- Infrastructure Design
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- Construction Management

jpp
The JPP Group

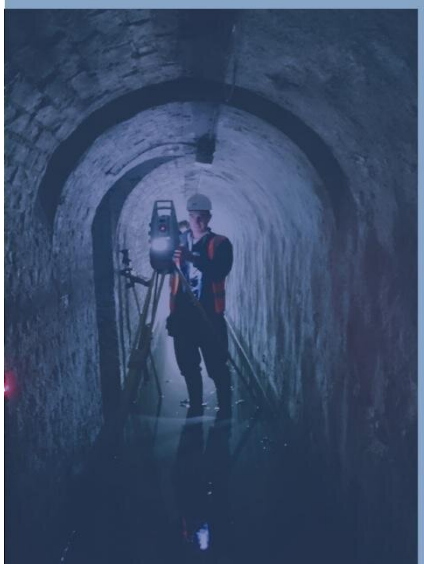




Proposed Redevelopment
David Lloyd Leisure Club, Thames Valley Business Park
Reading
RG6 1PT









Remediation Method Statement

October 2026
Revision 01
R-RMS-30799-01-01

JPP Geotechnical and Environmental Ltd Registered in England 11117245

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Proposed Redevelopment
David Lloyd Leisure Club, Thames Valley Business Park
Reading
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Remediation Method Statement

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Report Reference	R-RMS-30799-01-01
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01	17/11/26	Update to report following review and inclusion of EPG gas risk assessment	DK	DK

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1.0 Introduction

1.1 Client Instructions and Reliance

1.1.1 JPP were appointed by Willis Hazell Engineers Ltd on behalf of David Lloyd Leisure Ltd to produce a Remediation Method Statement based on existing ground investigation reports undertaken by JPP, ref. R-GI-30799-02-00 dated June 2026, for the proposed redevelopment of the existing David Lloyd Leisure Club within Thames Valley Business Park in Reading, RG6 1PT.

1.1.1 This Remediation Method Statement has been produced for the benefit of David Lloyd Leisure Ltd, JPP Geotechnical & Environmental Ltd will not accept liability for the third-party use of the information herein without prior reliance agreed. This report is valid for 6 years from the date of issue, however any significant changes to the proposals or followed legislation and guidance within this time could dictate a review of our findings and recommendations.

1.1.2 Interpretations and recommendations within this Remediation Method Statement are based upon information drawn from the previous reports (detailed in Section 2) and a recent report by EPG dated November 2026, this report should be read in conjunction with those reports. We do not accept liability or guarantee the authenticity or reliability of the information obtained or provided by others. There is a potential for ground conditions to vary from those encountered during previous investigations and may differ where not exposed by previous investigations.

1.2 Site Proposals and Report Objectives

1.2.1 The proposed development includes removing and rebuilding the indoor pool within a similar footprint, along with extensions including a spa garden to the east of the existing buildings. The proposed site plan is set out on the Hadfield Cawkwell Davidson drawing referenced 2025-219/HCD-A0-00-DR-A-PL-003/P03, included within Appendix A. We understand that there are limited areas of new landscaping proposed around the spa retreat garden and the edge of the car park near the spa retreat garden. In addition, there are areas of the existing site which are to be planted with new grassland to replace existing landscaping.

1.2.2 The objectives of this report are to advise a remediation strategy for the contamination encountered on site to satisfy the planning conditions referenced within the planning application ref. 253130, dated 4th September 2026, which is summarised below for reference:

Development shall not commence until a remediation strategy to deal with the risks associated with contamination of the site in respect of the development hereby permitted, has been submitted to, and approved in writing by, the Local Planning Authority.

This strategy will include the following components:

1. Up to date Preliminary Risk Assessment (PRA) and conceptual model following the results of an exploratory investigation.

2. A detailed site investigation scheme, based on the results from (1) to provide information for a detailed risk assessment to all receptors that may be affected, including those off-site.

3. A tiered risk assessment using the results of the site investigation referred to in (2).

4. An options appraisal including sustainability and treatability studies of the remediation measures required and how they are to be undertaken.

5. A remediation strategy and verification plan providing details of the data that will be collected in order to demonstrate that the works set out in the remediation strategy are complete and identifying any requirements for longer-term monitoring of pollutant linkages, mitigation, maintenance and arrangements for contingency action.

Any changes to these components require the written consent of the Local Planning Authority. The scheme shall be implemented as approved.

Reason: To ensure that the development does not contribute to, and is not put at unacceptable risk from or adversely affected by, unacceptable levels of water pollution in line with section 19 of the NPPF, and to ensure the development will contribute to and enhance the natural and local environment by remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate in line with section 19 of the NPPF

2.0 Previous Reports

The reports previously undertaken across the subject site are considered suitable to address Parts 1, 2 and 3 of Planning Condition 7, detailed in Section 1.2 above and should be submitted accordingly.

2.1 JPP- Phase I and Phase II Ground Investigation

2.1.1 JPP undertook a combined Phase I and Phase II Ground Investigation across the site in June 2026, ref. R-GI-30799-02-00. The intrusive ground investigation comprised 6 No. hand excavated trial pits, 7 No. windowless sampler boreholes to a maximum depth of 6.45m bgl, including installation of 6 No. ground gas and groundwater monitoring wells, 4 No. Dynamic probes to a maximum depth of 6.00m bgl. 2 No. cable percussive boreholes were drilled utilising clean drilling techniques (200mm casing, bentonite seal then reducing to 150mm casing) to a maximum depth of 20.45m bgl including installation of 3No. groundwater monitoring wells

2.1.2 The investigation concluded, in regard to the environmental risk associated with the site, that the risk posed to the wider environment and future development is low based on the nature of the development proposed and the low concentrations of contaminants recorded across the site.

2.1.3 Three of the eight samples of Made Ground submitted for asbestos screening were reported positive. The positive samples contained chrysotile, crocidolite and amosite loose fibres as sheeting cement. Samples from WS107 and WS105 contained loose fibres. Quantification testing was completed on all of the positive samples, the results were less than the laboratory detection limit of <0.001% in all samples. Due to the presence of asbestos in the Made Ground, the report recommended limited remediation will be required due to the asbestos contamination present, where new landscaped areas are proposed.

2.1.4 In addition, three return visits to monitor ground gas and groundwater monitoring, including groundwater sampling were completed. Based on the preliminary assessment carried out, the site is classified as Characteristic Situation 2 (CS2), therefore ground gas protection measures are required.

2.1.5 The reader is referred to the report for further detail including monitoring data and results of contamination testing including groundwater sampling.

2.2 EPG

2.2.1 A subsequent review of the Ground Gas Risk assessment provided by JPP under report ref. R-GI-30799-02-00 as described above, was undertaken by Environmental Protection Group (EPG), ref. 000991, dated November 2026, which is attached in Appendix B.

2.2.2 The report summarised the following:

'Spot monitoring on wells installed within the Made Ground shows low overall concentrations of methane and carbon dioxide with very low flow rates. Elevated methane has consistently been encountered in WS102 (up to 6.9%) and WS105 (up to 4%) but hazardous gas flow rates are all <0.07 l/hr. The source of the methane is likely to be small amounts organic material or unburnt coal within the Made Ground which has a very low gas generation potential as the gas is generated slowly over time.

A detailed risk assessment has been undertaken to further consider the risks from gas ingress into an assumed small space within the new development from migration through the concrete floor and also via an assumed perimeter floor crack. The results show very low estimated steady state concentrations of methane.'

'The risks from ground gas are considered to be very low and the site should be classified as CS1 with no specific gas protection measures required. The site is located in an area where <1% of properties are above the radon action level and radon protection is not required. The risks from vapour intrusion are also considered very low and no specific mitigation is required.

As a precautionary measure, movement and isolation joints and service entries through the floor within the ground level should be sealed to provide a gas resistant floor construction'

2.2.3 Accordingly on the basis of the detailed gas risk assessment undertaken by EPG, the site has been classified as CS1 with no specific gas protection measures required.

3.0 Site Setting

3.1 Location

3.1.1 The site is located within an area known as the Thames Valley Business Park, located to the south of the River Thames in the northeastern area of Reading (RG6 1PT). The site is centred at the approximate National Grid Reference of 474302, 174234. The site is irregularly shaped, comprising an existing David Lloyd Leisure Club, approximately 0.52ha in size.

3.1.2 The site is accessed from the southeast, via an access road from a roundabout to the south located along Thames Valley Park Drive. The main building occupies the majority of the site with the car park located to the east, north and west of the building, with further parking to the south outside of the site boundary.

3.1.3 The reader is referred to the JPP Phase I Desk Study Report for the full description of the walkover survey.

3.1.4 The subject site is predominantly covered by tarmac, block paving and buildings with some small, landscaped areas containing shrubs and bushes. A plant room is located on the western side of the building. Vegetation is present along the northern and eastern boundary of the site, including the strip between the site and the adjacent empty plot of land to the east.

3.1.5 The car park is bordered to the north, west and east by shrubs and trees along the site boundaries. To the south is further parking outside of the site boundary, with a children's nursery beyond along with some industrial buildings.

3.1.6 To the north and northeast of the site is public open space, a pond, trees and the River Thames all within Thames Valley Park Nature Reserve. To the east is a disused parcel of land and to the south is Thames Valley Business Park.

3.2 Site History

3.2.1 A Stage 1 Tier 1 Preliminary Risk Assessment (Phase I) Desk Study was undertaken by JPP for the site at David Lloyd Leisure Park, Thames Valley Business Park, Reading (Reference: R-DS-30799-01-01, dated March 2026).

3.2.2 The desk study identified that the site comprises an existing leisure complex with associated hardstanding and landscaped areas, with historical mapping indicating that a former cooling water channel crossed the site between the 1940s and 1980s, which may remain culverted beneath the site. Historical land uses within the surrounding area included former gravel extraction and infilling activities, a brickfield to the southwest, and a former electricity works immediately south of the site.

3.3 Geology

3.3.1 British Geological Survey (BGS) mapping indicates that the site and surrounding area are underlain by Made Ground (Artificial Deposit).

3.3.2 Superficial deposits mapped include Alluvium across the site, with a band of Langley Silt some 75m south of the existing David Lloyd building. In the wider area there are deposits of the Kempton Park Gravel Member further to the south. The underlying bedrock geology is mapped as the Seaford Chalk Formation and the Newhaven Chalk Formation (Undifferentiated).

3.3.3 Reference has been made to the BGS mapping sheet 268 (2000) which presents sections of the wider area. The geological map indicates that alluvium is likely to be overlying the Kempton Park Gravel Member which unconformably overlies the Chalk bedrock.

3.4 Hydrogeology

3.4.1 The superficial Alluvium and Kempton Park Gravel Member are both mapped as Secondary A Aquifers with the Langley Silt Member mapped as Unproductive strata. The Seaford Chalk Formation and the Newhaven Chalk Formation is classified as a Principal Aquifer. Groundwater vulnerability is recorded as a High for the Secondary aquifers and medium for the bedrock aquifers, both have a high pollutant speed.

3.4.2 There are two groundwater source protection zones (SPZs) within 1km of the site with the nearest one being located approximately 448m northwest of the site recorded as zone III (total catchment) and the second being located approximately 886m northwest of the site recorded as zone II (outer protection zone).

3.4.3 The site is recorded to have a very significant risk or high possibility of soluble rock, this relates to the chalk bedrock beneath the site.

3.4.4 The nearest surface water feature is approximately 4m west of the site and relates to either a pond or drainage ditch. The drainage ditch flows to the northwest to join the River Thames which is located approximately 275m north of the site. Further surface water ponds, lakes and ditches are located to the northeast, southeast, south and southwest of the site.

3.5 Ground Conditions

3.5.1 The ground investigation undertaken by JPP at the David Lloyd Reading site (ref. 30799) confirmed that the site is underlain by significant thicknesses of Made Ground associated with its historical use. The Made Ground was encountered beneath existing hardstanding, block paving, gravel surfacing and subbase materials, extending to depths of between 3.50m and 7.50m below ground level (bgl) within the deeper boreholes.

3.5.2 The shallow Made Ground generally comprised variable layers of cohesive and granular soils, including clay, sand and gravel, with deeper deposits predominantly comprising pulverised fuel ash (PFA) with variable gravel, sand, silt and clay content. The Made Ground was found to vary considerably in composition, strength and density, with locally loose deposits, cobbles and obstructions encountered during the investigation.

3.5.3 Underlying the Made Ground, natural granular deposits considered representative of the Kempton Park Gravel Member were encountered at depths of 7.50m bgl within CP101 and 3.50m bgl within CP102. These deposits generally comprised slightly sandy to sandy flint gravel and extended to approximately 8.50m bgl within both boreholes.

3.5.4 Bedrock geology associated with the Seaford Chalk and Newhaven Chalk Formations was encountered beneath the superficial deposits at approximately 8.50m bgl within both deeper boreholes. The Chalk was proven to the maximum investigation depth of 20.45m bgl.

