Enforcement, Governance and Trade Regulations 2012 The Timber and Timber Products (Placing on the Market) Regulations 2013 The Modern Slavery Act 2015 (Transparency in Supply Chains) Regulations 2015	Contamination to air, land and watercourses. Carbon emissions leading to climate change and whole life carbon of a project.	Circular economy statements and whole life cycle carbon assessments pushing further development of end of life strategy to waste on products, utilising waste as a resource. Selecting products with Environmental Product Declarations (EPDs) to push suppliers into reviewing end of life strategy for their products. Innovation of offsite construction methods and using s products which minimise waste generation.

Procurement	Not utilising local suppliers for procurement	Using natural resources. Not taking responsibility for material selection.	3	1	**4**	Review of local suppliers to the project and allow for these to tender packages of work / equipment.	1	1	**2**	Modern Slavery Act 2015 The Forest Law Enforcement, Governance and Trade Regulations 2012 The Timber and Timber Products (Placing on the Market) Regulations 2013 The Modern Slavery Act 2015 (Transparency in Supply Chains) Regulations 2015	Contamination to air, land and watercourses. Carbon emissions leading to climate change and whole life carbon of a project.	Circular economy statements and whole life cycle carbon assessments pushing further development of end of life strategy to waste on products, utilising waste as a resource. Selecting products with Environmental Product Declarations (EPDs) to push suppliers into reviewing end of life strategy for their products. Innovation of offsite construction methods and using s products which minimise waste generation.
Procurement	Plastic packaging - disposal	Using natural resources. Not taking responsibility for material selection.	3	1	**4**	Take-back schemes to prevent disposal of plastics on site and provide higher rates of recycling. Requesting materials with little to no packaging if available.	1	1	**2**	Modern Slavery Act 2015 The Plastic Packaging Tax (General) Regulations 2022	Contamination to air, land and watercourses. Carbon emissions leading to climate change and whole life carbon of a project.	Circular economy statements and whole life cycle carbon assessments pushing further development of end of life strategy to waste on products, utilising waste as a resource. Selecting products with Environmental Product Declarations (EPDs) to push suppliers into reviewing end of life strategy for their products. Innovation of offsite construction methods and using s products

												which minimise waste generation.
Procurement	Selecting MEP equipment	Using natural resources. Not taking responsibility for material selection. Noise-impact of the finished building by not following design recommendations and background noise surveys.	3	1	**4**	Selecting efficient equipment.	1	1	**2**	Control of Pollution Act 1974 Environmental Protection Act 1990 Noise & Statutory Nuisance Act 1993 The Noise Emissions in the Environment by Equipment for Use Outdoors Regulations 2001 as Amended 2005	Nuisance to neighbouring residents/businesses/fauna. Risk of not complying with local authority planning consent.	Fines and legal implications can be avoided.

Score Criteria:

Score Criteria			
Likelihood	**1** - Very Unlikely	**2** - Likely	**3** - Certain
Severity	**1** - Minor	**2** - Moderate	**3** - Very High
Gross Impact	**1 - 3** - Minor	**4** - Significant	**3** - Certain

Net Impact Score	Criteria
1 - 3 - Negligible	No additional control measures required.
4 - Significant	Aspect should be monitored and additional control measures may be required.
5 - 6 - Unacceptable	Activity generating this activity plus control measures must be reviewed.

Appendix H
Toolbox Talk and Register.

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Toolbox Talk – ENV004	
Topic/subject covered:	Contaminated Land

A: Details of the briefing

Location of briefing:	Basement Office	**Company:**	J. Redditington
Name of presenter:	Nishad Patel	**Position:**	PM
Date:		**Time:**	

B: Employee actions – Briefing/toolbox talk must be given before work starts – Include main parts of the briefing/toolbox talk in the below section, including actions which must be taken and avoided (Do's and Don'ts)

Purpose of Briefing
Land which has been used for industrial processes may be contaminated by wastes and fuels. When working on such sites special precautions may be required to prevent the contaminants from spreading into the wider environment and to protect workers from harm. The briefing will detail the hazards associated with contaminated land and the measures that should be taken to protect yourself and the surrounding environment from these hazards.
Hazards
• Health effects from exposure to dusts.
• Weak ground may not support plant or structures.
• Voids beneath the surface due to disused tanks and services.
• Asbestos waste.
• Run-off to rivers of sediments and contaminants.
• Chemicals - inhalation, ingestion.
• Radioactive waste.
• Fuels.
• Unexploded ordinance.
Reasons for Concern
The topic covers a wide range of hazards. The type and level of potential harm varies but may include:
• Harm to health of workers, visitors and trespassers ranging from skin and respiratory irritation to cancer, birth defects and death
• Harm to the ecosystem and the health of wildlife on the land being worked

• Harm to the ecosystem, or those using neighbouring land from run-off or spread of contamination
• Property damage and accidents to plant during construction, e.g. collapse of structures built on weak ground
• Corrosion to building materials and services
• Contamination of water including drinking water supplies (the works themselves, or new structures and services may cause contaminants to move through new pathways to ground and surface water sources)
• Harm to users of the land after construction works are complete, due to bringing contaminated soil closer to the surface, or a new type of occupancy exposes people to harm, e.g. vacant brownfield site converted to housing
• Trenches and confined spaces may be filled with toxic or asphyxiate gases due to land being disturbed
• Fire and explosion.
Your client or employer could be held liable if the work undertaken causes water pollution or risks to human health or the environment so it's important that you follow any systems of work which have been set up and also report promptly any new concerns you find on site.
Control Measures
• Your supervisor or manager should inform you of the types of contaminants which are likely to be present on site and the actions you need to take to avoid harm to yourself or others.
• Familiarise yourself with any risk assessments and safe systems of work for contaminated land, waste management and pollution control.
• Understand which materials are permitted to be reused on site and any restrictions which apply, and make sure you follow those rules.
• Be aware of the location of emergency spill materials on site and how to use them.
• Use designated wheel/vehicle wash areas.
• Make sure that you follow the site waste plan including for excavated material which may fall within the hazardous waste category on some sites.
• If you discover any unexpected materials, stop work and report it immediately so that the materials can be identified. Examples of such materials include:
* Buried drums, tanks, pipework or containers
* Soil or water which is strange colour or which has an unexpected smell (however, do not deliberately sniff an unknown substance)
* Other unexpected objects and materials
* Signs of oil present in soil or water.
• Wear the personal protective clothing you are instructed to wear.
• Wear the right respiratory protection for the job and follow any instructions you've been given, including information on how to wear it properly.
• Attend a face-fit test when asked to do so.
• Change disposable masks and filters regularly, report loss or damage and store masks in a clean dry place.
• Follow good hygiene practices to avoid cross contamination of your clean clothing.
• Wash your hands and face before eating, drinking or smoking, and only eat, drink or smoke in

Toolbox Talk – ENV004			
Topic/subject covered:	Contaminated Land		
Location of briefing:	Basement Site Office	**Company:**	J. Reddington

We the undersigned fully understand of the contents of this briefing/toolbox talk. If we are unable to carry out our work safely we agree that we must immediately stop work and inform our line manager or supervisor

Date	Print Name	Position/Role	Signature
	Daniele Campus	CARP	
	Jakup Wiadlenes	CARP	
	Claudio Console	CARP	
	ASTRIT ISAKAJ	CARP	
	Klajdi BALLIU	CARP	
	Maninder Singh	CAT	
	Harmail Singh	CAT	
	Jatinder Singh	CAT	
	Jagsir Singh	CAT	
	Orgest Hoxha	CARP	

Given by: Nishad Patel **Position:** PM **Signature:**

I confirm that the above delegates attended the above stated briefing/toolbox/training

Please ensure that a copy of this briefing/toolbox talk/training register is sent to the Training Department at Head Office – **jrl.training@jrlgroup.co.uk**

designated areas.
• Use disposable clothing or site laundry facilities as directed to avoid taking home contaminated laundry
• Follow any site rules for work in excavations or confined spaces.
• Report any concerns about contaminated land, the suspected release of pollutants, damage to bunds or pumps etc. to your supervisor, as a matter of urgency.
Key Points
• Disturbing contaminated land can damage your own health and that of others. It can also harm wildlife, and the wider ecosystem. Some contaminants can lead to more immediate damage by fire or explosion, structural collapse or enabling toxic gases to fill confined spaces.
• If contaminants are known to be present this will be explained by your supervisor or manager.
• Make sure you follow any site-specific rules to contain the contaminated materials in the designated areas.
• Protect yourself with good hygiene practices and the effective use of personal protective clothing.
• If you discover unexpected materials or new concerns, inform your supervisor or a manager immediately.

C: Employee actions – Briefing/toolbox talk must be given before work starts – Include main parts of the briefing/toolbox talk in the below section, including actions which must be taken and avoided (Do's and Don'ts)

Appendix I
Site Inspection Reports (Routine Reassurance Testing).

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4 Elstree Way
Borehamwood
WD6 1RN

27th September 2022

FAO: Frank Everett

Ferry Island, Tottenham Hale (Plot B), 125-139 High Cross Road, London N17 9NU

Waste Classification Report

Please find attached the results of laboratory testing carried out on three samples of soil and one sample of tarmac recovered from Ferry Island, Tottenham Hale (Plot B), 125-139 High Cross Road, London N17 9NU (the site) by a geo-environmental engineer from Terragen Environmental Consultants Limited (TGEN) on 13/09/2022. The samples represent made ground (soil and stones) and surface hardstanding (tarmac) being generated from enabling works excavations and will be excess to requirements and need to be removed from site.

1.0 WASTE CLASSIFICATION

One of the relevant objectives of the Revised Waste Framework (WFD) Directive (2018/851/EC) is to ensure that waste is recovered or disposed without endangering human health and without using processes or methods which could harm the environment, and without:

- Risk to water, air, soil, plants, or animals.
- Causing nuisance through noise or odours.
- Adversely affecting the countryside or places of special interest.