3.5.5 Groundwater was encountered during the investigation at depths of between 1.60m and 7.00m bgl, with subsequent monitoring generally recording groundwater levels between approximately 1.6m and 3.3m bgl. The groundwater regime is considered to comprise localised perched groundwater within the Made Ground, together with groundwater associated with the underlying natural gravel deposits and Chalk bedrock. Seasonal variations in groundwater levels should be anticipated.

3.5.6 The Made Ground deposits were found to be locally unstable, with borehole collapse recorded during the investigation. The variable nature of the Made Ground, together with the presence of shallow groundwater, presents a potential risk of excavation instability, groundwater ingress and difficult digging conditions. Appropriate temporary excavation support and groundwater control measures may therefore be required.

3.5.7 The ground investigation provides a reasonable indication of the anticipated ground conditions across the site. However, given the historical landfill use and significant variability of the Made Ground, localised changes in ground conditions, including the presence of obstructions, potentially contaminated materials

3.6 Contamination

3.6.1 The ground investigation undertaken by JPP included contamination testing of the Topsoil and Made Ground, which included heavy metals, metalloids, hydrocarbons, PAHs and asbestos. The results were assessed against the relevant Commercial/Industrial end-use screening values.

3.6.2 The soil contamination testing identified no exceedances of the adopted Commercial/Industrial screening values for heavy metals, metalloids, hydrocarbons or PAHs. The report concluded that the soils generally presented a low risk from chemical contamination with respect to the proposed commercial development.

3.6.3 Asbestos screening was undertaken on nine soil samples, comprising one Topsoil and eight Made Ground samples. Asbestos was identified within three samples, comprising chrysotile, crocidolite and amosite in the form of loose fibres and asbestos-containing cement and sheeting/board debris. Subsequent quantification testing returned concentrations of less than 0.001% in all three samples.

3.6.4 Although the concentrations of asbestos were low, the presence of asbestos-containing materials within the variable Made Ground presents a potential exposure risk during excavation works. The report recommended a minimum 300mm clean capping layer within proposed landscaped areas and clean service corridors to limit future exposure. Appropriate precautions for working with potentially asbestos-impacted soils and procedures for managing unexpected contamination should be adopted during construction

3.7 Groundwater

3.7.1 Groundwater sampling was undertaken as part of the JPP ground investigation, with samples recovered from the Made Ground, underlying Kempton Park Gravel Member and Chalk bedrock. The results were assessed against relevant drinking water standards (DWS) and environmental quality standards (EQS).

3.7.2 Elevated concentrations of arsenic were identified within shallow groundwater associated with the Made Ground, together with a localised exceedance for mercury. These elevated concentrations were not identified within the deeper groundwater samples recovered from the Kempton Park Gravel Member or Chalk. The report considered that the elevated concentrations were likely associated with localised perched groundwater within the Made Ground.

3.7.3 Groundwater testing also identified elevated hydrocarbon concentrations within CP102, with Total Petroleum Hydrocarbon (TPH) concentrations of 950µg/l and 300µg/l recorded within the Kempton Park Gravel Member and Chalk respectively. An oily sheen was also observed during well development.

3.7.4 The report concluded that the identified groundwater contamination did not indicate a significant risk to the underlying aquifers and that no specific groundwater remediation was required. However, appropriate precautions should be adopted where groundwater is encountered during excavation works, particularly within the Made Ground.

3.8 Ground Gas and Radon

3.8.1 Ground gas monitoring was undertaken as part of the initial JPP ground investigation, with maximum methane and carbon dioxide concentrations of 6.9% and 1.8% respectively recorded. Based on the calculated gas screening values (GSVs), the site was classified by JPP as Characteristic Situation 2 (CS2). However subsequent detailed assessment by EPG, dated November 2026, reclassified the site as CS1 and as such no specific gas protection measures are considered to be required as part of the development.

3.8.2 Given the historical landfill use and recorded methane concentrations, the potential for ground gas accumulation within excavations, service trenches and confined spaces should be considered during construction. Appropriate gas monitoring and safe working procedures should be implemented where necessary.

3.8.3 The radon assessment should be considered separately from the ground gas classification, with any requirements for radon protection measures determined in accordance with the site-specific radon risk assessment.

4.0 Contamination Assessment

4.1 General Contaminants

4.1.1 The ground investigation undertaken by JPP included contamination testing of Topsoil and Made Ground samples for a range of contaminants including heavy metals, metalloids, hydrocarbons, PAHs, VOCs, SVOCs and asbestos. The results were assessed against the relevant Commercial/Industrial end-use screening values.

4.1.2 No exceedances of the adopted Commercial/Industrial screening values were reported for the chemical contaminants tested within the Topsoil and Made Ground. The report concluded that the soils generally presented a low risk to human health and the wider environment in respect of chemical contamination.

4.2 Asbestos

4.2.1 Asbestos screening was undertaken on nine soil samples, comprising one Topsoil and eight Made Ground samples. Asbestos was identified within three samples, with chrysotile, crocidolite and amosite recorded in the form of loose fibres and asbestos-containing cement and sheeting/board debris. Subsequent quantification testing returned concentrations of less than 0.001% in all three samples.

4.2.2 Although the concentrations of asbestos were low, the presence of asbestos-containing materials within the variable Made Ground presents a potential exposure risk to construction workers and future maintenance operatives. The report recommended the provision of a minimum 300mm clean capping layer within proposed landscaped areas and clean service corridors to prevent future exposure to asbestos-impacted soils.

4.2.3 Given the historical landfill use and variable nature of the Made Ground, there remains a potential for additional asbestos-containing materials to be encountered during construction. Appropriate precautions and procedures for managing asbestos-impacted soils should therefore be implemented during excavation works.

4.3 Controlled Waters

4.3.1 The underlying Kempton Park Gravel Member is classified as a Secondary A Aquifer, whilst the Seaford Chalk and Newhaven Chalk Formations are classified as a Principal Aquifer. The site is not located within a groundwater Source Protection Zone, although Zone III and Zone II designations are recorded approximately 448m and 886m northwest of the site respectively.

4.3.2 Groundwater sampling undertaken by JPP identified elevated concentrations of arsenic within shallow groundwater associated with the Made Ground, together with a localised exceedance for mercury. These elevated concentrations were not identified within the deeper groundwater samples recovered from the Kempton Park Gravel Member or underlying Chalk aquifer.

4.3.3 Groundwater testing also identified hydrocarbons within CP102, with Total Petroleum Hydrocarbon concentrations of 950µg/l and 300µg/l recorded within the Kempton Park Gravel Member and Chalk respectively. An oily sheen was also observed during well development.

4.3.4 The report concluded that the elevated concentrations of arsenic and mercury were likely associated with localised perched groundwater within the Made Ground and did not indicate significant contamination of the underlying aquifers. Overall, the risk to controlled waters was considered to be low, with no specific groundwater remediation deemed necessary at this stage.

4.4 Ground Gas and Radon

4.4.1 Given the historical use of the site as a landfill, ground gas monitoring was undertaken by JPP to assess the potential risks associated with the generation and migration of hazardous ground gases, principally methane and carbon dioxide.

4.4.2 The detailed assessment of the land gas data obtained by JPP by EPG, dated November 2026, reclassified the site as CS1 and as such no specific gas protection measures are considered to be required as part of the development in accordance with BS8485.

4.4.3 Although the detailed ground gas assessment by EPG identified no requirements for protection measures within the proposed buildings, there remains a potential risk to construction workers from the accumulation of ground gases within excavations, service trenches and other confined spaces. Appropriate gas monitoring and safe working procedures should therefore be adopted during construction, particularly where works extend into the underlying Made Ground.

4.5 Theoretical Pollutant Linkages

4.5.1 On the basis of the ground investigation undertaken by JPP, no significant pollutant linkages were identified in relation to the general chemical contamination of the soils. However, the presence of asbestos within the Made Ground and elevated concentrations of methane associated with the historical landfill represent potential pollutant linkages requiring appropriate mitigation.

4.5.2 The presence of asbestos-containing materials within the Made Ground presents a potential exposure risk to construction workers during excavation. The report recommended clean service corridors, together with appropriate procedures for managing asbestos-impacted soils during construction.

4.5.3 Given the historical landfill use, there remains a risk of encountering unforeseen hotspots of contamination, including heavy metals, hydrocarbons, PAHs, asbestos and other anthropogenic materials. Appropriate procedures should be adopted for identifying, assessing and managing any unexpected contamination encountered during the works.

4.5.4 The proposed development will predominantly comprise buildings and hardstanding, which will substantially interrupt direct-contact pathways between underlying contaminated soils and future site users. However, there are limited areas of new landscaping proposed around the spa retreat garden and the edge of the car park near the spa retreat garden. In addition, there are areas of the existing site which are to be planted with new grassland to replace existing landscaping. In these areas there is a requirement for the provision of a minimum 300mm clean capping layer within proposed landscaped areas to prevent future exposure to asbestos-impacted soils.

4.5.5 The following table identifies the pollutant linkages identified. The principal receptors are considered to be construction/maintenance workers, future end users and water supply pipes, with appropriate remedial or protective measures required where significant contamination is identified.

Summary of Pollutant Linkages

Contaminant	Source	Pathway	Receptors
Asbestos	Made Ground	Soil and dust inhalation Dermal / direct contact	Construction workers Maintenance Workers End users
Hydrocarbons	Made Ground	Soil and dust inhalation Dermal / direct contact Plastic pipes	Construction workers New Water supply pipes
Ground Gas	Made Ground/Landfill	Gas migration and accumulation in excavations.	Construction workers

Table 4.5

5.0 Remediation Objectives & Remediation Strategy

5.1 Objectives

5.1.1 The remediation objectives are determined to sufficiently reduce the risks associated with the proposed redevelopment of the site. At this stage the identified risks are associated with dermal contact and inhalation and ingestion of dust contaminated with asbestos.

5.1.2 Risks associated with ground gases have been removed from the remedial objectives set out below, considering the reclassification of the site by EPG to CS1 following their detailed assessment.

5.1.3 Where the Made Ground soils are to be covered in hardstanding, remediation of the underlying Made Ground soils is not considered to be required as the pathway between the source and the receptor will be broken.

5.1.4 In areas of proposed soft landscaping, where exceedances have been recorded and where public access is permitted, a suitable clean cover thickness of clean site won or imported soils should be placed to prevent contact with residual Made Ground soils.

5.1.5 Due to the history of the site, unforeseen hotspots of contamination may come to light during demolition and future earthworks and as such a watching brief is considered to be an important aspect of future works on site.

5.2 Strategy

5.2.1 All remediation proposals/measures outlined below are subject to approval from the Local Planning Authority (LPA) prior to implementation.

Summary of Remediation Strategy Requirements

Source	Receptor	Remediation requirements
Asbestos in Made Ground soils.	Construction Workers	Suitable health and safety precautions shall be adopted by all construction operatives during the excavation of potentially contaminated soils.
Asbestos in Made Ground soils	Maintenance Workers/ Future Site Users	In any areas of proposed soft landscaping where public access is permitted a 300mm clean cover thickness should be allowed for to prevent contact with any impacted Made Ground soils. This should be placed onto a geotextile membrane to help prevent disturbance and mixing of the clean cover soils with the underlying Made Ground.
Asbestos in Made Ground soils	New Below Ground Services	Where services are proposed, clean service trenches should be constructed around buried services to reduce the risk of future maintenance workers coming into contact with the asbestos impacted soils.

Table 5.2

5.3 Unsuspected Contamination

5.3.1 Should any conditions be exposed during the course of the development works that could suggest contaminated soils from visual or olfactory evidence, work should be halted, and JPP should be consulted to determine the most appropriate course of action. Any subsequent remedial action will require prior agreement from the LPA.

5.3.2 Accordingly, a discovery strategy will be adopted to ensure that any hitherto unknown contamination is identified and dealt with in an appropriate manner, as follows:

- A close watch will be maintained during any excavation works.
- In the event that unexpected or malodorous soils or liquids are encountered, excavation work shall cease in the affected area.
- The affected area shall be made safe and fenced off to prevent unauthorised access.
- The Site Manager shall notify JPP of the discovery, who will attend site to inspect the suspect materials, provide advice and take samples as necessary.
- The Site Manager shall notify the Local Authority of the discovery.
- Any contaminated excavated soil will be stockpiled separately on sufficiently bunded polythene sheeting and covered. The soils may require additional testing and appropriate classification for offsite disposal before being removed by a suitable waste carrier if off-site disposal is the selected remediation option used.
- All records and transport tickets shall be retained for subsequent verification reporting.

5.4 Verification

5.4.1 In any areas of proposed soft landscaping where public access is permitted a 300mm clean cover thickness should be allowed for to prevent contact with any impacted Made Ground soils. This should be placed onto a geotextile membrane to help prevent disturbance and mixing of the clean cover soils with the underlying Made Ground. The validation works will be supported with field records along with photographic evidence. Additional laboratory testing may be advised to confirm the suitability of the imported fill material/topsoil if required.

5.4.2 Suitable health and safety precautions shall be adopted by all construction operatives during the excavation of potentially contaminated soils.

5.4.3 Where soils are to be removed off site they should be disposed of to a suitably licensed landfill based on the waste classification provided within the Ground Investigation report. Waste carrier tickets/consignment notes shall need to be retained for any contaminated soils which are to be removed off site, to be included within the verification report.

5.4.4 A verification report shall be produced outlining the remediation that has been carried out and including appropriate records such as photographs and waste carrier records.

Appendix A
Drawings

NOTES:

0m 5 10 15 20

1:200

N

Application Boundary
0.58 hectares / 5790 sqm

Car Park
156 spaces

inc.
76 David Lloyd spaces
80 shared spaces

Lake

Drake

David Lloyd Car Park

Childrens Nursery

Computacentre

Thames Valley Park Dr

Thames Valley Park Dr

Thames Valley Park Dr

Cycle Hire Station

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REVISION: P03 BY: KDS CHECKED: MPB DATE: 10/02/2026
Planning Issue: Extension footprint reduced in size. Additional parking bays added. Existing plant compound extended.

REVISION: P02 BY: KDS CHECKED: MPB DATE: 03/02/2026
Planning Issue

REVISION: P01 BY: KDS CHECKED: MPB DATE: 16/12/2025
Planning Issue

STATUS

S4a | FOR PLANNING

CLIENT

David Lloyd CLUBS

PROJECT

DAVID LLOYD READING THAMES VALLEY BUSINESS PARK

TITLE

PROPOSED SITE PLAN

Hadfield Cawkwell Davidson
Broomgrove Lodge, 13 Broomgrove Rd, Sheffield, S10 2LZ T 0114 266 8181 www.hcd.co.uk

HCD PROJECT NO.	SCALE	REV.
2025-219	1:200 @ A1	P03

PROJECT NO.	ORIGINATOR	VOLUME	LEVEL	TYPE	ROLE + NUMBER
25219	HCD	A0	00	DR	A-PL-003

S:\Architecture\25219\Drawings\DR - Plotsheets\Planning\A-PL-003 - Proposed Site Plan.dwg

©HCD

NOTES:

0m 5 10

1:200

Application Boundary

N

Shared Car Park

David Lloyd Car Park

Plant Compound

A

SAUNA

SHWR

PLUNGE POOL

SPA GARDEN

HYDRO POOL

Existing paving
Infill tree pits with pavers

Entrance barrier

MATERIALS KEY

General vehicular & kerb
Tarmacadam surface finish, to match existing

Footpath paving
To match existing

Soft landscaping

Artificial grass
TigerTurf, Finesse 26mm

Resin bonded gravel
'Cappuccino' by the Resin Mill Ltd

Resin bonded gravel
'New Oyster Pearl' by the Resin Mill Ltd

Decorative Slate Chippings

External Tiling
Atlas Concorde, Block Grigio 600x600.
Laid on external grade screed, screed laid to fall to slot drain and tanked with Ardex S7 plus prior to tiling

FENCING KEY

2m High Fencing
Both sides - Horizontal Thermo Radiata Pine, Knot/Defect free, profile BB11.

2m High Fencing
Spa side / external side of plant compound - Horizontal Thermo Radiata Pine, Knot/Defect free, profile BB11.
Store side / internal side of plant compound - unboarded

(A) **Spa garden escape gate**
1100mm clear width, self closing, push pad with external key access

REVISION: P03 BY: KDS CHECKED: MPB DATE: 10/02/2026
Planning Issue: Updated to reflect reduced size of extension. Parking updated. Plant compound expanded.

REVISION: P02 BY: HP CHECKED: MPB DATE: 03/02/2026
Planning Issue

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Planning Issue

STATUS

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CLIENT

David Lloyd CLUBS

PROJECT

DAVID LLOYD READING THAMES VALLEY BUSINESS PARK

TITLE

SITE MATERIALS PLAN

Hadfield Cawkwell Davidson
Broomgrove Lodge, 13 Broomgrove Rd, Sheffield, S10 2LZ T 0114 266 8181 www.hcd.co.uk

HCD PROJECT NO.	SCALE	REV.
2025-219	1:200 @ A2	P03

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Appendix B
Reports

part of STRI group

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Ground Gas Assessment

David Lloyd, Reading

Client: David Lloyd Leisure Ltd

000991
11 November 2026
Version 3

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Summary

The Environmental Protection Group Limited (EPG) has been commissioned by David Lloyd Leisure Ltd to undertake a ground gas risk assessment for the proposed refurbishment and redevelopment works at the existing David Lloyd Leisure Club, off Thames Valley Park Drive in Reading.

The proposed development comprises the refurbishment of the main two-storey building, demolition of single-storey structures and replacement with a new infill structure connecting to the swimming pool building and spa garden on the east of the existing buildings. The existing structure and floor around the swimming pool will be demolished and rebuilt. Ground improvement using controlled modulus columns will be undertaken with a ground bearing slab supported on pad foundations. The proposed foundation solution is not considered to represent preferential pathways for gas migration.

The majority of the site was undeveloped until Thames Valley Business Park was constructed in the late 1980s except for a cooling water channel towards the west of the site which connected the River Thames to an electricity works to the south of the site from the 1940s to 1980s. This channel is still present to the northwest of the site and could be culverted beneath the site or have been infilled prior to the existing development. The electricity works appears to have been removed before or as part of the Thames Valley Business Park development.

Five areas of historical landfilling are located within 100m of the site, one of which extends into the eastern site boundary close to the proposed new spa garden, which were operated by Thames Valley Park Limited. These are all indicated as including special waste. However all the special waste licenses are dated over the time of the remediation works at the site and likely relate to works to reprofile stockpiles of pulverised fuel ash (PFA) to facilitate the redevelopment of the business park. PFA was also deposited into contained areas within the business park. The majority of the earlier licences for the power station from 1945 indicate inert waste was deposited.

The site is underlain by Made Ground proved to depths of 3.5m to 7.5m bgl which overlies superficial deposits comprising Kempton Park Gravels over Chalk bedrock. Made Ground comprises granular and cohesive horizons near surface with ash and clinker present at depth which is consistent with PFA. No potentially significant degradable material has been encountered within the Made Ground. Previous investigation at the disused car parks immediately to the east shows Made Ground including ash up to 10m bgl.

Spot monitoring on wells installed within the Made Ground shows low overall concentrations of methane and carbon dioxide with very low flow rates. Elevated methane has consistently been encountered in WS102 (up to 6.9%) and WS105 (up to 4%) but hazardous gas flow rates are all <0.07 l/hr. The source of the methane is likely to be small amounts organic material or unburnt coal within the Made Ground which has a very low gas generation potential as the gas is generated slowly over time.

A detailed risk assessment has been undertaken to further consider the risks from gas ingress into an assumed small space within the new development from migration through the concrete floor and also via an assumed perimeter floor crack. The results show very low estimated steady state concentrations of methane.

Overall, ground gas risks are considered very low and the site is classified as Characteristic Situation 1 (CS1) with no specific gas protection measures required. The site is located in an area where <1% of

properties are above the radon action level and radon protection is not required. The risks from vapour intrusion are also considered very low with no specific mitigation required.

As a precautionary measure, movement and isolation joints and service entries through the floor within the ground level should be sealed to provide a gas resistant floor construction.

Existing monitoring wells should be decommissioned and sealed in accordance with Environment Agency guidance.

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1 Introduction

1.1 Background

The Environmental Protection Group Limited (EPG) has been appointed by David Lloyd Leisure Ltd to provide a ground gas risk assessment as part of the proposed refurbishment and redevelopment at the existing David Lloyd Leisure Club, off Thames Valley Park Drive in Reading, RG16 1PT.

Recent ground investigation and assessment by JPP in 2026 for the development identified the site as Characteristic Situation 2 requiring the inclusion of gas protection measures.

EPG have been appointed to review the risks from ground gas and vapours for the site to determine if mitigation measures are warranted.

1.2 Objective

The objective of the report is to review the potential sources of ground gas at the site and undertake a ground gas risk assessment. The risk assessment will conclude whether gas mitigation measures are required for the proposed development. Consideration of the risks from vapour intrusion and radon has also been undertaken.

This report supersedes all previous ground gas risk assessment conducted for the site.

1.3 Competence

The report has been prepared by Damian Watkin and reviewed by Steve Wilson of EPG

Damian Watkin is a Geoenvironmental Associate at EPG with over 25 years contaminated land experience. He is a Chartered Geologist and accredited SoBRA member for permanent gases and vapour intrusion. Damian is experienced in the investigation, assessment and remediation of contaminated land along with ground gas and vapour assessment and mitigation.

The report has been reviewed by Steve Wilson. Steve is a Chartered Engineer, Member of the Institution of Civil Engineers and Registered Ground Engineering Advisor with over 35 years' experience in geotechnical design and the investigation and assessment of ground gas (including mine gas, landfill gas, natural methane emissions and leaking natural gas wells). He is a SoBRA Accredited Risk Assessor (permanent gas and vapour intrusion). He has contributed to most of the recent guidance on ground gas risk and mitigation design, including various CIRIA and CL:AIRE Reports and BS8485. He is lead author of the CL:AIRE guidance on good practice in mine gas risk assessment.

1.4 The Site

The site location is shown in Figure 1 below.

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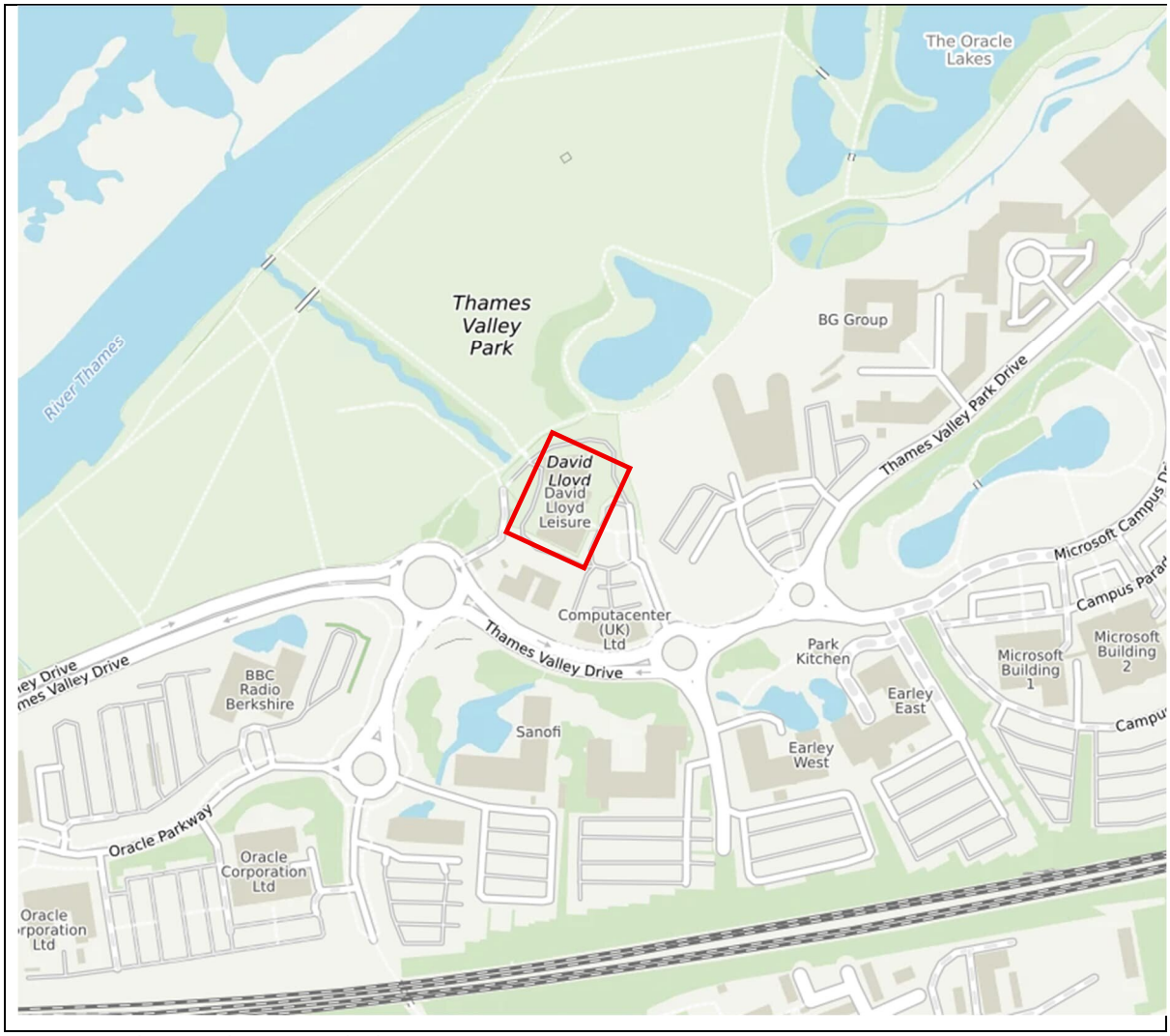

Figure 1: Site location (source: Scalgo)

The site is approximately centred at National Grid reference 474292, 174239. The site occupies an overall area of 0.52 hectares including parking and pedestrian access areas.