It also provides the general framework of waste management requirements and sets the basic EU waste management definitions. The List of Waste (LoW) Amendment Decision (2014/955/EU) establishes the classification system, including the distinction between hazardous and non-hazardous wastes. It is closely linked to the main characteristics that render waste hazardous as contained in Annex III of the WFD. The amendments came into force to align waste classification with relevant sections of and approaches used in EU chemicals regulations, such as REACH (1907/2006/EC) and the CLP (1272/2008/EC), which in turn adapt for the EU the UN globally harmonised system for chemicals classification. In 2020 and 2021, GB and the UK introduced its own set of waste classification regulations, such as the CLP, REACH and the mandatory classification and labelling list, which retain, mirror and/or replace relevant EU regulations.

Waste is not considered to be a substance, a mixture or an article. Consequently, obligations under the REACH and the CLP regulations do not apply for producers or holders of waste. Nevertheless, information generated in the frameworks of REACH and the CLP that set criteria for substances to be classified as hazardous are related to some of the hazardous properties applicable to the classification of waste. Annex VI of the CLP contains official harmonised classifications of substances, which must be used where the classification of waste depends on the presence of hazardous substances. The classification of substances is periodically updated by the European Chemicals Agency in the form of a new EU regulation, which automatically amends the CLP.

The Landfill Directive (1999/31/EC) defines the categories of waste applicable to landfill sites as hazardous, non-hazardous, municipal and inert. A landfill is defined as a waste disposal site for the deposit of waste onto or into land. Landfills are divided into three classes:

- Landfills for hazardous waste.
- Landfills for non-hazardous waste.
- Landfills for inert waste.

The three main categories of waste and the options for landfilling are as follows:

- Hazardous with or without additional treatment prior to landfill or stable non-reactive hazardous waste (SNRHW) suitable for placement in a dedicated cell in a suitably permitted non-hazardous landfill site.
- Non-hazardous.
- Inert and suitable for disposal to an appropriately permitted landfill site.

To determine the presence and significance of hazards associated with any construction, demolition and earthworks (CD&E) arisings and therefore the resultant options for management of the materials, and where necessary the appropriate class of facility the waste can be taken to, it is therefore necessary to:

- Determine the presence of hazardous properties within the materials.
- Determine the category of the waste.
- Determine if the waste meets the requirements for reuse onsite, recovery or recycling on or offsite, or disposal offsite as waste.

The main statutory guidance document used to properly classify waste as either hazardous or non-hazardous in the UK is Guidance on the Classification and Assessment of Waste (WM3). The stepped methodology for classifying a waste and assessing any hazardous properties is as follows:

- Check if the waste needs to be classified.
- Identify the code that may apply to the waste.
- Identify the assessment required to select the correct code.
- Determine the chemical composition of the waste.
- Determine if the substances in the waste are hazardous substances or persistent organic pollutants.
- Assess the hazardous properties of the waste.
- Assign and describe the classification code.

The waste types disposed to a landfill site permitted to accept inert waste or recovered at a site permitted or exempted in accordance with UK regulations and statutory guidance should be classified as inert. No hazardous or contaminated wastes, as defined in the Waste Acceptance Criteria (WAC) and Procedures Directive (2003/33/EC), should be accepted at such sites. The source and origin of the waste along with a description (e.g. physical form, consistency, composition, colour, odour and likely behaviour etc.) should be determined for all material accepted at such inert waste facilities. The materials should be stable, non-reactive and with a sufficient bearing capacity for the end use.

In accordance with the Landfill Directive and UK statutory guidance, the only materials allowed for disposal or recovery at such inert waste facilities without more detailed information (e.g. chemical analyses, site investigation data etc.) should be restricted to single source material from a known site and a reliable producer. The material from the site or source should not be contaminated and should not contain significant quantities of deleterious materials such as wood, plastic etc. Materials potentially suitable for recovery at such inert waste facilities without laboratory analysis should be restricted to the following:

LoW Code	Description	Restrictions
170101	Concrete	Selected CD&E waste only
170102	Bricks	Selected CD&E waste only
170103	Tiles & Ceramics	Selected CD&E waste only
170107	Mixture of Concrete, Bricks, Tiles & Ceramics	Selected CD&E waste only
170504	Soil & Stones (e.g. natural clay & sand etc.)	Selected CD&E waste not from contaminated sites*
200202	Soil & Stones (e.g. natural clay & sand etc.)	Selected garden & park waste only*

- *Excluding topsoil or peat when used as subsoil or fill.
- Selected CD&E or garden & park waste with low (non-significant) contents of other types of materials (i.e. metals, plastics, organics, wood, rubber etc.). The origin of the waste must be known and relevant information regarding the waste must have been assessed.
- No CD&E waste from buildings or land contaminated with dangerous substances (e.g. 170106 & 170503).
- No CD&E waste from buildings treated or painted with dangerous substances in significant amounts.
- These materials should only be accepted if they arise from a single identified source.
- Mixtures of different types of these wastes from the same single source are acceptable without testing.
- Mixtures of these wastes from different sources are not acceptable unless pre-testing is carried out.

If the waste materials were determined as hazardous or potentially inert and required disposal to landfill, then a further stage of assessment would be required to determine if the waste meets the requirements for disposal at a particular category of landfill facility. This is done in the form of WAC testing. It should be noted that the associated regulations and statutory guidance do not apply to the use of suitable uncontaminated waste for redevelopment, restoration and filling in work or for construction purposes, or for recovery activities.

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2.0 SITE DESCRIPTION

The Tottenham Hale Centre (THC) development consists of five different sites: Welbourne, North Island, Ferry Island, Ashley Road East and Ashley Road West. Prior to 1864, Ferry Island (Plot B) was predominantly residential with a pumping station occupying the E boundary. By 1936, the residential properties in the SW had been developed into a single building and the pumping station was no longer present. During the 1970s and 80s the site was cleared and a new road junction constructed in the SE corner of the site. More recently and prior to the current development Ferry Island has been occupied by three commercial units including KFC, Pizza Hut and Maplin, with associated car parking.

The proposed THC development essentially comprises the demolition of the existing structures and the construction of residential-led development with retail/business uses alongside; servicing, highways improvements and public amenity space including soft and hard landscaped areas creating an improved public realm.

We understand that as part of the development there will be a shallow reduced level excavation followed by placement of a pile mat, piling, pile cap excavations and a deep basement excavation, which will generate in total circa 26790m^3 of material for disposal from site as waste. It is likely that circa 7170m^3 (27%) of the arisings will be made ground of which circa 2870m^3 will be pile mat and hardstanding, and circa 19620m^3 (73%) will be uncontaminated and inert natural soil and pile arisings.

The anticipated geology at the Ferry Island site comprises made ground overlying superficial deposits of Enfield Silt and River Terrace Deposits. The London Clay is at depth and in the order of 15m thick, underlain by the Lambeth Group, Thanet Sand and White Chalk.

Two site investigation reports have been prepared by Langan International (ref. 841011101 dated 26/07/2018 and 04/11/2021) on behalf of Whitby Wood, which comprised the progression of thirteen exploratory holes. The strata encountered confirmed the anticipated geology and comprised made ground, on average circa 1.7m thick, typically containing only a small quantity of deleterious materials, such as fragments of clinker and tarmac, with no visual or olfactory evidence of significant contamination. Asbestos containing material was not visible during the site investigation but it was detected at low concentrations in three samples of made ground tested. The made ground overlies natural and uncontaminated (inert) Enfield Silt, Kempton Park Gravel and London Clay.

During the investigations thirty-five samples were taken from the thirteen exploratory hole locations to depths of up to 6.2mbgl representing circa 26790m^3 of enabling works excavations at the site.

3.0 SITE SAMPLING

A geo-environmental engineer from TGEN visited the site on 13/09/2022 to assess the nature of the strata encountered. This included:

- A physical description of the arisings in accordance with relevant AGS and BSI standards.
- An assessment of visual and olfactory evidence of contamination.
- The recovery of representative samples.
- The submission of samples to a UKAS/MCERTS accredited laboratory for analysis.

During the visit, samples of materials were recovered and included the following:

- Three samples of made ground from general excavation arisings (GA).
- One sample of tarmac (TM) from the surface hardstanding.

4.0 MATERIALS ASSESSMENT

In accordance with the LoW (as amended), the CD&E arisings encountered during this sampling exercise are mirror entries with a mirror hazardous (MH) entry and a mirror non-hazardous (MN) entry as follows:

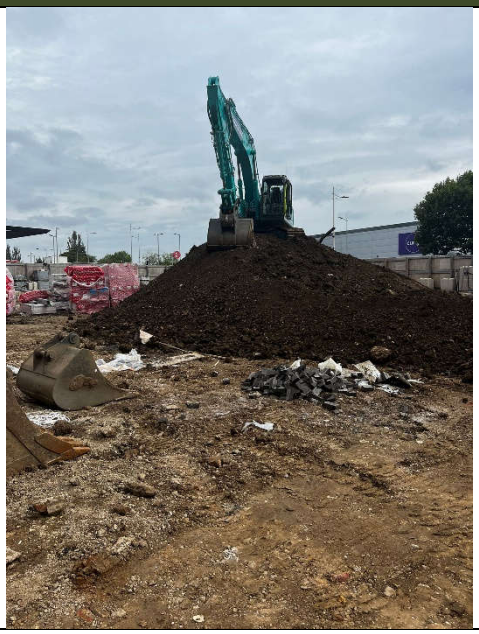
- Soil and stones containing dangerous substances (LoW Code 170503*) – MH.
- Soil and stones not containing dangerous substances (LoW Code 170504) - MN.

- Bituminous mixtures containing coil tar (LoW Code 170301*) – MH.
- Bituminous mixtures other than those mentioned in 170301 (LoW Code 170302) – MN.