1.5 The Development

The proposed development comprises the refurbishment of the main two-storey building, demolition of single-storey structures and replacement with a new infill structure connecting to the swimming pool building. The existing structure and floor around the swimming pool will be demolished and rebuilt. Extensions include a spa garden on the east of the existing buildings.

Figure 2 below shows the proposed development.

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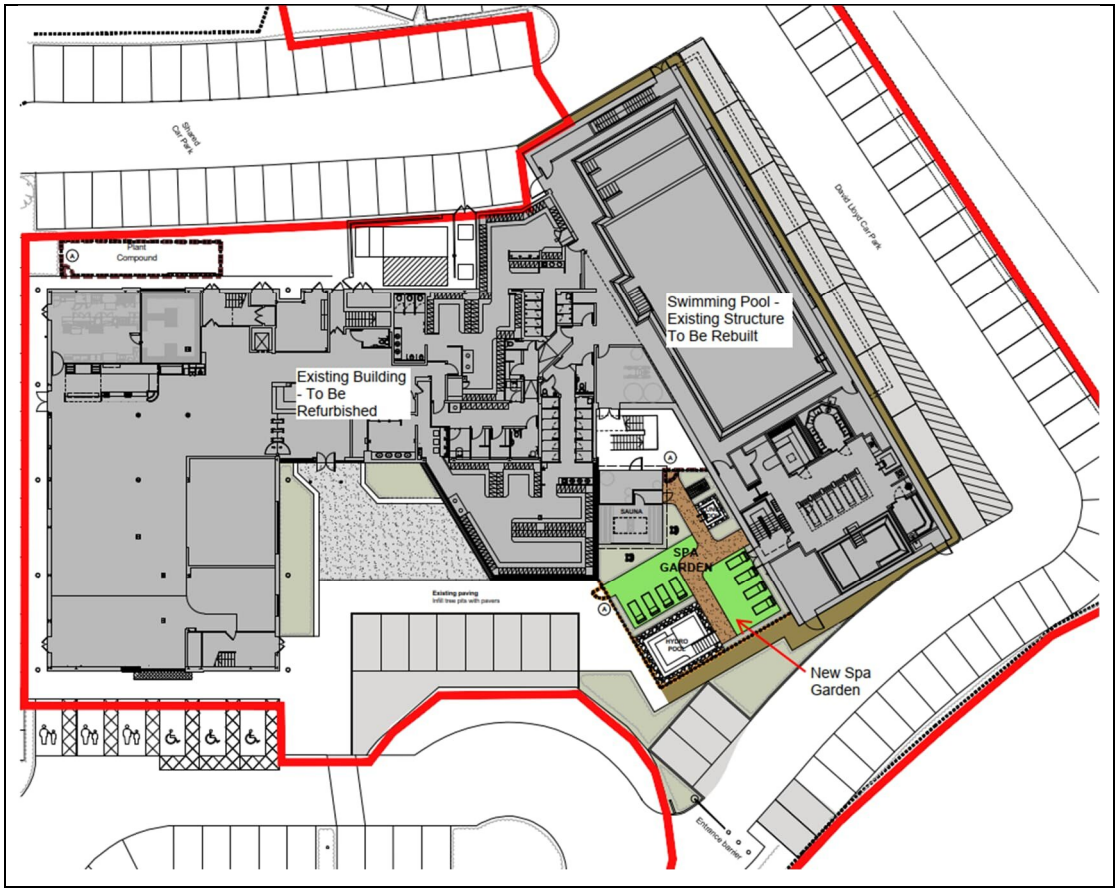

Figure 2: Proposed development layout

Ground improvement comprising controlled modulus columns (with no prefabricated vertical drains) will be used to support pad foundations of between 400mm and 1500mm thickness to a minimum of 1000mm below ground level with the top of the foundations at +35.725 and a 150mm reinforced ground bearing slab.

Ground beams will be constructed for the infill structure between the existing main building and swimming pool.

Figure 3 shows the proposed foundation layout for the new structures.

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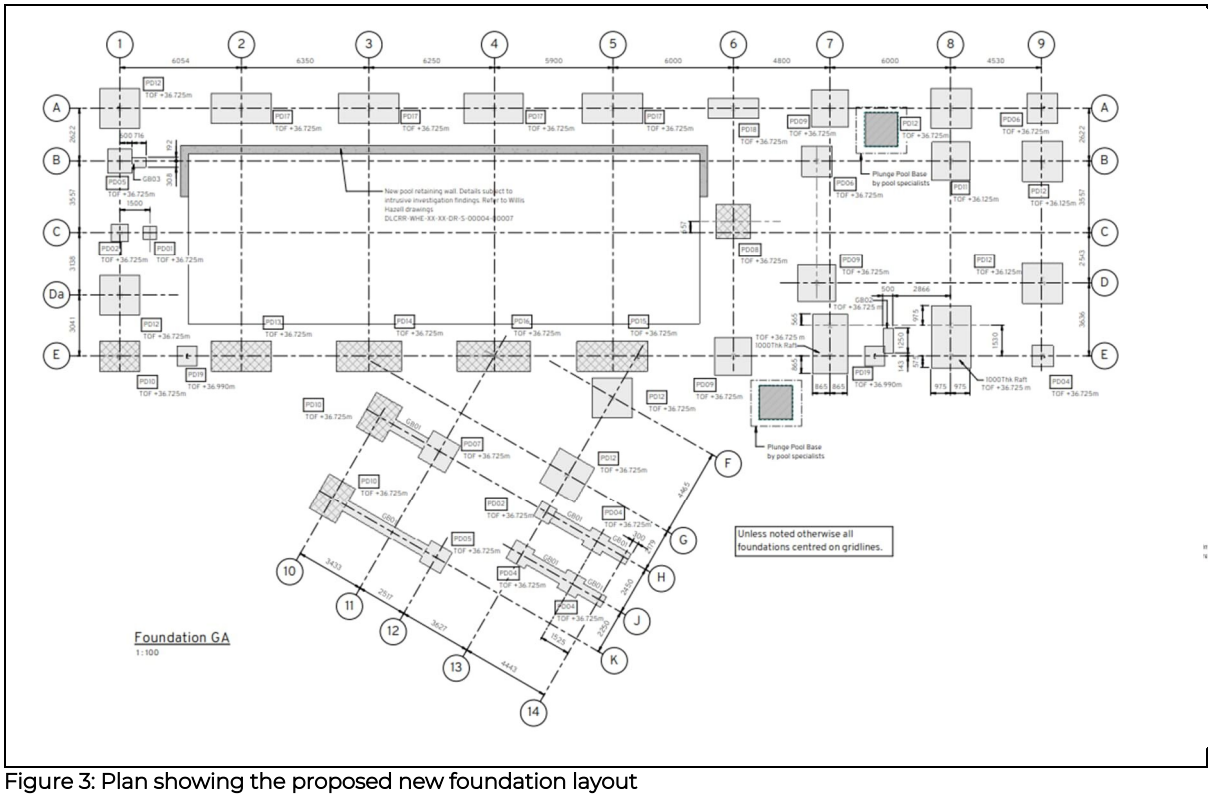

Figure 3: Plan showing the proposed new foundation layout

Development drawings have been provided in Appendix A.

1.6 Information Sources

This report is based on the following information sources:

- JPP Geotechnical and Environmental Ltd, March 2026. David Lloyd Leisure Park, Thames Valley Business Park, Reading, RG6 1PT - Phase 1 Desk Study Report. Prepared for Willis Hazell Engineers Ltd on behalf of David Lloyd Leisure Ltd
- JPP Geotechnical and Environmental Ltd, June 2026. Proposed Redevelopment David Lloyd Leisure Park, Thames Valley Business Park, Reading, RG6 1PT - Phase II Ground Investigation Report. Prepared for Willis Hazell Engineers Ltd on behalf of David Lloyd Leisure Ltd
- JPP Geotechnical and Environmental Ltd, October 2026. Proposed Redevelopment David Lloyd Leisure Park, Thames Valley Business Park, Reading, RG6 1PT – Remediation Method Statement. Prepared for Willis Hazell Engineers Ltd on behalf of David Lloyd Leisure Ltd

The JPP (2026) Phase 1 Desk Study Report includes a Landmark Envirocheck environmental database report and historical Ordnance Survey (OS) maps which have been used to inform this report. It also includes a ground investigation report from 2018 as an appendix which relates to an investigation from 2011 by Terramech Investigations Ltd for what appears to be the area immediately east of the site (no drawings or figures are included with the report).

EPG has also completed a more comprehensive Phase 1 research exercise than the JPP one. This has obtained historical information from the Environment Agency.

2 Site Condition

2.1 Current and Surrounding Land Uses

The main building is located towards the southern and central areas of the site with car parking located to the east, north and west of the building, with further parking to the south outside of the site boundary. An indoor swimming pool with a retractable roof covering is located adjacent to the northern end of the main building. A plant room is located on the western side of the building.

Limited areas of landscaping are present at the site.

Access to site is from the southeast, via an access road from a roundabout on Thames Valley Park Drive. The existing site layout is shown in Figure 4 below.

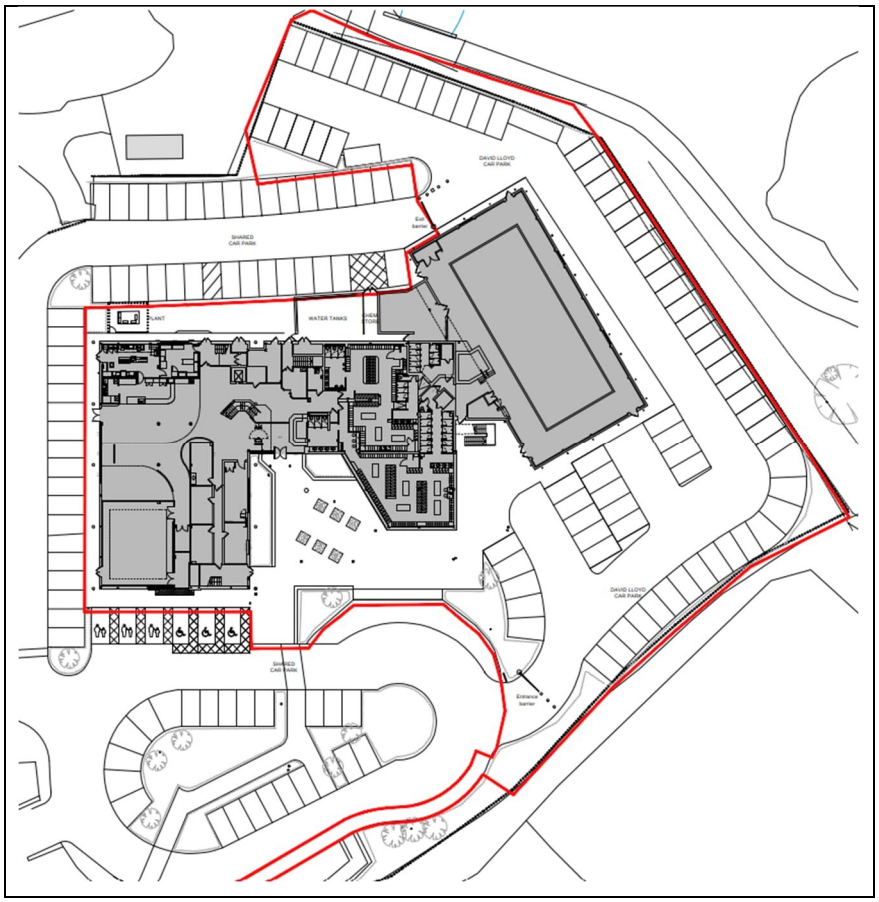

Figure 4: Existing Site layout

The site is bounded by:

- North and northwest: Thames Valley Park Nature Reserve.
- East: Thames Valley Business Park, with the building and areas of car parking immediately to the east being disused.
- South: immediately to the south is a nursery and office building, beyond this Thames Valley Park Drive and then further commercial / office buildings associated with Thames Valley Park. Approximately 290m to the south is the Great Western Main Line railway.
- West: access road from roundabout on Thames Valley Park Drive with further commercial / office buildings associated with Thames Valley Park further to the west.

The site area is relatively flat with the ground elevation typically around 37m AOD (Above Ordnance Datum) although there is a slight fall across the site from south to north.

In terms of the surrounding areas, the nature reserve to the north is located a slightly lower elevation than the site (c.35.5m to 36m AOD). However, the areas to the west, south and east are all at a slightly higher elevation with increasing elevation further to the south, east and northeast.

2.2 Site History

Historical mapping shows the site as open fields until a cooling water channel crosses northwest-southeast through the western part of the site (beneath the existing David Lloyd main building) from the 1940s to 1980s. This channel provided water from the River Thames to an electricity works to the south which extended up to the approximately location of the existing Thames Park Valley Drive road. This channel is still present to the northwest of the site and could remain culverted beneath the site or have been infilled prior to the existing development. The existing buildings onsite are first shown on mapping from the 1990s.

The electricity works appears to have been removed before or as part of the existing Thames Valley Business Park development.

In the surrounding area, aside from electricity works / power station and existing Thames Valley Business Park, historical land uses within 250m included a former brickfield and brick works and an engineering works to the southwest, infilling activities to the east during the 1940s, excavations for the nature reserve to the north and northeast in the 1990s. Extensive areas of gravel pit excavations are present further to the north of the River Thames which now form part of a nature reserve.

A case study on improvements works in the Thames Region[1] indicates that the flood plain meadows around the power station were used as a tip for pulverised fuel ash. The site was prepared for development by removing the original topsoil, removing the underlying gravel and burying the pulverised fuel ash in a cell and then replacing the original soil on top. In the approximate area of the power station a nature reserve was established. This involved creating lakes, islands and wetland areas and then planting with reedbeds and other appropriate vegetation. The earthworks on the site were also carried out to order to compensate for loss of flood storage and to open up flood flow routes. The former cooling water channel was enhanced for nature.

An archaeological study at the site prior to redevelopment as the business park[2] indicates that prior to the Thames Valley Park development, it was occupied by the redundant buildings of the Earley Power Station with extensive dumps of waste pulverised fuel ash (PFA) extending onto the floodplain. It also confirms the gravel excavation and infilling with PFA.

2.3 Geology

Published information on the geology has been obtained from the British Geological Survey's (BGS) GeoIndex online resource.

[1] EA 25 Case Studies, case study 12, Thames Valley Park, Reading.
[2] Excavations at Thames Valley Park, Reading 1986 to 88, Prehistoric and Romano-British Occupation of the Floodplain and a Terrace of the River Thames by I. Barnes, C.A. Butterworth, John W. Hawkes, and L. Smith Wessex Archaeology Report No. 14

The site and wider area to the west, east and south are shown as being underlain by Artificial Deposits. Given the presence of Artificial Ground beneath other areas of the Thames Valley Business Park, this material could have been deposited as part the Thames Valley Park development.

Superficial deposits comprising Alluvium from the Quaternary Period are shown near surface across the site and in the surrounding area especially to the north. Alluvium is characterised as clay, silt, sand and gravel. Normally soft to firm consolidated, compressible silty clay, but can contain layers of silt, sand, peat and basal gravel. Geological mapping shows the Alluvium as overlying Langley Silt Member which comprises clay and silt, and the Kempton Park Gravels which comprise sand and gravel, locally with lenses of silt, clay or peat.

The bedrock geology at the site is Cretaceous Seaford Chalk Formation and Newhaven Chalk Formation.

2.3.1 BGS Historical Borehole Records

A number of historical BGS borehole records are shown within the site area dating from 1988 for Thames Valley Park Reading but these are all confidential.

A limited number of records are available for the surrounding area. The closest (SU77SW938) is located immediately north of the site which dates from 1984 and shows Alluvium to 3.8m bgl over gravels to 7.7m bgl which is underlain by Chalk.

Another record (SU77SW617) dating from 1986 is located approximately 90m to the west which shows topsoil over Alluvium to 1.0m which is underlain by chalk gravel. The nearest record to the east (SU77SW947) is located at approximately 145m distance and dates from 1984 which shows topsoil over Made Ground to 2.0m over Alluvium. The Made Ground comprises fine grained ash with isolated building rubble (roof tiles).

Recent ground investigation information is available for the site. Further details of the ground conditions encountered is provided in Section 3 of this report.

2.4 Environmental Setting

2.4.1 Groundwater

The site is underlain by a Secondary A aquifer associated with the superficial deposits. The Chalk bedrock is classified as a Principal aquifer.

There are no groundwater abstraction source protection zones within 250m.

2.4.2 Surface water

The closest surface water feature is a drain located approximately 22m west of the existing swimming pool building and a lake is located approximately 45m to the northeast. Further lakes or ponds associated with Thames Valley Park are located within 500m to the northwest and northeast of the site.

The River Thames is located approximately 250m to the northwest of the site.

2.4.3 Flood risk

The Envirocheck report indicates the site is within a Flood Risk Zone 2 area (0.1% to 1% annual probability of extreme flooding from rivers or sea without defences). A Flood Risk Zone 3 (1% of

greater annual probability of flooding from rivers or sea without defences) shown immediately to the north and northwest of the site area.

The Envirocheck report also indicates there is the potential for groundwater flooding to occur at the surface within the site area.

2.4.4 Radon

The Envirocheck Report obtained by JPP and the UK Health Security Agency mapping indicates the site is located in an area where <1% of the properties are at or above the action level. Radon protection is not required.

2.4.5 Landfills

A historical landfill is recorded as extending into the east of the site area, this is shown adjacent to existing buildings and extending further to the east. The licence holder was Thames Valley Park Limited for the deposition of waste including special waste with the last input date of 30 June 1989. This would be associated with the redevelopment works.

A further 5 no. historical landfills are recorded within 250m also registered to Thames Valley Park Limited for the deposition of waste including special waste with the last input date of 30 June 1989. These would also be associated with redevelopment works

A further two records are provided for historical landfills within 250m relating to Earley Power Station where deposited waste included inert waste and the Central Electricity Generating Board for deposition of waste including inert and industrial waste. Both have first input dates of December 1945, the former has a last input date of December 1990.

There is record of a registered landfill c.210m to the north east of the site operated by Thames Valley Park Ltd dated from March 1988 accepting 'only waste produced onsite'. The license is shown as lapsed/cancelled/defunct/not applicable/surrendered. Authorised waste comprised contamination by low level of asbestos, inert material from on site, other material removed at North Earley and pulverised fuel ash. The record is shown as relating to an area of ponds within the Thames Valley Park Nature Reserve to the northeast of the site.

JPP (March 2026) make reference to Wokingham Borough Council's website which includes Thames Valley Park as historical landfills within a note dated 18/07/2024. The records indicate that the sites were filled with mixed/special/hazardous waste. However, the record does not include the landfill which extends into the site area.

2.4.6 Mining and quarrying

The Envirocheck report does not show the site to be in a potential mining area or BGS recorded mineral site.

Potentially infilled land as unknown filled ground (pit, quarry, etc) is shown within 250m to the southeast from 1995 mapping.

The site is not located within a Mining Remediation Authority Coal Mining Reporting Area.

2.5 Discussion

Prior to the existing buildings, the site history indicates the site was previously undeveloped with the exception of a cooling water channel.

Published information indicates the ground conditions comprise Artificial Ground, which is likely to include at least some historical landfilling, undertaken as part of the redevelopment of the site as a business park, over superficial deposits which could include Alluvium.

A number of areas of landfilling, indicated as including special waste or inert and industrial waste, are located within 250m of the site. Five of these landfills are located within 100m and one extends into the eastern site boundary close to existing buildings and the proposed new spa garden. Information provided does not indicate the deposited waste included household waste. The licenses were all held by Thames Valley Park so relate to the redevelopment works at the site.

Ground gas could be associated with Artificial Deposits, landfilling or Alluvium, but they are not likely to have a high gas generation potential. Gas in Alluvium does not pose a hazard to above ground developments.

Volatile vapours could be associated with historical landfilling and Artificial Ground.

The site is not located in an area where radon protection is required.

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3 Previous Investigations

3.1 Scope of Investigations

EPG have been provided with a previous intrusive ground investigation report for the site prepared by JPP in June 2026, this is based on ground investigation site works undertaken in November 2025 which contains relevant information to inform the ground gas and vapour risk assessment.

The ground investigation is summarised in Table 1 below and the associated exploratory holes are shown in Figure 5. Exploratory hole logs and ground gas monitoring results can be found in Appendix B and Appendix C respectively.

Table 1: Summary of exploratory holes

Exploratory Hole Type	Exploratory Hole Reference	Depth (m bgl)	Comment
Cable percussion borehole	CP101 and CP102	20.45	Determine possible lateral edge of Made Ground (CP101). Determine deeper soil horizons below proposed footprint to inform foundation design. Install deep groundwater well. Coverage for contamination testing.
Dynamic sampler (windowless sampler)	WS101 to WS107	1.00 to 6.45	General coverage (WS102, WS015, WS106) and area of proposed extension footprint (WS101, WS103 to WS105). Coverage for contamination testing (WS101). Installation ground gas monitoring wells (WS103 to WS105, WS107).
Hand Dug Pits	HP01 to HP06	0.10 to 1.00	General coverage to confirm surface construction details and CBR values for the car park resurfacing.

A plan of the ground investigation locations undertaken by JPP is shown below in Figure 5 and provided in Appendix B.

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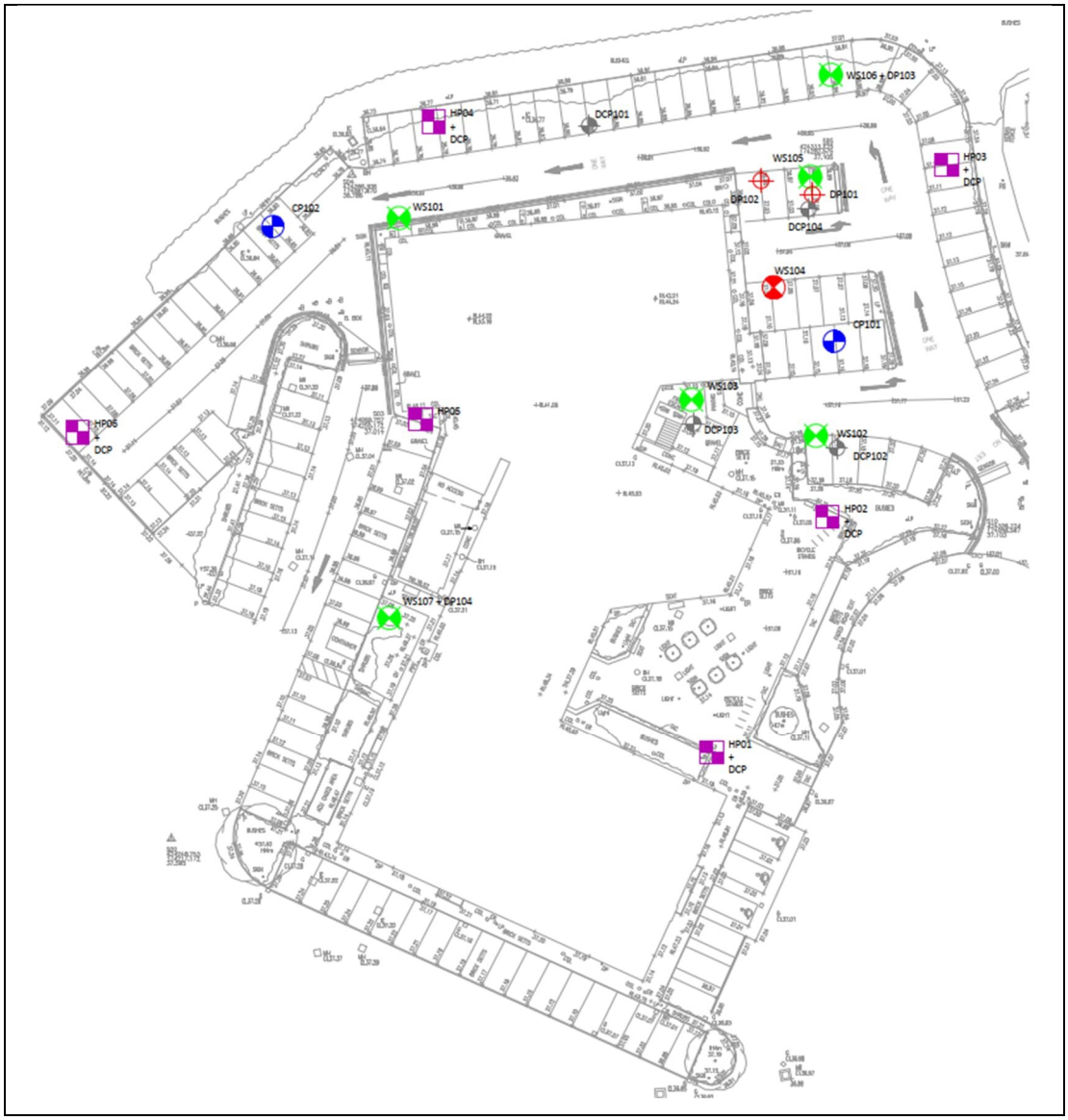

Figure 5: Ground investigation exploratory hole plan

Data was collected during the ground investigation that is relevant to the ground gas and vapour risk assessment, this included the results from soil and groundwater samples collected and analysed for a range of potential contaminants including petroleum hydrocarbons and polyaromatic hydrocarbons some of which are volatile.

The two boreholes, CP101 and CP102, were installed by JPP as groundwater wells with shallow wells in WS103, WS104, WS105 and WS106 where subsequent ground gas monitoring was undertaken.

Table 2 provides a summary of the monitoring wells installations.