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4.1 Physical Appearance of the Waste

Made Ground - General Arisings (GA)

Sampling Date	Reference	Physical Description	Photograph
13/09/2022	GA/1309/01 GA/1309/02 GA/1309/03	Dark brown, sandy, silty, clay with gravel and occasional fragments of brick, concrete, clinker and tarmac. There was no significant odour and the PID reading was <1ppm. No asbestos was seen during the sampling and there was no visual or olfactory evidence of contamination. Based on the physical description, the made ground arisings could be described as: Soil and stones not containing dangerous substances (LoW Code 170504) - MN.	

Surface Hardstanding – Tarmac (TM)

Sampling Date	Reference	Physical Description	Photograph
13/09/2022	TM/1309/01	Black, bituminous tarmacadam. There was no significant odour and the PID reading was <1ppm. No asbestos was seen during the sampling and there was no visual or olfactory evidence of contamination. Based on the physical description, the tarmac arisings could be described as: Bituminous mixtures not containing coal tar (LoW Code 170302) - MN.	

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4.2 Chemical Nature of the Waste

The samples were subjected to a programme of laboratory testing, which included an asbestos screen and a suite of potential contaminants associated with a wide range of potential activities to confirm the preliminary waste classification based on the physical description of the material sampled. The laboratory test reports are presented in Appendix A, which can be summarised as follows.

Made Ground - General Arisings (GA)

Ref	Chemical Summary		Waste Classification
	Asbestos	Solid	LoW Code
GA/1309/01	NAD	No significant contamination	170504
GA/1309/02	NAD	No significant contamination	170504
GA/1309/03	NAD	No significant contamination	170504

NAD No asbestos observed during sample preparation or detected in the sample.

The samples of made ground general arisings (GA) returned low concentrations of a wide range of potential contaminants that corroborated the physical assessment of the material. The arisings represented by the samples of stockpiled made ground would be properly classified as:

- Soil and stones not containing hazardous substances (LoW Code 170504).

Surface Hardstanding – Tarmac (TM)

Ref	Chemical Summary		Waste Classification
	Asbestos	Solid	LoW Code
TM/1309/01	-	Low BaP and total PAH and no coal tar identified.	170302

The sample of tarmac returned low concentrations of benzo(a)pyrene (BaP and total polyaromatic hydrocarbons (PAH) and coal tar residue was not identified. The arisings represented by the sample of tarmac would be properly classified as:

- Bituminous materials not containing coal tar (LoW Code 170302).

5.0 SUMMARY

The material represented by all four samples (made ground and tarmac) would be suitable for acceptance and treatment at a typical soil and aggregates recycling facility (e.g. SR2010 No12, such as Knights Road) as uncontaminated soil and stones (LoW Code 170504) or as bituminous materials not containing coal tar (LoW Code 170302) assuming it remains physically clean and there is no evidence of contamination. We would recommend that during any excavation associated with future phases of the development, should materials previously unidentified during the various investigations be encountered (e.g. an unusual appearance and/or odour etc.), works are halted in that area and the advice of a geo-environmental specialist be sought to determine an appropriate course of action. We would also advise you to employ routine waste practices when managing the disposal of the waste material (i.e. visual and olfactory inspections of all loads leaving the site) to ensure that the material remains consistent and suitable for recovery or disposal at your chosen facility in accordance with level 1, level 2 and level 3 waste acceptance procedures. Please be aware that your duty of care paperwork now needs to include the following:

- The relevant UK SIC Code.
- A declaration that you have fulfilled your duty to apply the waste hierarchy.
- The relevant LoW Code.

We trust that this report meets your requirements, but please contact us should you require clarification on any of the matters raised. Thank you for your custom and we hope that we can be of further assistance to you in the future.

Paul Brewer
BSc (Hons), MSc, MI Soil Sci, CSci
Senior Environmental Consultant

Dr. Barry Powell
BSc (Hons), PhD, MCIWM
Principal Consultant

(for and on behalf of Terragen Environmental Consultants Limited)

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6.0 LIMITATIONS AND USE OF THE REPORT

IMPORTANT: This section should be read before reliance is placed on any of the opinions, advice, recommendations or conclusions set out in this report.

a) This report has been prepared for the purpose of providing interpretation on analytical results supplied by the Client pursuant to its appointment of Terragen Environmental Consultants Limited to act as a Consultant.

b) These comments are given in good faith on the basis of the results provided. Terragen Environmental Consultants Limited can bear no responsibility for any inaccuracies that may arise from the laboratory testing.

c) This report does not constitute a qualitative risk assessment of the site or the soils and is not based upon a conceptual site model as we have been provided with insufficient information to establish the existence of potential sources of contamination, plausible pathways, or sensitive receptors and therefore assumes that they exist.

d) The report is unable to comment on the potential risks to controlled waters (groundwater or surface water), although where contaminant concentrations are below relevant threshold criteria in most circumstances it may be considered that the risk is low.

e) We have assumed that the results are representative of the area sampled. This does not imply that they may be considered representative of the site itself. Terragen Environmental Consultants Limited can accept no responsibility for the integrity of the sampling regime.

f) Save for the Client no duty is undertaken or warranty or representation made to any party in respect of the opinions, advice, recommendations or conclusions herein set out.

g) All work carried out in preparing this report has used, and is based upon, our professional knowledge and understanding of the current relevant English and European Community standards, approved codes of practice, technology and legislation.
Changes in the above may cause the opinion, advice, recommendations or conclusions set out in this report to become inappropriate or incorrect. However, in giving its opinions, advice, recommendations and conclusions, Terragen Environmental Consultants Limited has considered pending changes to environmental legislation and regulations of which it is currently aware. Following delivery of this report, we will have no obligation to advise the Client of any such changes, or of their repercussions.

h) Terragen Environmental Consultants Limited acknowledges that it is being retained, in part, because of its knowledge and experience with respect to environmental matters. Terragen Environmental Consultants Limited will consider and analyse all information provided to it in the context of our knowledge and experience and all other relevant information known to us. To the extent that the information provided to us is not inconsistent or incompatible therewith, Terragen Environmental Consultants Limited shall be entitled to rely upon and assume, without independent verification, the accuracy and completeness of such information.

i) The content of this report represents the professional opinion of experienced environmental consultants. Terragen Environmental Consultants Limited does not provide specialist legal advice and the advice of lawyers may be required.

j) In the Summary and Recommendations sections of this report, Terragen Environmental Consultants Limited has set out our key findings and provided a summary and overview of our advice, opinions and recommendations. However, other parts of this report will often indicate the limitations of the information obtained by Terragen Environmental Consultants Limited and therefore any advice, opinions or recommendations set out in the Executive Summary, Summary and Recommendations sections ought not to be relied upon unless they are considered in the context of the whole report.

k) The lack of evidence of the presence of hazardous or harmful materials at the subject property does not guarantee the absence of such materials; rather it indicates only that none were found as a result of the services provided. The services described in this report were performed in accordance with the general practices and procedures accepted in the consulting field.

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Appendix A Laboratory Test Reports.

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Analytical Report Number : 22-83957

Project / Site name:	Ferry Island, Tottenham Hale (Plot B), 125-139 High Cross Road	**Samples received on:**	14/09/2022
Your job number:	TJ3885A01	**Samples instructed on/ Analysis started on:**	14/09/2022
Your order number:	TJ3885A01	**Analysis completed by:**	22/09/2022
Report Issue Number:	1	**Report issued on:**	22/09/2022
Samples Analysed:	3 soil samples		

Signed:

Dominika Warjan
Junior Reporting Specialist
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

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

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Analytical Report Number: 22-83957
Project / Site name: Ferry Island, Tottenham Hale (Plot B), 125-139 High Cross Road
Your Order No: TJ3885A01

Lab Sample Number				2423795	2423796	2423797
Sample Reference				GA/1309/01	GA/1309/02	GA/1309/03
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				13/09/2022	13/09/2022	13/09/2022
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	12	12	11
Total mass of sample received	kg	0.001	NONE	0.9	0.9	0.9
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	SFS	SFS	SFS
General Inorganics						
pH - Automated	pH Units	N/A	MCERTS	8.5	8.5	8.3
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
Total Sulphate as SO4	mg/kg	50	MCERTS	1500	1500	1300
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	800	840	850
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.4	0.42	0.42
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	399	418	424
Sulphide	mg/kg	1	MCERTS	2.4	2.2	3.8
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	0.9	0.9	0.9
Total Phenols						
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
Speciated PAHs						
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	0.57	0.53
Anthracene	mg/kg	0.05	MCERTS	< 0.05	0.16	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	0.99	1.1
Pyrene	mg/kg	0.05	MCERTS	< 0.05	0.94	1.1
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.76	0.82
Chrysene	mg/kg	0.05	MCERTS	< 0.05	0.49	0.8
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	0.77	1.1
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	0.25	0.33
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.59	0.74
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.31	0.4
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	0.39	0.45
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05
Total PAH						
Total WAC-17 PAHs	mg/kg	0.85	NONE	< 0.85	6.22	7.31

This certificate should not be reproduced, except in full, without the express permission of the laboratory.
The results included within the report relate only to the sample(s) submitted for testing.

Analytical Report Number: 22-83957
Project / Site name: Ferry Island, Tottenham Hale (Plot B), 125-139 High Cross Road
Your Order No: TJ3885A01

Lab Sample Number				2423795	2423796	2423797
Sample Reference				GA/1309/01	GA/1309/02	GA/1309/03
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				13/09/2022	13/09/2022	13/09/2022
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
Heavy Metals / Metalloids						
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	3.7	3.8	3.1
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	14	15	13
Barium (aqua regia extractable)	mg/kg	1	MCERTS	190	140	130
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.81	0.88	0.79
Boron (water soluble)	mg/kg	0.2	MCERTS	1.9	0.8	0.8
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	23	24	24
Copper (aqua regia extractable)	mg/kg	1	MCERTS	44	40	35
Lead (aqua regia extractable)	mg/kg	1	MCERTS	220	180	120
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	0.5	0.5	0.4
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	1.2	1.2	1.1
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	19	21	21
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	38	42	39
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	140	140	120
Petroleum Hydrocarbons						
TPH C10 - C40 $_{EH\_CU\_1D\_TOTAL}$	mg/kg	10	MCERTS	33	31	21

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

This certificate should not be reproduced, except in full, without the express permission of the laboratory.
The results included within the report relate only to the sample(s) submitted for testing.