Table 2: Monitoring well installations

Monitoring Well	Response Zone Strata	Well Installation Depth (m bgl)
CP101	Chalk	14.00 to 20.00
CP102	Kempton Park Gravels	4.00 to 8.50
	Chalk	13.00 to 20.00
WS101	Made Ground	1.00 to 4.00
WS102	Made Ground	1.00 to 6.00
WS103	Made Ground	1.00 to 5.80
WS104	Made Ground	1.00 to 4.00
WS105	Made Ground	0.50 to 1.50
WS106	Made Ground	2.00 to 6.00
WS107	Made Ground	0.50 to 1.00

3.2 Ground Conditions

The following provides a summary of the ground conditions encountered by JPP, the logs are presented in full in Appendix B.

3.2.1 Made Ground

Underlying a blacktop, block paving, gravel surfacing and/or subbase in all locations was a variable Made Ground comprising layers of cohesive or granular material.

Made Ground was encountered in each hand dug pit and window sample hole to depths of between 0.10m bgl (HP01) to 6.45m bgl (WS101) with some locations refusing within the Made Ground on either very dense deposits or possible obstructions. The base of the Made Ground was not proved in any of these exploratory holes.

CP101 and CP102 proved the base of the Made Ground at 7.50m bgl and 3.50m bgl respectively.

JPP identified two distinct types of Made Ground which were differentiated by their colour.

The upper layer generally comprised beige, brown, orange or occasionally grey sands, gravels and clays which appeared intermixed with no consistent material units across the site at various levels. The base of this shallower Made Ground was proved at depths of 1.80m bgl (WS101) to 2.30m bgl (WS103) except for WS105, WS107 and the hand dug pits where it was not proved.

The more cohesive units in this upper layer were generally encountered as a firm to stiff gravelly very sandy clay with gravels consisting of fine to coarse subangular to angular brick, flint, glass, concrete, chalk fragments, sandstone, clinker and possible slag and brick cobbles observed within WS103 at 0.30m bgl.

More granular units within the upper Made Ground were variable (where present) but generally comprised slightly silty very gravelly fine to coarse sand with gravels of fine to coarse subrounded to subangular brick, flint, concrete and chalk fragments, or medium dense clayey very sandy fine to

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coarse subrounded to angular flint, brick, concrete, sandstone timber and metal gravel. Additionally, subangular concrete and flint cobbles were observed within WS107.

The deeper Made Ground generally comprised very loose to loose black, greenish brown or dark green silty sand or silty clay which JPP noted also included PFA, clinker and / or slag.

3.2.2 Superficial deposits

Kempton Park Gravels (KPG) were encountered below the Made Ground in CP101 from 7.5m to 9.5m bgl and in CP102 from 3.50m to 8.50m bgl.

The superficial deposits comprised medium dense to dense orangish brown very sandy fine to coarse subrounded to angular flint gravel.

3.2.3 Bedrock

Chalk bedrock was encountered in CP101 at 9.50m bgl and CP102 at 8.50m bgl and proved to 20.45m bgl (base of these boreholes).

The Chalk was initially encountered in CP101 as a structureless chalk comprising white silty sandy gravelly clay to 10.50m bgl becoming silty fine to coarse subangular flint and chalk gravel the base of the hole. No structureless chalk was encountered in CP102 with silty fine to coarse subangular flint and chalk gravel present from 8.50m bgl to the base of the hole.

3.2.4 Evidence of contamination

During groundwater monitoring and sampling a slight oily sheen was noted on water extracted from the shallow (KPG) and deep (Chalk) monitoring wells installed within CP102 as the well was developed.

No other visual or olfactory evidence of soil or groundwater contamination was encountered.

PFA was noted as being encountered in the majority of the locations, proven to depths of between 3.00m to 7.50m bgl. Other anthropogenic materials were also present in the Made Ground which included brick, concrete, glass and metal. There is no evidence of fresh degradable material being present in the Made Ground. Thus, it cannot generate ground gas in sufficient volumes and rates to sustain hazardous emissions from the ground.

3.2.5 Groundwater

Table 3 provides a summary of the groundwater strikes encountered by JPP.

Table 3: Summary of groundwater strikes

Exploratory Hole	Strata	Strike Depth (m bgl) [elevation mOAD]	Groundwater Depth on Completion (m bgl)
CP101	Made Ground	0.80 [36.28]	
	Made Ground	7.00 [30.08]	3.10
CP102	Made Ground	3.20 [33.58]	2.20
WS101	Made Ground	3.70 [33.13]	2.00
WS102	-	Dry	Dry

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Exploratory Hole	Strata	Strike Depth (m bgl) [elevation mOAD]	Groundwater Depth on Completion (m bgl)
WS103	Made Ground	1.60 [35.50]	Dry
WS104	Made Ground	2.00 [35.03]	1.72
WS105	-	Dry	Dry
WS106	-	Dry	
WS107	-	Dry	Dry
HP03	Made Ground	0.70 [36.36]	0.69

Table 4 provides a summary of the groundwater levels encountered by JPP from four rounds of monitoring undertaken from 14 April to 1 June 2026.

Table 4: Summary of groundwater levels

Exploratory Hole	Strata	Groundwater Depth (m bgl)	Groundwater Elevation (mOAD)
CP101	Chalk	2.21 to 3.31	33.77 to 34.98
CP102	KPG	1.88 to 1.97	34.81 to 34.90
	Chalk	1.89 to 2.30	34.48 to 34.96
WS101	Made Ground	1.60 to 1.74	35.09 to 35.23
WS102	Made Ground	1.73 to 1.89	35.24 to 35.43
WS103	Made Ground	Dry to 1.57	Dry to 35.51
WS105	Made Ground	Dry	Dry
WS106	Made Ground	1.85 to 1.99	34.96 to 35.09
WS107	Made Ground	Dry	Dry

Groundwater was only present in WS103 during the fourth round of water level monitoring.

Monitoring indicates that shallow groundwater is present within the Made Ground along with the underlying Kempton Park Gravels and Chalk bedrock.

Groundwater levels in the Made Ground are slightly higher overall than the elevations obtained from the Kempton Park Gravels and Chalk bedrock.

The similarities in the water levels from CP102 are indicative of a hydraulic connection between the KPG and the Chalk bedrock.

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3.3 Contamination

The following provides a review of the chemical testing results obtained for volatile contaminants by JPP to consider the risks from vapour intrusion.

3.3.1 Soil contamination

Shallow soil samples (<1m depth) were tested for a range of possible contaminants including petroleum hydrocarbons and polyaromatic hydrocarbons some of which are potentially volatile along with volatile organic compounds (VOCs).

A review of the soil contamination testing does not show any results which exceed the generic assessment criteria (GAC) for a commercial end use which includes the vapour intrusion pathway.

Results for VOCs were below the lower laboratory detection limit.

Results for total organic carbon (including those converted from organic matter) obtained from shallow Made Ground were low at less than 1% except for WS107 at 0.05m depth which comprised topsoil.

3.3.2 Groundwater contamination

Groundwater samples were obtained by JPP for chemical analysis from the CP101 (Chalk) and CP102 (KPG and Chalk) and WS101 and WS02 (Made Ground).

All groundwater samples were tested for polyaromatic hydrocarbons, with petroleum hydrocarbons tested in CP101 (Chalk) and CP102 (KPG and Chalk) and VOCs in groundwater from the Made Ground from WS101 and WS02. Groundwater samples from CP101 and CP102 were also tested for benzene, toluene, ethylbenzene, xylenes (BTEX) and methyl tertiary butyl ether (MTBE) which are VOCs.

The results for potentially volatile contaminants have been compared against the SoBRA GAC for groundwater vapours based on a sand with 1% soil organic matter for a commercial end use.

Results for VOCs were below the lower laboratory detection limit. BTEX and MTBE were below the lower laboratory detection limit.

Aliphatic petroleum hydrocarbon fractions were present in samples from CP101 (Chalk) and CP102 (KPG and Chalk) from the EC12 to EC35 range which are not considered to be volatile.

Naphthalene was present in the sample from CP101 at 0.39µg/l which is well below the SoBRA groundwater GAC for volatile vapours.

3.4 Gas Monitoring

Three rounds of ground gas spot monitoring were undertaken by JPP from 6 May to 1 June 2026 on six shallow wells installed in WS101 to WS103 and WS105 to WS107.

EPG note the monitoring well screen in WS106 was almost completely flooded during the first round of monitoring with groundwater at 1.91m bgl and top of well screen was at 1.90m bgl. Only a limited section of well screen (<0.1m) was unflooded in WS106 during the two other rounds. Data obtained from flooded wells is not considered to be representative of the gas regime in unsaturated soils.

Although groundwater was present in WS101 and WS102, the well screens were not completely flooded during monitoring. WS105 and WS107 were dry during each of the monitoring rounds and

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WS103 was dry during the first and second round with 0.01m of water noted in the base during the third round.

Table 5 provides the peak results for methane and carbon dioxide along with the steady state flow rates from monitoring.

Table 5: Summary of gas monitoring results

Monitoring Well	Peak Methane (%)	Peak Carbon Dioxide (%)	Steady State Flow Rate (l/hr)
WS101	0.3 to 0.4	0.2 to 0.3	<0.1
WS102	1.9 to 6.9	0.2 to 0.8	<0.1 to 0.1
WS103	0.3 to 0.7	0.6 to 1.4	<0.1
WS105	0.9 to 4.0	0.1 to 0.2	<0.1
WS106	0.3 to 0.4	1.2 to 1.8	<0.1 to 0.1
WS107	0.3 to 0.4	0.1 to 0.5	<0.1 to 0.1

The highest results for methane were consistently obtained from WS102 where the well screen was installed from 1.0m to 4.0m bgl within Made Ground comprising clay and sand with inclusion of flint and brick, the deepest sand layer appears to comprise ash.

Elevated results for methane were also obtained from WS105 which was installed at shallow depth (0.5 to 1.0m bgl) into Made Ground comprising sand with brick and flint gravels over clay with inclusions of brick, flint glass and wood.

No evidence of degradable material was encountered in the Made Ground from WS102 or WS105.

Results for carbon dioxide were all very low and the peak and steady state flow rates were negligible (<0.1 to 0.1 litres/hour).

A ternary plot has been provided below in Figure 6 to inform the source of gases encountered based on steady state concentrations for methane and carbon dioxide from spot monitoring.

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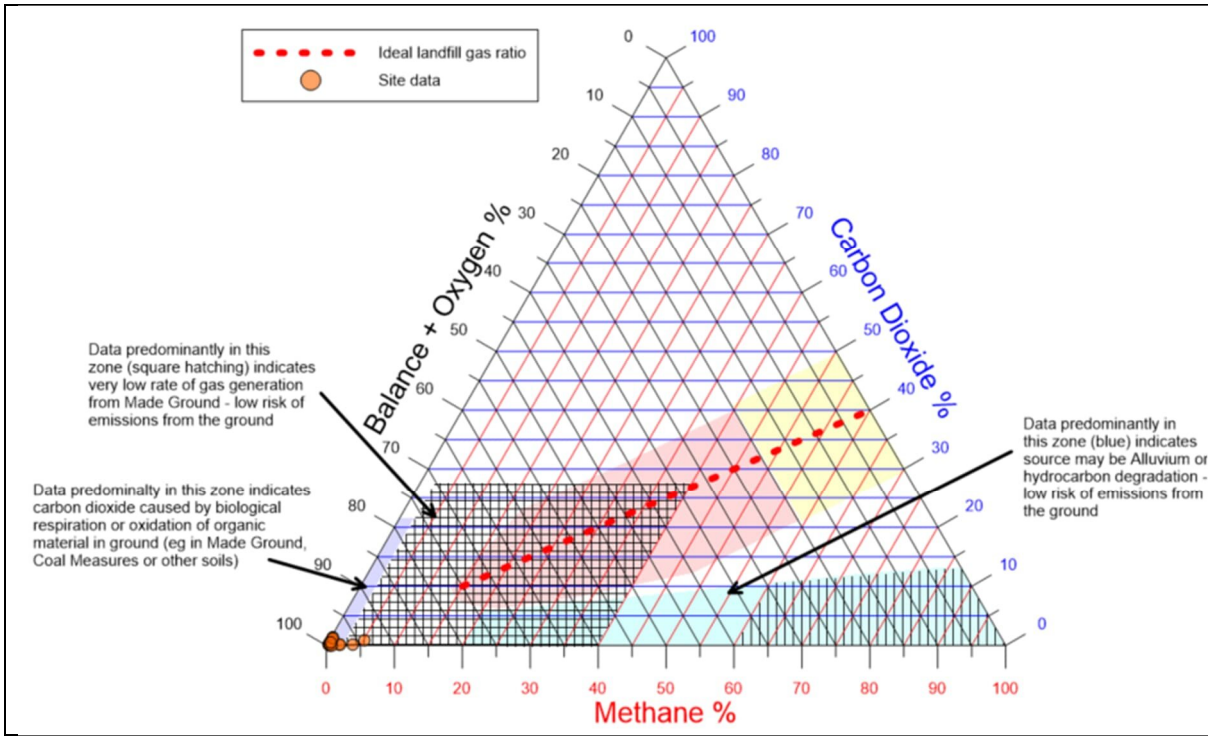

Figure 6: Ternary plot from spot monitoring

The majority of results plot in the area associated with microbial respiration or oxidation of organic material, with a number of results from WS102 and WS105 plotting in or close to the area associated with Made Ground which has a very low rate of gas generation.