Analytical Report Number : 22-83957
Project / Site name: Ferry Island, Tottenham Hale (Plot B), 125-139 High Cross Road

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2423795	GA/1309/01	None Supplied	None Supplied	Brown clay and loam with gravel and vegetation.
2423796	GA/1309/02	None Supplied	None Supplied	Brown clay and loam with gravel.
2423797	GA/1309/03	None Supplied	None Supplied	Brown clay and loam with gravel.

Analytical Report Number : 22-83957
Project / Site name: Ferry Island, Tottenham Hale (Plot B), 125-139 High Cross Road

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270. MCERTS accredited except Coronene.	L064-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
TPH Banding in Soil by FID	Determination of hexane extractable hydrocarbons in soil by GC-FID.	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	D	MCERTS
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE

Analytical Report Number : 22-83957
Project / Site name: Ferry Island, Tottenham Hale (Plot B), 125-139 High Cross Road

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

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

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Analytical Report Number : 22-84325

Project / Site name:	Ferry Island, Tottenham Hale (Plot B), 125-139 High Cross Road, London	**Samples received on:**	14/09/2022
Your job number:	TJ3885A04	**Samples instructed on/ Analysis started on:**	15/09/2022
Your order number:	TJ3885A04	**Analysis completed by:**	22/09/2022
Report Issue Number:	1	**Report issued on:**	22/09/2022
Samples Analysed:	1 non soil sample		

Signed:

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

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

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

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

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

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

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Analytical Report Number: 22-84325
Project / Site name: Ferry Island, Tottenham Hale (Plot B), 125-139 High Cross Road, London
Your Order No: TJ3885A04

Lab Sample Number				2425721
Sample Reference				TM/1309/01
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				13/09/2022
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**	
Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	0.01	NONE	0.17
Total mass of sample received	kg	0.001	NONE	0.4

Speciated PAHs

Naphthalene	mg/kg	0.05	NONE	< 0.05
Acenaphthylene	mg/kg	0.05	NONE	< 0.05
Acenaphthene	mg/kg	0.05	NONE	< 0.05
Fluorene	mg/kg	0.05	NONE	< 0.05
Phenanthrene	mg/kg	0.05	NONE	0.39
Anthracene	mg/kg	0.05	NONE	< 0.05
Fluoranthene	mg/kg	0.05	NONE	0.43
Pyrene	mg/kg	0.05	NONE	0.4
Benzo(a)anthracene	mg/kg	0.05	NONE	0.3
Chrysene	mg/kg	0.05	NONE	0.38
Benzo(b)fluoranthene	mg/kg	0.05	NONE	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	NONE	< 0.05
Benzo(a)pyrene	mg/kg	0.05	NONE	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	NONE	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	NONE	1.9

Miscellaneous Organics

Coal Tar		N/A	NONE	Not Identified
Total Residue	mg/kg	10	NONE	3800

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

Analytical Report Number : 22-84325
Project / Site name: Ferry Island, Tottenham Hale (Plot B), 125-139 High Cross Road, London

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2425721	TM/1309/01	None Supplied	None Supplied	Non Soil**

**Non MCERTS Matrix

Analytical Report Number : 22-84325
Project / Site name: Ferry Island, Tottenham Hale (Plot B), 125-139 High Cross Road, London

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Coal Tar in Soil	DCM Extraction with qualitative interpretation via GC/MS	In-house method	L064-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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

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Our Ref. TJ3885BR1

J. Reddington Limited
4 Elstree Way
Borehamwood
WD6 1RN

25th October 2022

FAO: Frank Everett

Ferry Island, Tottenham Hale (Plot B), 125-139 High Cross Road, London N17 9NU

Waste Classification Report

Please find attached the results of laboratory testing carried out on three samples of soil and one sample of tarmac recovered from Ferry Island, Tottenham Hale (Plot B), 125-139 High Cross Road, London N17 9NU (the site) by a geo-environmental engineer from Terragen Environmental Consultants Limited (TGEN) on 11/10/2022. The samples represent made ground (soil and stones) being generated from enabling works excavations and will be excess to requirements and need to be removed from site.

1.0 WASTE CLASSIFICATION

One of the relevant objectives of the Revised Waste Framework (WFD) Directive (2018/851/EC) is to ensure that waste is recovered or disposed without endangering human health and without using processes or methods which could harm the environment, and without:

- Risk to water, air, soil, plants, or animals.
- Causing nuisance through noise or odours.
- Adversely affecting the countryside or places of special interest.

It also provides the general framework of waste management requirements and sets the basic EU waste management definitions. The List of Waste (LoW) Amendment Decision (2014/955/EU) establishes the classification system, including the distinction between hazardous and non-hazardous wastes. It is closely linked to the main characteristics that render waste hazardous as contained in Annex III of the WFD. The amendments came into force to align waste classification with relevant sections of and approaches used in EU chemicals regulations, such as REACH (1907/2006/EC) and the CLP (1272/2008/EC), which in turn adapt for the EU the UN globally harmonised system for chemicals classification. In 2020 and 2021, GB and the UK introduced its own set of waste classification regulations, such as the CLP, REACH and the mandatory classification and labelling list, which retain, mirror and/or replace relevant EU regulations.

Waste is not considered to be a substance, a mixture or an article. Consequently, obligations under the REACH and the CLP regulations do not apply for producers or holders of waste. Nevertheless, information generated in the frameworks of REACH and the CLP that set criteria for substances to be classified as hazardous are related to some of the hazardous properties applicable to the classification of waste. Annex VI of the CLP contains official harmonised classifications of substances, which must be used where the classification of waste depends on the presence of hazardous substances. The classification of substances is periodically updated by the European Chemicals Agency in the form of a new EU regulation, which automatically amends the CLP.

The Landfill Directive (1999/31/EC) defines the categories of waste applicable to landfill sites as hazardous, non-hazardous, municipal and inert. A landfill is defined as a waste disposal site for the deposit of waste onto or into land. Landfills are divided into three classes:

- Landfills for hazardous waste.
- Landfills for non-hazardous waste.
- Landfills for inert waste.

The three main categories of waste and the options for landfilling are as follows:

- Hazardous with or without additional treatment prior to landfill or stable non-reactive hazardous waste (SNRHW) suitable for placement in a dedicated cell in a suitably permitted non-hazardous landfill site.
- Non-hazardous.
- Inert and suitable for disposal to an appropriately permitted landfill site.

To determine the presence and significance of hazards associated with any construction, demolition and earthworks (CD&E) arisings and therefore the resultant options for management of the materials, and where necessary the appropriate class of facility the waste can be taken to, it is therefore necessary to:

- Determine the presence of hazardous properties within the materials.
- Determine the category of the waste.
- Determine if the waste meets the requirements for reuse onsite, recovery or recycling on or offsite, or disposal offsite as waste.

The main statutory guidance document used to properly classify waste as either hazardous or non-hazardous in the UK is Guidance on the Classification and Assessment of Waste (WM3). The stepped methodology for classifying a waste and assessing any hazardous properties is as follows:

- Check if the waste needs to be classified.
- Identify the code that may apply to the waste.
- Identify the assessment required to select the correct code.
- Determine the chemical composition of the waste.
- Determine if the substances in the waste are hazardous substances or persistent organic pollutants.
- Assess the hazardous properties of the waste.
- Assign and describe the classification code.

The waste types disposed to a landfill site permitted to accept inert waste or recovered at a site permitted or exempted in accordance with UK regulations and statutory guidance should be classified as inert. No hazardous or contaminated wastes, as defined in the Waste Acceptance Criteria (WAC) and Procedures Directive (2003/33/EC), should be accepted at such sites. The source and origin of the waste along with a description (e.g. physical form, consistency, composition, colour, odour and likely behaviour etc.) should be determined for all material accepted at such inert waste facilities. The materials should be stable, non-reactive and with a sufficient bearing capacity for the end use.

In accordance with the Landfill Directive and UK statutory guidance, the only materials allowed for disposal or recovery at such inert waste facilities without more detailed information (e.g. chemical analyses, site investigation data etc.) should be restricted to single source material from a known site and a reliable producer. The material from the site or source should not be contaminated and should not contain significant quantities of deleterious materials such as wood, plastic etc. Materials potentially suitable for recovery at such inert waste facilities without laboratory analysis should be restricted to the following:

LoW Code	Description	Restrictions
170101	Concrete	Selected CD&E waste only
170102	Bricks	Selected CD&E waste only
170103	Tiles & Ceramics	Selected CD&E waste only
170107	Mixture of Concrete, Bricks, Tiles & Ceramics	Selected CD&E waste only
170504	Soil & Stones (e.g. natural clay & sand etc.)	Selected CD&E waste not from contaminated sites*
200202	Soil & Stones (e.g. natural clay & sand etc.)	Selected garden & park waste only*

- *Excluding topsoil or peat when used as subsoil or fill.
- Selected CD&E or garden & park waste with low (non-significant) contents of other types of materials (i.e. metals, plastics, organics, wood, rubber etc.). The origin of the waste must be known and relevant information regarding the waste must have been assessed.
- No CD&E waste from buildings or land contaminated with dangerous substances (e.g. 170106 & 170503).
- No CD&E waste from buildings treated or painted with dangerous substances in significant amounts.
- These materials should only be accepted if they arise from a single identified source.
- Mixtures of different types of these wastes from the same single source are acceptable without testing.
- Mixtures of these wastes from different sources are not acceptable unless pre-testing is carried out.

If the waste materials were determined as hazardous or potentially inert and required disposal to landfill, then a further stage of assessment would be required to determine if the waste meets the requirements for disposal at a particular category of landfill facility. This is done in the form of WAC testing. It should be noted that the associated regulations and statutory guidance do not apply to the use of suitable uncontaminated waste for redevelopment, restoration and filling in work or for construction purposes, or for recovery activities.

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2.0 SITE DESCRIPTION

The Tottenham Hale Centre (THC) development consists of five different sites: Welbourne, North Island, Ferry Island, Ashley Road East and Ashley Road West. Prior to 1864, Ferry Island (Plot B) was predominantly residential with a pumping station occupying the E boundary. By 1936, the residential properties in the SW had been developed into a single building and the pumping station was no longer present. During the 1970s and 80s the site was cleared and a new road junction constructed in the SE corner of the site. More recently and prior to the current development Ferry Island has been occupied by three commercial units including KFC, Pizza Hut and Maplin, with associated car parking.

The proposed THC development essentially comprises the demolition of the existing structures and the construction of residential-led development with retail/business uses alongside; servicing, highways improvements and public amenity space including soft and hard landscaped areas creating an improved public realm.

We understand that as part of the development there will be a shallow reduced level excavation followed by placement of a pile mat, piling, pile cap excavations and a deep basement excavation, which will generate in total circa 26790m^3 of material for disposal from site as waste. It is likely that circa 7170m^3 (27%) of the arisings will be made ground of which circa 2870m^3 will be pile mat and hardstanding, and circa 19620m^3 (73%) will be uncontaminated and inert natural soil and pile arisings.

The anticipated geology at the Ferry Island site comprises made ground overlying superficial deposits of Enfield Silt and River Terrace Deposits. The London Clay is at depth and in the order of 15m thick, underlain by the Lambeth Group, Thanet Sand and White Chalk.

Two site investigation reports have been prepared by Langan International (ref. 841011101 dated 26/07/2018 and 04/11/2021) on behalf of Whitby Wood, which comprised the progression of thirteen exploratory holes. The strata encountered confirmed the anticipated geology and comprised made ground, on average circa 1.7m thick, typically containing only a small quantity of deleterious materials, such as fragments of clinker and tarmac, with no visual or olfactory evidence of significant contamination. Asbestos containing material was not visible during the site investigation but it was detected at low concentrations in three samples of made ground tested. The made ground overlies natural and uncontaminated (inert) Enfield Silt, Kempton Park Gravel and London Clay.

During the investigations thirty-five samples were taken from the thirteen exploratory hole locations to depths of up to 6.2mbgl representing circa 26790m^3 of enabling works excavations at the site.

3.0 SITE SAMPLING

A geo-environmental engineer from TGEN visited the site on 11/10/2022 to assess the nature of the strata encountered. This included:

- A physical description of the arisings in accordance with relevant AGS and BSI standards.
- An assessment of visual and olfactory evidence of contamination.
- The recovery of representative samples.
- The submission of samples to a UKAS/MCERTS accredited laboratory for analysis.

During the visit, samples of materials were recovered and included the following:

- Three samples of made ground from general excavation arisings (GA).

4.0 MATERIALS ASSESSMENT

In accordance with the LoW (as amended), the CD&E arisings encountered during this sampling exercise are mirror entries with a mirror hazardous (MH) entry and a mirror non-hazardous (MN) entry as follows:

- Soil and stones containing dangerous substances (LoW Code 170503*) – MH.
- Soil and stones not containing dangerous substances (LoW Code 170504) - MN.

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4.1 Physical Appearance of the Waste

Made Ground - General Arisings (GA)

Sampling Date	Reference	Physical Description	Photograph
11/10/2022	GA/1110/01 GA/1110/02 GA/1110/03	Dark brown, sandy, silty, clay with gravel and occasional fragments of brick and concrete, and rare fragments of wood and metal. There was no significant odour and the PID reading was <1ppm. No asbestos was seen during the sampling and there was no visual or olfactory evidence of contamination. Based on the physical description, the made ground arisings could be described as: Soil and stones not containing dangerous substances (LoW Code 170504) - MN.	

4.2 Chemical Nature of the Waste

The samples were subjected to a programme of laboratory testing, which included an asbestos screen and a suite of potential contaminants associated with a wide range of potential activities to confirm the preliminary waste classification based on the physical description of the material sampled. The laboratory test reports are presented in Appendix A, which can be summarised as follows.

Made Ground - General Arisings (GA)

Ref	Chemical Summary		Waste Classification
	Asbestos	Solid	LoW Code
GA/1110/01	NAD	No significant contamination	170504
GA/1110/02	NAD	No significant contamination	170504
GA/1110/03	NAD	No significant contamination	170504

NAD No asbestos observed during sample preparation or detected in the sample.

The samples of made ground general arisings (GA) returned low concentrations of a wide range of potential contaminants that corroborated the physical assessment of the material. The arisings represented by the samples of stockpiled made ground would be properly classified as:

- Soil and stones not containing hazardous substances (LoW Code 170504).

5.0 SUMMARY

The material represented by all three samples (made ground) would be suitable for acceptance and treatment at a typical soil and aggregates recycling facility (e.g. SR2010 No12, such as Knights Road) as uncontaminated soil and stones (LoW Code 170504) assuming it remains physically clean and there is no evidence of contamination. We would recommend that during any excavation associated with future phases of the development, should materials previously unidentified during the various investigations be encountered (e.g. an unusual appearance and/or odour etc.), works are halted in that area and the advice of a geo-environmental specialist be sought to determine an appropriate course of action. We would also advise you to employ routine waste practices when managing the disposal of the waste material (i.e. visual and olfactory inspections of all loads leaving the site) to ensure that the material remains consistent and suitable for recovery or disposal at your chosen facility in accordance with level 1, level 2 and level 3 waste acceptance procedures. Please be aware that your duty of care paperwork now needs to include the following:

- The relevant UK SIC Code.
- A declaration that you have fulfilled your duty to apply the waste hierarchy.
- The relevant LoW Code.

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We trust that this report meets your requirements, but please contact us should you require clarification on any of the matters raised. Thank you for your custom and we hope that we can be of further assistance to you in the future.

Paul Brewer
BSc (Hons), MSc, MI Soil Sci, CSci
Senior Environmental Consultant

Dr. Barry Powell
BSc (Hons), PhD, MCIWM
Principal Consultant

(for and on behalf of Terragen Environmental Consultants Limited)

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6.0 LIMITATIONS AND USE OF THE REPORT

IMPORTANT: This section should be read before reliance is placed on any of the opinions, advice, recommendations or conclusions set out in this report.

a) This report has been prepared for the purpose of providing interpretation on analytical results supplied by the Client pursuant to its appointment of Terragen Environmental Consultants Limited to act as a Consultant.

b) These comments are given in good faith on the basis of the results provided. Terragen Environmental Consultants Limited can bear no responsibility for any inaccuracies that may arise from the laboratory testing.

c) This report does not constitute a qualitative risk assessment of the site or the soils and is not based upon a conceptual site model as we have been provided with insufficient information to establish the existence of potential sources of contamination, plausible pathways, or sensitive receptors and therefore assumes that they exist.

d) The report is unable to comment on the potential risks to controlled waters (groundwater or surface water), although where contaminant concentrations are below relevant threshold criteria in most circumstances it may be considered that the risk is low.

e) We have assumed that the results are representative of the area sampled. This does not imply that they may be considered representative of the site itself. Terragen Environmental Consultants Limited can accept no responsibility for the integrity of the sampling regime.

f) Save for the Client no duty is undertaken or warranty or representation made to any party in respect of the opinions, advice, recommendations or conclusions herein set out.

g) All work carried out in preparing this report has used, and is based upon, our professional knowledge and understanding of the current relevant English and European Community standards, approved codes of practice, technology and legislation.
Changes in the above may cause the opinion, advice, recommendations or conclusions set out in this report to become inappropriate or incorrect. However, in giving its opinions, advice, recommendations and conclusions, Terragen Environmental Consultants Limited has considered pending changes to environmental legislation and regulations of which it is currently aware. Following delivery of this report, we will have no obligation to advise the Client of any such changes, or of their repercussions.

h) Terragen Environmental Consultants Limited acknowledges that it is being retained, in part, because of its knowledge and experience with respect to environmental matters. Terragen Environmental Consultants Limited will consider and analyse all information provided to it in the context of our knowledge and experience and all other relevant information known to us. To the extent that the information provided to us is not inconsistent or incompatible therewith, Terragen Environmental Consultants Limited shall be entitled to rely upon and assume, without independent verification, the accuracy and completeness of such information.

i) The content of this report represents the professional opinion of experienced environmental consultants. Terragen Environmental Consultants Limited does not provide specialist legal advice and the advice of lawyers may be required.

j) In the Summary and Recommendations sections of this report, Terragen Environmental Consultants Limited has set out our key findings and provided a summary and overview of our advice, opinions and recommendations. However, other parts of this report will often indicate the limitations of the information obtained by Terragen Environmental Consultants Limited and therefore any advice, opinions or recommendations set out in the Executive Summary, Summary and Recommendations sections ought not to be relied upon unless they are considered in the context of the whole report.

k) The lack of evidence of the presence of hazardous or harmful materials at the subject property does not guarantee the absence of such materials; rather it indicates only that none were found as a result of the services provided. The services described in this report were performed in accordance with the general practices and procedures accepted in the consulting field.

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Appendix A Laboratory Test Reports.

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Analytical Report Number : 22-89654

Project / Site name:	Ferry Island, Tottenham Hale (Plot B), 125-139 High Cross Road, London N17	**Samples received on:**	12/10/2022
Your job number:	TJ3885B01	**Samples instructed on/ Analysis started on:**	12/10/2022
Your order number:	TJ3885B01	**Analysis completed by:**	24/10/2022
Report Issue Number:	1	**Report issued on:**	24/10/2022
Samples Analysed:	3 soil samples		

Signed:

Adam Fenwick
Technical Reviewer
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

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

This certificate should not be reproduced, except in full, without the express permission of i2 Analytical Ltd.