3.5 BG Group Site E Car Park

The JPP (2026) Desk Study report includes a factual report dating from 2018 relating to a ground investigation at the Site E car park of the BG Group site which JPP indicate is immediately east of the site and comprises disused areas of parking. The company who prepared the 2018 report is not indicated but it appears to be Terramech Investigations Ltd from other information provided the report.

JPP indicate the data provided included a plan and logs produced by Terramech in October 2011, but the investigation plan and logs produced by Terramech are not included.

The 2018 report refers to a desk study prepared by Terramech which identified the presence of old ash lagoons below the Thames Valley Park area, including the Site E car park. The investigations were noted as showing that the wider BG Group site was generally underlain by capped power station ash materials. Pulverised Fuel Ash (PFA) was noted as being pumped as a slurry into lagoons on the area during the working life of Earley power station which was located just to the southwest of the BG Group site.

EPG note the historical area of landfilling identified within the east of the David Lloyd site extends into the area east of the site.

JPP indicate the cable percussion borehole logs confirmed Made Ground to depths of between 5m to 10m bgl where encountered, overlying a gravel or sand, likely to be the Kempton Park Gravel Member, which in turn overlies Chalk bedrock from 9.00m to 11.30m bgl.

Ash was noted as being present in the Made Ground in two layers separated by a thick layer of mixed rubble, flint gravels and clays. Sporadic pockets containing fragments of white cementitious board and bubbly black clinker were also noted in the rubble. The 2018 report also refers to a basal sealing layer below the power station ash.

No laboratory testing data was included with the 2018 report. The report text indicates that asbestos contamination comprising amosite and chrysotile was encountered within the Made Ground including cement bound fragments and fibres. A photo within the report from a window sample hole shows a layer of amosite (brown asbestos) just above PFA.

Discussion provided in the 2018 report indicates that none of the results for petroleum hydrocarbons or PAHs exceeded the GAC for a commercial land use. No BTEX or MTBE was noted as being encountered above the lower detection limit in soil.

The 2018 report notes that on the basis of the findings of the preceding investigations by Watermans, which concluded that the ash lagoon material did not pose a risk to groundwater, groundwater analysis was not carried out as part of the 2011 investigation.

The 2018 report also indicates that ground gas monitoring was not carried out by Terramech based on work carried out by Waterman Environmental which had dismissed the potential for any ground gas hazards over the whole BG Group site.

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4 Conceptual Site Model

4.1 Causes of ground gas incidents

A review of the ground gas incidents around the world undertaken by EPG as part of a research project in 2019 (Card et al., Reliability and risk in gas protection design – 20 years on, Ground Engineering 2019) shows that there are several factors that are common where gas phase migration of methane or carbon dioxide into a building has occurred:

- A large volume of gas that can migrate easily through open voids such as fractured rock, old mine shafts or oil wells (e.g. landfills, mine workings, volcanic areas, oil or gas reservoirs or similar). Note that a high concentration does not automatically imply a large volume of gas
- Open voids close to buildings allow gas to accumulate in a reservoir (e.g. sealed void under floor slabs or stone column foundations).
- Open pathway from the reservoir of gas to the inside of the building (e.g., pipework that gas can migrate inside, or open trench backfill such as pea gravel).

Although the site is partially underlain by landfill, it is essentially inert with respect to ground gas generation and none of the above factors are present. Further discussion on this has been provided below.

4.2 Sources

Records indicate a landfill extends into the eastern part of the site which accepted waste including special waste with the last input in 1989 with other areas of landfilling identified within 250m with relating to Earley Power Station where deposited waste included inert waste and to the Central Electricity Generating Board for deposition of waste including inert and industrial waste, the former has a last input date of December 1990. The designation as special waste does not infer a high gas generation potential. Special waste is normally determined because of hazardous chemical content rather than a high organic content.

Records for a registered landfill c.210m to the north east of the site dated March 1988 indicate this was operated by Thames Valley Park Ltd accepting 'only waste produced onsite' with authorised waste comprising contamination by low level of asbestos, inert material from on site, other material removed at North Earley and pulverised fuel ash.

Made Ground is present across the David Lloyd site which is described as cohesive and granular near surface over mainly ash and clinker at depth. No significant degradable material has been identified in the Made Ground. The presence of Made Ground, including PFA, has been identified from an investigation on the site immediately east of David Lloyd.

A JPP window sample hole (WS102) drilled in or very close to the area of landfilling in the east of the site and showed similar ground conditions to exploratory holes in other parts of the site. The landfilling appears to relate to deposition of ash which is also identified in historical borehole records from the 1980s further to the east in Thames Valley Business Park.

A cooling water channel was present crossing the site from the 1940s to the 1980s. It is possible this could still be culverted below the site or more likely it was infilled as part of the existing site development.

Gas monitoring shows low overall concentrations of methane and carbon dioxide. Elevated methane has only consistently been encountered in two wells, WS102 and WS105, both of which were installed into the Made Ground. The Made Ground does not contain any significant amounts of potentially degradable material.

Flow rates were negligible indicating very low gas generation rates. The majority of monitoring results relate to microbial respiration or oxidation of organic material with results from WS102 and WS105 relating to Made Ground which has a very low rate of gas generation.

4.3 Pathways

The site is underlain by Made Ground near surface which comprises granular and cohesive although more granular material is present at depth. Granular strata could provide a pathway for gas to move vertically or laterally.

Shallow groundwater is present which will significantly restrict the pathways for lateral migration and will prevent vertical migration of gas from depth (if present) except via the dissolved phase.

The foundation solution comprises controlled modulus columns and pad foundations which are not considered to provide preferential pathways for gas migration.

Monitoring wells can act as pathways for gas migration if they are not appropriately decommissioned.

4.4 Receptors

The potential receptors for ground gas migration and ingress at the site are the future users of the buildings following construction.

4.5 Conceptual Site Model

The Conceptual Site Model is shown in Figure 7.

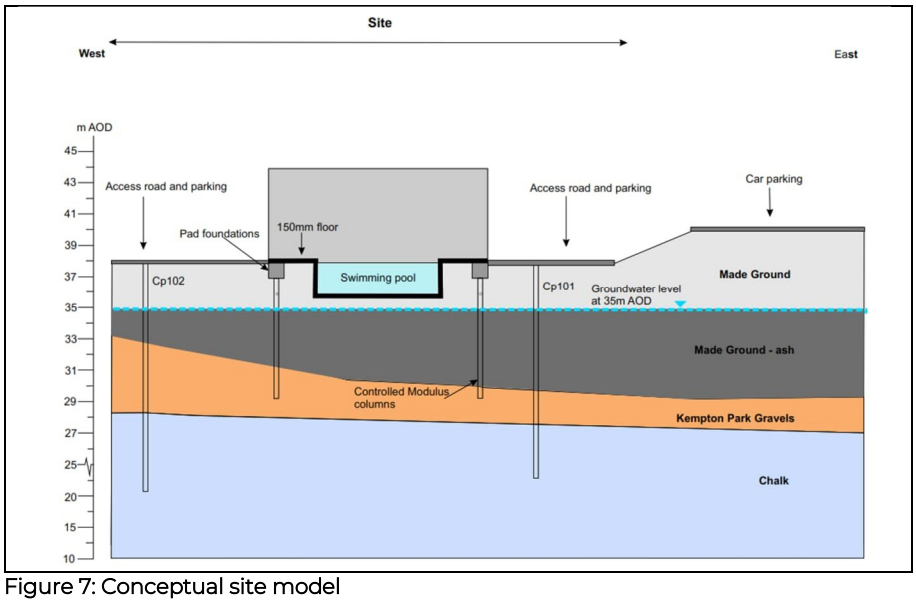

Figure 7: Conceptual site model

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5 Gas Monitoring Risk Assessment

5.1 BS8485 assessment methodology

The gas risk assessment process in BS8485:2015+A2019 has been followed in this report.

The gas regime has been characterised by undertaking a simple screening exercise to compare the data to generic gas screening values. Clause 6.3.2 of BS8485:2015+A:2019 describes the process for developing a Gas Screening Value of a site as follows:

1. Borehole hazardous gas values (Qhg) are calculated for each borehole standpipe for each monitoring event. Note Qhg is obtained by multiplying the gas concentration (of methane and/or carbon dioxide) by the flow rate for each well, on a visit-by-visit basis.
2. The reliability of the measured gas flow rates and concentrations is assessed taking into account borehole construction (and geology, groundwater conditions etc).
3. Decisions are made as to whether to use peak gas flow rates of steady state rates in each calculation.
4. Where necessary, decisions are made about how to deal with any temporal or spatial shortages.
5. Judgements are made about what Gas Screening Value (GSV) to use for design purposes, taking all relevant information into account, notably the Conceptual Site Model. Using the calculated GSV the site is characterised as one of six 'Characteristic Situations' (CS) with CS1 being indicative of 'very low gas hazard' and CS6 being indicative of 'very high gas hazard'. In addition, there is a requirement to consider an increase from CS1 to CS2 if methane concentrations exceed 1%v/v and/or carbon dioxide concentrations exceed 5%v/v. Note: it is not mandatory in BS8485:2015+A1:2019 to automatically increase the classification because of elevated concentrations.
6. An assessment of worst-case conditions is then completed, if appropriate.

5.1.1 Generic assessment based on monitoring data

Consistent with BS8485:2015+A1:2019, EPG's approach to the assessment of gas risk on this site starts with the calculation of hazardous gas values from borehole monitoring, taking into account the data quality and CSM. The monitoring data will then be reviewed in context of the additional line of evidence collected.

The hazardous gas flow rates (HGFRs) for methane and carbon dioxide for each set of spot monitoring results based on the steady state flow readings (set to 0.1 litres/hour (l/hr) where results were less than detection) and peak gas concentrations have been collated in Figure 8.

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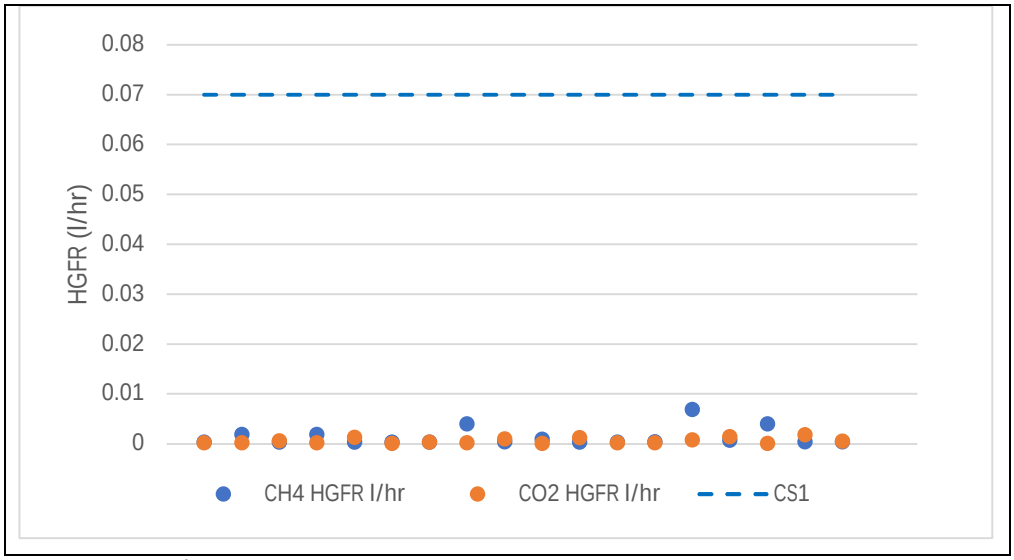

Figure 8: HGFRs from spot monitoring

The highest HGFR is 0.0069 l/hr with many of the results <0.001 l/hr. All of the results are below the limit for Characteristic Situation (CS)1 for both carbon dioxide and methane, with no HGFR exceeding the 0.07l/hr CS1 limit.

Therefore, taking into account the source of the gas and negligible gas generation rate, CS1 is considered appropriate for the site.

5.1.2 Data quality assessment

Based on the Conceptual Site Model, EPG considers there is sufficient ground investigation data to permit assessment of the gas risk when all lines of evidence are considered in the collective, i.e., known history of the site / surrounding area and observed ground conditions and collected gas monitoring.

The ground gas monitoring locations provide a general coverage of the site area, with boreholes located across the site.

A worst-case assessment is not required due to very low risk sources present.

5.2 Detailed Quantitative Risk Assessment

Based on the presence of slightly elevated methane, further detailed risk assessment has been undertaken to consider the migration of methane through unsaturated Made Ground / fill material and attenuation from ventilation within the building.