Analytical Report Number: 22-89654
Project / Site name: Ferry Island, Tottenham Hale (Plot B), 125-139 High Cross Road, London N17
Your Order No: TJ3885B01

Lab Sample Number				2458186	2458187	2458188
Sample Reference				GA/1110/01	GA/1110/02	GA/1110/03
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				11/10/2022	11/10/2022	11/10/2022
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
Stone Content	%	0.1	NONE	20	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	10	12	10
Total mass of sample received	kg	0.001	NONE	0.8	0.8	0.8
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	SZS	SZS	SZS

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.9	8.9	8.3
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
Total Sulphate as SO4	mg/kg	50	MCERTS	1600	1700	1400
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	1000	920	840
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.51	0.46	0.42
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	506	459	419
Sulphide	mg/kg	1	MCERTS	14	6.4	3.4
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	0.7	0.7	0.6

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	1.7	0.42	0.52
Anthracene	mg/kg	0.05	MCERTS	0.71	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	3.3	0.89	1.2
Pyrene	mg/kg	0.05	MCERTS	2.8	0.79	1.1
Benzo(a)anthracene	mg/kg	0.05	MCERTS	1.6	0.53	0.65
Chrysene	mg/kg	0.05	MCERTS	1.2	0.53	0.78
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	1.2	0.6	0.9
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.95	0.34	0.37
Benzo(a)pyrene	mg/kg	0.05	MCERTS	1.2	0.6	0.78
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.5	0.37	0.49
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.58	0.42	0.56
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05

Total PAH

Total WAC-17 PAHs	mg/kg	0.85	NONE	15.6	5.49	7.3

Analytical Report Number: 22-89654
Project / Site name: Ferry Island, Tottenham Hale (Plot B), 125-139 High Cross Road, London N17
Your Order No: TJ3885B01

Lab Sample Number				2458186	2458187	2458188
Sample Reference				GA/1110/01	GA/1110/02	GA/1110/03
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				11/10/2022	11/10/2022	11/10/2022
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
Heavy Metals / Metalloids						
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	15	13	15
Barium (aqua regia extractable)	mg/kg	1	MCERTS	130	120	130
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.78	0.77	0.91
Boron (water soluble)	mg/kg	0.2	MCERTS	0.8	1.3	1.4
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	22	22	23
Copper (aqua regia extractable)	mg/kg	1	MCERTS	34	34	38
Lead (aqua regia extractable)	mg/kg	1	MCERTS	130	110	130
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	1.3	1.1	1.1
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	20	19	20
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	46	37	37
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	130	140	120
Petroleum Hydrocarbons						
TPH C10 - C40 $_{EH\_CU\_1D\_TOTAL}$	mg/kg	10	MCERTS	310	58	66

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

Analytical Report Number : 22-89654
Project / Site name: Ferry Island, Tottenham Hale (Plot B), 125-139 High Cross Road, London N17

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2458186	GA/1110/01	None Supplied	None Supplied	Brown loam and clay with gravel and stones.
2458187	GA/1110/02	None Supplied	None Supplied	Brown clay and sand with gravel and brick.
2458188	GA/1110/03	None Supplied	None Supplied	Brown clay and sand with gravel.

Analytical Report Number : 22-89654
Project / Site name: Ferry Island, Tottenham Hale (Plot B), 125-139 High Cross Road, London N17

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270. MCERTS accredited except Coronene.	L064-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
TPH Banding in Soil by FID	Determination of hexane extractable hydrocarbons in soil by GC-FID.	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	D	MCERTS
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE

Analytical Report Number : 22-89654
Project / Site name: Ferry Island, Tottenham Hale (Plot B), 125-139 High Cross Road, London N17

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

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

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J. Reddington Limited
4 Elstree Way
Borehamwood
WD6 1RN

12th December 2022

FAO: Frank Everett

Ferry Island, Tottenham Hale (Plot B), 125-139 High Cross Road, London N17 9NU

Waste Classification Report

Please find attached the results of laboratory testing carried out on four samples of soil recovered from Ferry Island, Tottenham Hale (Plot B), 125-139 High Cross Road, London N17 9NU (the site) by a geo-environmental engineer from Terragen Environmental Consultants Limited (TGEN) on 23/11/2022. The samples represent made ground and natural ground (soil and stones) being generated from enabling works excavations and will be excess to requirements and need to be removed from site.

1.0 WASTE CLASSIFICATION

One of the relevant objectives of the Revised Waste Framework (WFD) Directive (2018/851/EC) is to ensure that waste is recovered or disposed without endangering human health and without using processes or methods which could harm the environment, and without:

- Risk to water, air, soil, plants, or animals.
- Causing nuisance through noise or odours.
- Adversely affecting the countryside or places of special interest.

It also provides the general framework of waste management requirements and sets the basic EU waste management definitions. The List of Waste (LoW) Amendment Decision (2014/955/EU) establishes the classification system, including the distinction between hazardous and non-hazardous wastes. It is closely linked to the main characteristics that render waste hazardous as contained in Annex III of the WFD. The amendments came into force to align waste classification with relevant sections of and approaches used in EU chemicals regulations, such as REACH (1907/2006/EC) and the CLP (1272/2008/EC), which in turn adapt for the EU the UN globally harmonised system for chemicals classification. In 2020 and 2021, GB and the UK introduced its own set of waste classification regulations, such as the CLP, REACH and the mandatory classification and labelling list, which retain, mirror and/or replace relevant EU regulations.

Waste is not considered to be a substance, a mixture or an article. Consequently, obligations under the REACH and the CLP regulations do not apply for producers or holders of waste. Nevertheless, information generated in the frameworks of REACH and the CLP that set criteria for substances to be classified as hazardous are related to some of the hazardous properties applicable to the classification of waste. Annex VI of the CLP contains official harmonised classifications of substances, which must be used where the classification of waste depends on the presence of hazardous substances. The classification of substances is periodically updated by the European Chemicals Agency in the form of a new EU regulation, which automatically amends the CLP.

The Landfill Directive (1999/31/EC) defines the categories of waste applicable to landfill sites as hazardous, non-hazardous, municipal and inert. A landfill is defined as a waste disposal site for the deposit of waste onto or into land. Landfills are divided into three classes:

- Landfills for hazardous waste.
- Landfills for non-hazardous waste.
- Landfills for inert waste.

The three main categories of waste and the options for landfilling are as follows:

- Hazardous with or without additional treatment prior to landfill or stable non-reactive hazardous waste (SNRHW) suitable for placement in a dedicated cell in a suitably permitted non-hazardous landfill site.
- Non-hazardous.
- Inert and suitable for disposal to an appropriately permitted landfill site.

To determine the presence and significance of hazards associated with any construction, demolition and earthworks (CD&E) arisings and therefore the resultant options for management of the materials, and where necessary the appropriate class of facility the waste can be taken to, it is therefore necessary to:

- Determine the presence of hazardous properties within the materials.
- Determine the category of the waste.
- Determine if the waste meets the requirements for reuse onsite, recovery or recycling on or offsite, or disposal offsite as waste.

The main statutory guidance document used to properly classify waste as either hazardous or non-hazardous in the UK is Guidance on the Classification and Assessment of Waste (WM3). The stepped methodology for classifying a waste and assessing any hazardous properties is as follows:

- Check if the waste needs to be classified.
- Identify the code that may apply to the waste.
- Identify the assessment required to select the correct code.
- Determine the chemical composition of the waste.
- Determine if the substances in the waste are hazardous substances or persistent organic pollutants.
- Assess the hazardous properties of the waste.
- Assign and describe the classification code.

The waste types disposed to a landfill site permitted to accept inert waste or recovered at a site permitted or exempted in accordance with UK regulations and statutory guidance should be classified as inert. No hazardous or contaminated wastes, as defined in the Waste Acceptance Criteria (WAC) and Procedures Directive (2003/33/EC), should be accepted at such sites. The source and origin of the waste along with a description (e.g. physical form, consistency, composition, colour, odour and likely behaviour etc.) should be determined for all material accepted at such inert waste facilities. The materials should be stable, non-reactive and with a sufficient bearing capacity for the end use.

In accordance with the Landfill Directive and UK statutory guidance, the only materials allowed for disposal or recovery at such inert waste facilities without more detailed information (e.g. chemical analyses, site investigation data etc.) should be restricted to single source material from a known site and a reliable producer. The material from the site or source should not be contaminated and should not contain significant quantities of deleterious materials such as wood, plastic etc. Materials potentially suitable for recovery at such inert waste facilities without laboratory analysis should be restricted to the following:

LoW Code	Description	Restrictions
170101	Concrete	Selected CD&E waste only
170102	Bricks	Selected CD&E waste only
170103	Tiles & Ceramics	Selected CD&E waste only
170107	Mixture of Concrete, Bricks, Tiles & Ceramics	Selected CD&E waste only
170504	Soil & Stones (e.g. natural clay & sand etc.)	Selected CD&E waste not from contaminated sites*
200202	Soil & Stones (e.g. natural clay & sand etc.)	Selected garden & park waste only*

- *Excluding topsoil or peat when used as subsoil or fill.
- Selected CD&E or garden & park waste with low (non-significant) contents of other types of materials (i.e. metals, plastics, organics, wood, rubber etc.). The origin of the waste must be known and relevant information regarding the waste must have been assessed.
- No CD&E waste from buildings or land contaminated with dangerous substances (e.g. 170106 & 170503).
- No CD&E waste from buildings treated or painted with dangerous substances in significant amounts.
- These materials should only be accepted if they arise from a single identified source.
- Mixtures of different types of these wastes from the same single source are acceptable without testing.
- Mixtures of these wastes from different sources are not acceptable unless pre-testing is carried out.

If the waste materials were determined as hazardous or potentially inert and required disposal to landfill, then a further stage of assessment would be required to determine if the waste meets the requirements for disposal at a particular category of landfill facility. This is done in the form of WAC testing. It should be noted that the associated regulations and statutory guidance do not apply to the use of suitable uncontaminated waste for redevelopment, restoration and filling in work or for construction purposes, or for recovery activities.

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2.0 SITE DESCRIPTION

The Tottenham Hale Centre (THC) development consists of five different sites: Welbourne, North Island, Ferry Island, Ashley Road East and Ashley Road West. Prior to 1864, Ferry Island (Plot B) was predominantly residential with a pumping station occupying the E boundary. By 1936, the residential properties in the SW had been developed into a single building and the pumping station was no longer present. During the 1970s and 80s the site was cleared and a new road junction constructed in the SE corner of the site. More recently and prior to the current development Ferry Island has been occupied by three commercial units including KFC, Pizza Hut and Maplin, with associated car parking.

The proposed THC development essentially comprises the demolition of the existing structures and the construction of residential-led development with retail/business uses alongside; servicing, highways improvements and public amenity space including soft and hard landscaped areas creating an improved public realm.

We understand that as part of the development there will be a shallow reduced level excavation followed by placement of a pile mat, piling, pile cap excavations and a deep basement excavation, which will generate in total circa 26790m^3 of material for disposal from site as waste. It is likely that circa 7170m^3 (27%) of the arisings will be made ground of which circa 2870m^3 will be pile mat and hardstanding, and circa 19620m^3 (73%) will be uncontaminated and inert natural soil and pile arisings.

The anticipated geology at the Ferry Island site comprises made ground overlying superficial deposits of Enfield Silt and River Terrace Deposits. The London Clay is at depth and in the order of 15m thick, underlain by the Lambeth Group, Thanet Sand and White Chalk.

Two site investigation reports have been prepared by Langan International (ref. 841011101 dated 26/07/2018 and 04/11/2021) on behalf of Whitby Wood, which comprised the progression of thirteen exploratory holes. The strata encountered confirmed the anticipated geology and comprised made ground, on average circa 1.7m thick, typically containing only a small quantity of deleterious materials, such as fragments of clinker and tarmac, with no visual or olfactory evidence of significant contamination. Asbestos containing material was not visible during the site investigation but it was detected at low concentrations in three samples of made ground tested. The made ground overlies natural and uncontaminated (inert) Enfield Silt, Kempton Park Gravel and London Clay.

During the investigations thirty-five samples were taken from the thirteen exploratory hole locations to depths of up to 6.2mbgl representing circa 26790m^3 of enabling works excavations at the site.

3.0 SITE SAMPLING

A geo-environmental engineer from TGEN visited the site on 23/11/2022 to assess the nature of the strata encountered. This included:

- A physical description of the arisings in accordance with relevant AGS and BSI standards.
- An assessment of visual and olfactory evidence of contamination.
- The recovery of representative samples.
- The submission of samples to a UKAS/MCERTS accredited laboratory for analysis.

During the visit, routine reassurance samples of materials were recovered and included the following:

- Three samples of made ground from general excavation/piling arisings (MG).
- One sample of natural ground from general excavation/piling arisings (NAT).

4.0 MATERIALS ASSESSMENT

In accordance with the LoW (as amended), the CD&E arisings encountered during this sampling exercise are mirror entries with a mirror hazardous (MH) entry and a mirror non-hazardous (MN) entry as follows:

- Soil and stones containing dangerous substances (LoW Code 170503*) – MH.
- Soil and stones not containing dangerous substances (LoW Code 170504) - MN.

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4.1 Physical Appearance of the Waste

Made Ground Arisings (MG)

Sampling Date	Reference	Physical Description	Photograph
23/11/2022	MG/2311/01 MG/2311/02 MG/2311/03	Grey/ brown, slightly sandy, silty, clay with gravel and occasional fragments of brick and concrete, and rare fragments of wood and metal. There was no significant odour and the PID reading was <1ppm. No asbestos was seen during the sampling and there was no visual or olfactory evidence of contamination. Based on the physical description, the made ground arisings could be described as: Soil and stones not containing dangerous substances (LoW Code 170504) - MN.	

Natural Ground Arisings (NAT)

Sampling Date	Reference	Physical Description	Photograph
23/11/2022	NAT/2311/01	Dark grey/brown, silty, clay with rare gravel. There was no significant odour and the PID reading was <1ppm. No asbestos was seen during the sampling and there was no visual or olfactory evidence of contamination. Based on the physical description, the natural ground arisings could be described as: Soil and stones not containing dangerous substances (LoW Code 170504) - MN.	

4.2 Chemical Nature of the Waste

The samples were subjected to a programme of laboratory testing, which included an asbestos screen and a suite of potential contaminants associated with a wide range of potential activities to confirm the preliminary waste classification based on the physical description of the material sampled. The laboratory test reports are presented in Appendix A, which can be summarised as follows.

Made Ground Arisings (GA)

Ref	Chemical Summary		Waste Classification
	Asbestos	Solid	LoW Code
MG/2311/01	Fibres <0.001%	No significant contamination	170504
MG/2311/02	NAD	No significant contamination	170504
MG/2311/03	NAD	No significant contamination	170504

NAD No asbestos observed during sample preparation or detected in the sample.

Natural Ground Arisings (NAT)

Ref	Chemical Summary		Waste Classification
	Asbestos	Solid	LoW Code
NAT/2311/01	NAD	No significant contamination	170504

NAD No asbestos observed during sample preparation or detected in the sample.

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5.0 SUMMARY

No asbestos was observed during the sampling. Loose chrysotile fibres were detected in one sample of made ground, which was subject to quantification returning a concentration below the laboratory limit of detection. As such, the material represented by the samples (made ground and natural) would be classified as

- **Soil and stones not containing hazardous substances (LoW Code 170504).**

In addition, material represented by the samples can be described for waste disposal purposes as follows:

- MG/2311/01 Slightly elevated concentration of asbestos (Non-hazardous waste).
- *MG/2311/02 No significant contamination (Uncontaminated waste).*
- *MG/2311/03 No significant contamination (Uncontaminated waste).*
- *NAT/2311/01No significant contamination (Uncontaminated and inert waste).*

We would recommend that during any excavation associated with future phases of the development, should materials previously unidentified during the various investigations be encountered (e.g. an unusual appearance and/or odour etc.), works are halted in that area and the advice of a geo-environmental specialist be sought to determine an appropriate course of action. We would also advise you to employ routine waste practices when managing the disposal of the waste material (i.e. visual and olfactory inspections of all loads leaving the site) to ensure that the material remains consistent and suitable for recovery or disposal at your chosen facility in accordance with level 1, level 2 and level 3 waste acceptance procedures. Please be aware that your duty of care paperwork now needs to include the following:

- The relevant UK SIC Code.
- A declaration that you have fulfilled your duty to apply the waste hierarchy.
- The relevant LoW Code.

*****

We trust that this report meets your requirements, but please contact us should you require clarification on any of the matters raised. Thank you for your custom and we hope that we can be of further assistance to you in the future.

Paul Brewer
BSc (Hons), MSc, MI Soil Sci
Senior Environmental Consultant

Dr. Barry Powell
BSc (Hons), PhD, MCIWM
Principal Consultant

(for and on behalf of Terragen Environmental Consultants Limited)

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6.0 LIMITATIONS AND USE OF THE REPORT

IMPORTANT: This section should be read before reliance is placed on any of the opinions, advice, recommendations or conclusions set out in this report.

a) This report has been prepared for the purpose of providing interpretation on analytical results supplied by the Client pursuant to its appointment of Terragen Environmental Consultants Limited to act as a Consultant.

b) These comments are given in good faith on the basis of the results provided. Terragen Environmental Consultants Limited can bear no responsibility for any inaccuracies that may arise from the laboratory testing.

c) This report does not constitute a qualitative risk assessment of the site or the soils and is not based upon a conceptual site model as we have been provided with insufficient information to establish the existence of potential sources of contamination, plausible pathways, or sensitive receptors and therefore assumes that they exist.

d) The report is unable to comment on the potential risks to controlled waters (groundwater or surface water), although where contaminant concentrations are below relevant threshold criteria in most circumstances it may be considered that the risk is low.

e) We have assumed that the results are representative of the area sampled. This does not imply that they may be considered representative of the site itself. Terragen Environmental Consultants Limited can accept no responsibility for the integrity of the sampling regime.

f) Save for the Client no duty is undertaken or warranty or representation made to any party in respect of the opinions, advice, recommendations or conclusions herein set out.

g) All work carried out in preparing this report has used, and is based upon, our professional knowledge and understanding of the current relevant English and European Community standards, approved codes of practice, technology and legislation.
Changes in the above may cause the opinion, advice, recommendations or conclusions set out in this report to become inappropriate or incorrect. However, in giving its opinions, advice, recommendations and conclusions, Terragen Environmental Consultants Limited has considered pending changes to environmental legislation and regulations of which it is currently aware. Following delivery of this report, we will have no obligation to advise the Client of any such changes, or of their repercussions.

h) Terragen Environmental Consultants Limited acknowledges that it is being retained, in part, because of its knowledge and experience with respect to environmental matters. Terragen Environmental Consultants Limited will consider and analyse all information provided to it in the context of our knowledge and experience and all other relevant information known to us. To the extent that the information provided to us is not inconsistent or incompatible therewith, Terragen Environmental Consultants Limited shall be entitled to rely upon and assume, without independent verification, the accuracy and completeness of such information.

i) The content of this report represents the professional opinion of experienced environmental consultants. Terragen Environmental Consultants Limited does not provide specialist legal advice and the advice of lawyers may be required.

j) In the Summary and Recommendations sections of this report, Terragen Environmental Consultants Limited has set out our key findings and provided a summary and overview of our advice, opinions and recommendations. However, other parts of this report will often indicate the limitations of the information obtained by Terragen Environmental Consultants Limited and therefore any advice, opinions or recommendations set out in the Executive Summary, Summary and Recommendations sections ought not to be relied upon unless they are considered in the context of the whole report.

k) The lack of evidence of the presence of hazardous or harmful materials at the subject property does not guarantee the absence of such materials; rather it indicates only that none were found as a result of the services provided. The services described in this report were performed in accordance with the general practices and procedures accepted in the consulting field.

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Appendix A Laboratory Test Reports.

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Analytical Report Number : 22-98429

Project / Site name:	Ferry Island Tottenham Hale Plot B High Cross Road London N17 9NU JRLE	**Samples received on:**	23/11/2022
Your job number:	TJ3885C01	**Samples instructed on/ Analysis started on:**	23/11/2022
Your order number:	TJ3885C01	**Analysis completed by:**	08/12/2022
Report Issue Number:	1	**Report issued on:**	08/12/2022
Samples Analysed:	3 soil samples		

Signed:

Dominika Warjan
Junior Reporting Specialist
For & on behalf of i2 Analytical Ltd.

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

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

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

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

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

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

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Analytical Report Number: 22-98429
Project / Site name: Ferry Island Tottenham Hale Plot B High Cross Road London N17 9NU JRLE
Your Order No: TJ3885C01

Lab Sample Number				2509059	2509060	2509061
Sample Reference				MG/2311/01	MG/2311/02	MG/2311/03
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				23/11/2022	23/11/2022	23/11/2022
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	16	17	19
Total mass of sample received	kg	0.001	NONE	1.2	1.2	1.2

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001	-	-
Asbestos Analyst ID	N/A	N/A	N/A	SCA	SCA	SCA

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	11.4	11.5	11.4
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
Total Sulphate as SO4	mg/kg	50	MCERTS	4400	5500	3700
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	810	950	730
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.4	0.47	0.36
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	403	475	363
Sulphide	mg/kg	1	NONE	130	180	140
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	0.7	0.5	0.6

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0

Speciated PAHs

Naphthalene	mg/kg	0.05	NONE	0.17	0.16	0.13
Acenaphthylene	mg/kg	0.05	NONE	0.06	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	NONE	0.12	0.07	0.06
Fluorene	mg/kg	0.05	NONE	0.08	0.06	< 0.05
Phenanthrene	mg/kg	0.05	NONE	1	0.87	0.59
Anthracene	mg/kg	0.05	NONE	0.22	0.19	0.11
Fluoranthene	mg/kg	0.05	NONE	1.6	1.4	1.2
Pyrene	mg/kg	0.05	NONE	1.7	1.2	1.2
Benzo(a)anthracene	mg/kg	0.05	NONE	0.8	0.63	0.65
Chrysene	mg/kg	0.05	NONE	0.58	0.61	0.67
Benzo(b)fluoranthene	mg/kg	0.05	NONE	0.67	0.7	0.89
Benzo(k)fluoranthene	mg/kg	0.05	NONE	0.45	0.34	0.32
Benzo(a)pyrene	mg/kg	0.05	NONE	0.68	0.65	0.7
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	0.29	0.31	0.39
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	0.07	0.08	0.1
Benzo(ghi)perylene	mg/kg	0.05	NONE	0.36	0.36	0.53
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05

Total PAH

Total WAC-17 PAHs	mg/kg	0.85	NONE	8.84	7.58	7.56

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The results included within the report relate only to the sample(s) submitted for testing.

Analytical Report Number: 22-98429
Project / Site name: Ferry Island Tottenham Hale Plot B High Cross Road London N17 9NU JRLE
Your Order No: TJ3885C01

Lab Sample Number				2509059	2509060	2509061
Sample Reference				MG/2311/01	MG/2311/02	MG/2311/03
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				23/11/2022	23/11/2022	23/11/2022
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
Heavy Metals / Metalloids						
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	2.6	< 1.0	< 1.0
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	10	11	9.8
Barium (aqua regia extractable)	mg/kg	1	MCERTS	110	110	180
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.72	0.79	0.72
Boron (water soluble)	mg/kg	0.2	MCERTS	0.7	0.4	0.7
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	19	21	19
Copper (aqua regia extractable)	mg/kg	1	MCERTS	37	31	29
Lead (aqua regia extractable)	mg/kg	1	MCERTS	85	61	90
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	1.1	1.3	1.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	15	16	16
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	31	33	36
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	82	78	99
Petroleum Hydrocarbons						
TPH C10 - C40 $_{EH\_CU\_1D\_TOTAL}$	mg/kg	10	NONE	76	< 10	50

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

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The results included within the report relate only to the sample(s) submitted for testing.

UKAS TESTING
4041

Analytical i2 Environmental Science

Analytical Report Number: 22-98429
Project / Site name: Ferry Island Tottenham Hale Plot B High Cross Road London N17 9NU JRLE
Your Order No: TJ3885C01

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
2509059	MG/2311/01		170	Loose Fibres	**Chrysotile**	< 0.001	**< 0.001**

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

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The results included within the report are representative of the samples submitted for analysis.

Analytical Report Number : 22-98429
Project / Site name: Ferry Island Tottenham Hale Plot B High Cross Road London N17 9NU JRLE

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2509059	MG/2311/01	None Supplied	None Supplied	Brown clay and sand with gravel.
2509060	MG/2311/02	None Supplied	None Supplied	Brown clay and sand with gravel.
2509061	MG/2311/03	None Supplied	None Supplied	Brown clay and sand.

Analytical Report Number : 22-98429
Project / Site name: Ferry Island Tottenham Hale Plot B High Cross Road London N17 9NU JRLE

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270.	L064-PL	D	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
TPH Banding in Soil by FID	Determination of hexane extractable hydrocarbons in soil by GC-FID.	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	D	NONE
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS

Analytical Report Number : 22-98429
Project / Site name: Ferry Island Tottenham Hale Plot B High Cross Road London N17 9NU JRLE

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

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

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Analytical Report Number : 22-98432

Project / Site name:	Ferry Island Tottenham Hale Plot B High Cross Road London N17 9NU JRLE	**Samples received on:**	23/11/2022
Your job number:	TJ3885C02	**Samples instructed on/ Analysis started on:**	23/11/2022
Your order number:	TJ3885C02	**Analysis completed by:**	09/12/2022
Report Issue Number:	1	**Report issued on:**	09/12/2022
Samples Analysed:	1 soil sample		

Izabela Wójcik

Signed:

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

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

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

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

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

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

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Analytical Report Number: 22-98432
Project / Site name: Ferry Island Tottenham Hale Plot B High Cross Road London N17 9NU JRLE
Your Order No: TJ3885C02

Lab Sample Number				2509124
Sample Reference				NAT/2311/01
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				23/11/2022
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**	
Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	0.01	NONE	18
Total mass of sample received	kg	0.001	NONE	1.2

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	MWI

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	11.3
Total Cyanide	mg/kg	1	MCERTS	< 1.0
Free Cyanide	mg/kg	1	MCERTS	< 1.0
Total Sulphate as SO4	mg/kg	50	MCERTS	3100
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	1000
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.5
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	499
Sulphide	mg/kg	1	NONE	21
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	0.5

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0

Speciated PAHs

Naphthalene	mg/kg	0.05	NONE	< 0.05
Acenaphthylene	mg/kg	0.05	NONE	< 0.05
Acenaphthene	mg/kg	0.05	NONE	< 0.05
Fluorene	mg/kg	0.05	NONE	< 0.05
Phenanthrene	mg/kg	0.05	NONE	0.59
Anthracene	mg/kg	0.05	NONE	0.1
Fluoranthene	mg/kg	0.05	NONE	0.74
Pyrene	mg/kg	0.05	NONE	0.74
Benzo(a)anthracene	mg/kg	0.05	NONE	0.35
Chrysene	mg/kg	0.05	NONE	0.42
Benzo(b)fluoranthene	mg/kg	0.05	NONE	0.45
Benzo(k)fluoranthene	mg/kg	0.05	NONE	0.14
Benzo(a)pyrene	mg/kg	0.05	NONE	0.35
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	NONE	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	NONE	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	NONE	< 0.05
Coronene	mg/kg	0.05	NONE	< 0.05

Total PAH

Total WAC-17 PAHs	mg/kg	0.85	NONE	3.88

Analytical Report Number: 22-98432
Project / Site name: Ferry Island Tottenham Hale Plot B High Cross Road London N17 9NU JRLE
Your Order No: TJ3885C02

Lab Sample Number				2509124
Sample Reference				NAT/2311/01
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				23/11/2022
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**	
Heavy Metals / Metalloids				
Antimony (aqua regia extractable)	mg/kg	1	ISO 17025	< 1.0
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	11
Barium (aqua regia extractable)	mg/kg	1	MCERTS	93
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.87
Boron (water soluble)	mg/kg	0.2	MCERTS	1.3
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	23
Copper (aqua regia extractable)	mg/kg	1	MCERTS	25
Lead (aqua regia extractable)	mg/kg	1	MCERTS	39
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3
Molybdenum (aqua regia extractable)	mg/kg	0.25	MCERTS	0.92
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	21
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	38
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	67
Petroleum Hydrocarbons				
TPH C10 - C40 $_{EH\_CU\_1D\_TOTAL}$	mg/kg	10	NONE	31

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

Analytical Report Number : 22-98432
Project / Site name: Ferry Island Tottenham Hale Plot B High Cross Road London N17 9NU JRLE

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

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

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2509124	NAT/2311/01	None Supplied	None Supplied	Brown clay and sand.

Analytical Report Number : 22-98432
Project / Site name: Ferry Island Tottenham Hale Plot B High Cross Road London N17 9NU JRLE

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270.	L064-PL	D	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	NONE
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
TPH Banding in Soil by FID	Determination of hexane extractable hydrocarbons in soil by GC-FID.	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	D	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE

Analytical Report Number : 22-98432
Project / Site name: Ferry Island Tottenham Hale Plot B High Cross Road London N17 9NU JRLE

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
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Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

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