Flow rates from monitoring are indicative of negligible gas generation and gas migration will predominantly be via diffusion which is a slow process.

The assessment has been based on gas migration via diffusion from a source in shallow Made Ground through the concrete floor into an assumed small space such as a cupboard or storeroom. The risks will be lower for larger and more well ventilated spaces. The presence of floor coverings can also reduce gas ingress. The assessment is based on the approach provided in Wilson (2008) Modular approach to analysing vapour migration into buildings in the UK.

The assessment has been based on the highest concentration of methane from WS105 (6.9%) which was installed in Made Ground to represent the near surface gas regime. The assessment assumes

that the highest methane concentration recorded is present under the full footprint of all the buildings at a steady-state.

Pad foundations and controlled modulus columns are not considered to provide preferential pathways for gas migration.

Table 6 summarises the input parameters used in the assessment and estimated steady state methane concentrations derived.

Table 6: Diffusion Assessment - Input Parameters and Results

Parameter	Input Value	Comments
Methane concentration (%)	6.9	Peak result from WS102
Depth to source (m)	0.5	Assumed shallow depth in the Made Ground
Henrys Constant (10 °C)	21	Sander (2023) Compilation of Henry's Law Constants for Water as Solvent with temperature correction based on the approach outlined in EPG (2018) Ground Gas Information Sheet No.2 Dissolved methane monitoring for ground gas risk assessment
Air diffusion coefficient (m2/s)	$1.5x10^{-5}$	CIRIA Report 152 (1995) Risk assessment for methane and other gases from the ground
Water diffusion coefficient (m2/s)	$1.5x10^{-9}$	CIRIA Report 152 (1995) Risk assessment for methane and other gases from the ground
Air filled porosity – soil	0.3	Environment Agency SR3 (2009) Updated technical background to the CLEA model for sand, this will be conservative where cohesive strata is present
Water filled porosity - soil	0.24	Environment Agency SR3 (2009) for sand, this will be conservative where cohesive strata is present
Air filled porosity – concrete	0.034	Defra and the Environment Agency CLR 10 (2002) The Contaminated Land Exposure Assessment (CLEA) model: Technical basis and algorithms
Water filled porosity - concrete	0.034	Defra and the Environment Agency CLR 10 (2002)
Floor thickness (m)	0.15	Construction drawings
Building length (m)	1.5	Assumed small space within the development
Building width (m)	1.5	Assumed small space within the development
Building height (m)	2.5	Assumed small space within the development
Air changes per hour	1	Environment Agency SR3 (2009) for commercial buildings

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Parameter	Input Value	Comments
Estimated steady state methane concentration (%)	0.00083 (8.3ppm)	

The estimated steady state concentration for methane from diffusion through an intact concrete floor is very low and only slightly above ambient concentrations (approximately 0.0002%). The result is also well within the limiting value of 100ppm provided in Card, Lucas and Wilson (2019) 'Risk and reliability in gas protection design – 20 years on' for Gas Regime A which is the level of risk assumed to be low and referred to as a category 4 case in accordance Defra and also the Class 4 limiting value in CIRIA C795 'Retrofitting hazardous gas protection measures in existing or refurbished buildings'.

The assessment above has been based on a number of conservative assumptions, so further sensitivity analysis is not considered to be required.

However, to further consider the risks, assessment has also been undertaken for pressure driven flow (advection) into the building via an assumed perimeter floor crack based on the approach provided in the Ground Gas Handbook (2009).

Table 6 summarises the input parameters used in the assessment and estimated steady state methane concentrations derived.

Table 7: Pressure Driven Flow via Floor Cracks - Input Parameters and Results

Parameter	Input Value	Comments
Methane concentration (%)	6.9	Peak result from WS102
Depth to source (m)	0.5	Assumed shallow depth below the floor slab
Hydraulic conductivity (m/s)	$1x10^{-4}$	Assumed conductivity for sand (higher than the value of $7.36x10^{-5}$ m/s provided by the Environment Agency in SR3). Conservative where cohesive strata is present. Estimated hydraulic conductivity values from particle size distribution testing on samples of ash Made Ground from CP101 at 2.5-3.0m and WS102 at 3.2m are less than $1x10^{-6}$ m/s.
Pressure difference (pascals)	5.1	Highest value provided by the Environment Agency in SR3 (2009) for a commercial building
Floor crack width (m)	0.002	Environment Agency SR3 (2009)
Floor crack length and width (m)	1.5	Assumes a crack is present around the perimeter of the enclosed space
Building length (m)	1.5	Assumed small space within the development
Building width (m)	1.5	Assumed small space within the development
Building height (m)	2.5	Assumed small space within the development

Parameter	Input Value	Comments
Air changes per hour	1	Environment Agency SR3 (2009) for commercial buildings
Estimated steady state methane concentration (%)	0.0054 (5.4ppm)	

The estimated steady state concentration for ingress via a floor crack is lower than for diffusion through the floor slab and well within the limiting values for methane.

Results from the detailed quantitative risk assessment do not indicate an elevated risk should be present from methane in shallow Made Ground.

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6 Conclusions

The majority of the site was undeveloped until Thames Valley Business Park was constructed in the late 1980s except for a cooling water channel towards the west of the site which connected the River Thames to an electricity works to the south of the site from the 1940s to 1980s. This channel is still present to the northwest of the site and could be culverted beneath the site or infilled prior to the existing development. The electricity works appears to have been removed before or as part of the Thames Valley Business Park development.

Five areas of historical landfilling are located within 100m of the site, one of which extends into the eastern site boundary close to the proposed new spa garden operated by Thames Valley Park Limited. These are all indicated as including special waste.

The site is underlain by Made Ground proved to depths of 3.5m to 7.5m bgl which overlies superficial deposits comprising Kempton Park Gravels over Chalk bedrock. Made Ground comprises granular and cohesive horizons near surface with ash and clinker present at depth. No potentially significant degradable material has been encountered within the Made Ground. Previous investigation information for the disused car parks immediately to the east shows the presence of Made Ground including ash up to 10m bgl.

Shallow groundwater is present within the Made Ground, and also in the Kempton Park Gravels and Chalk which are likely to be in hydraulic connection.

Spot monitoring on wells installed within the Made Ground shows low overall concentrations of methane and carbon dioxide with very low flow rates. Elevated methane has consistently been encountered in WS102 (up to 6.9%) and WS105 (up to 4%) but hazardous gas flow rates are <0.07 l/hr.

The source of the methane is likely to be small amounts organic material within the Made Ground which has a very low gas generation potential as the gas is generated slowly over time.

A detailed risk assessment has been undertaken to further consider the risks from gas ingress into an assumed small space such as a cupboard or storeroom in the development from migration through the concrete floor and via an assumed perimeter floor crack. The results show very low estimated steady state concentrations of methane.

The controlled modulus columns which will be used to support pad foundations are not considered to represent preferential pathways for gas migration.

The risks from ground gas are considered to be very low and the site should be classified as CS1 with no specific gas protection measures required. The site is located in an area where <1% of properties are above the radon action level and radon protection is not required. The risks from vapour intrusion are also considered very low and no specific mitigation is required.

As a precautionary measure, movement and isolation joints and service entries through the floor within the ground level should be sealed to provide a gas resistant floor construction.

Existing monitoring wells should be appropriately decommissioned and sealed in accordance with Environment Agency guidance on good practice for decommissioning redundant boreholes and wells.

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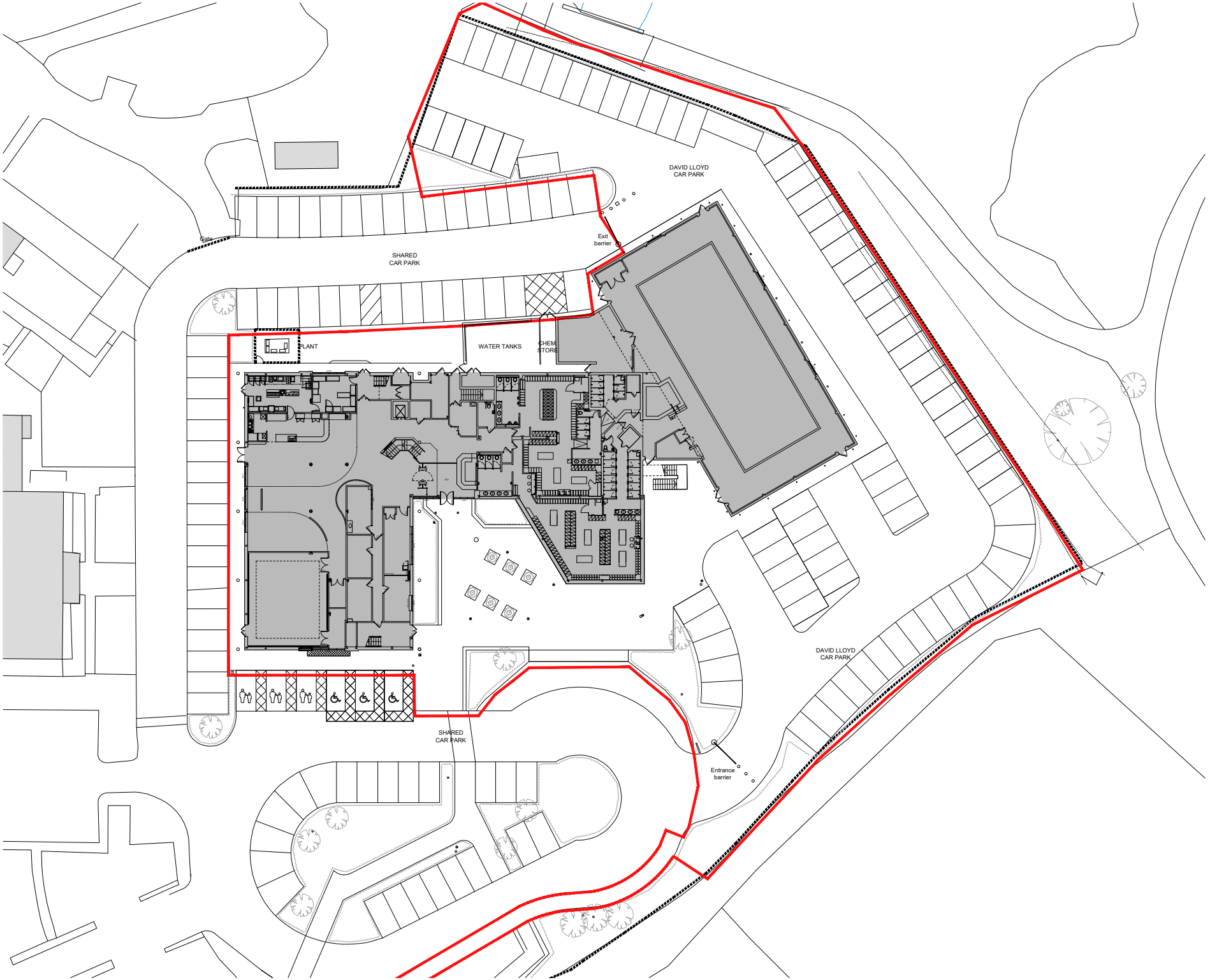
Appendix A

Drawings



NOTES

Responsibility is not accepted for errors made by others in scaling from this drawing. All construction information should be taken from figured dimensions only.
Verify all dimensions and setting out on site. Notify any discrepancies to the architect.
For structural information, refer to structural engineer's drawings & specifications. For M&E information, refer to M&E engineer's and sub-contractors' drawings & specifications. For health & safety information, refer to health & safety risk assessments.

This drawing and any related specifications are issued as architectural design intent and / or detailed design in accordance with the project specific design responsibility matrix. Whilst Hadfield Cawkwell Davidson have exercised all reasonable care and due diligence when developing the design, reference should still be made to the manufacturers' literature and any specialist sub-contractor design information, and all details should be constructed strictly in accordance with the manufacturers' instructions and / or specialist sub-contractor design where applicable. If in doubt, please consult Hadfield Cawkwell Davidson prior to installation. Where our information is superseded by specialist sub-contractor design information, all responsibility for the design is transferred to the specialist.

All new works, products and processes are to be in accordance with the relevant british standards and manufacturers' guidance.

This drawing is indicative of design intent only. all construction details, finishes and interfaces to be confirmed & agreed with David Lloyd prior to construction.

To be designed, detailed, fabricated & installed by specialist. specialist to provide working drawings and sample of all finishes for approval prior to commencing fabrication.

0m 10 20 30 40 50

1:500

EXISTING CAR PARK
151 SPACES

INC.
- 74 DAVID LLOYD SPACES
- 71 SHARED SPACES
- 3 SHARED DISABLED
- 3 SHARED PARENT & CHILD

N

REVISION: T01 BY: JM CHECKED: CM DATE: 08/05/2026
Initial issue

STATUS

D2 | FOR TENDER

CLIENT

DAVID LLOYD CLUBS

PROJECT

DAVID LLOYD READING
THAMES VALLEY
BUSINESS PARK

TITLE

EXISTING SITE PLAN

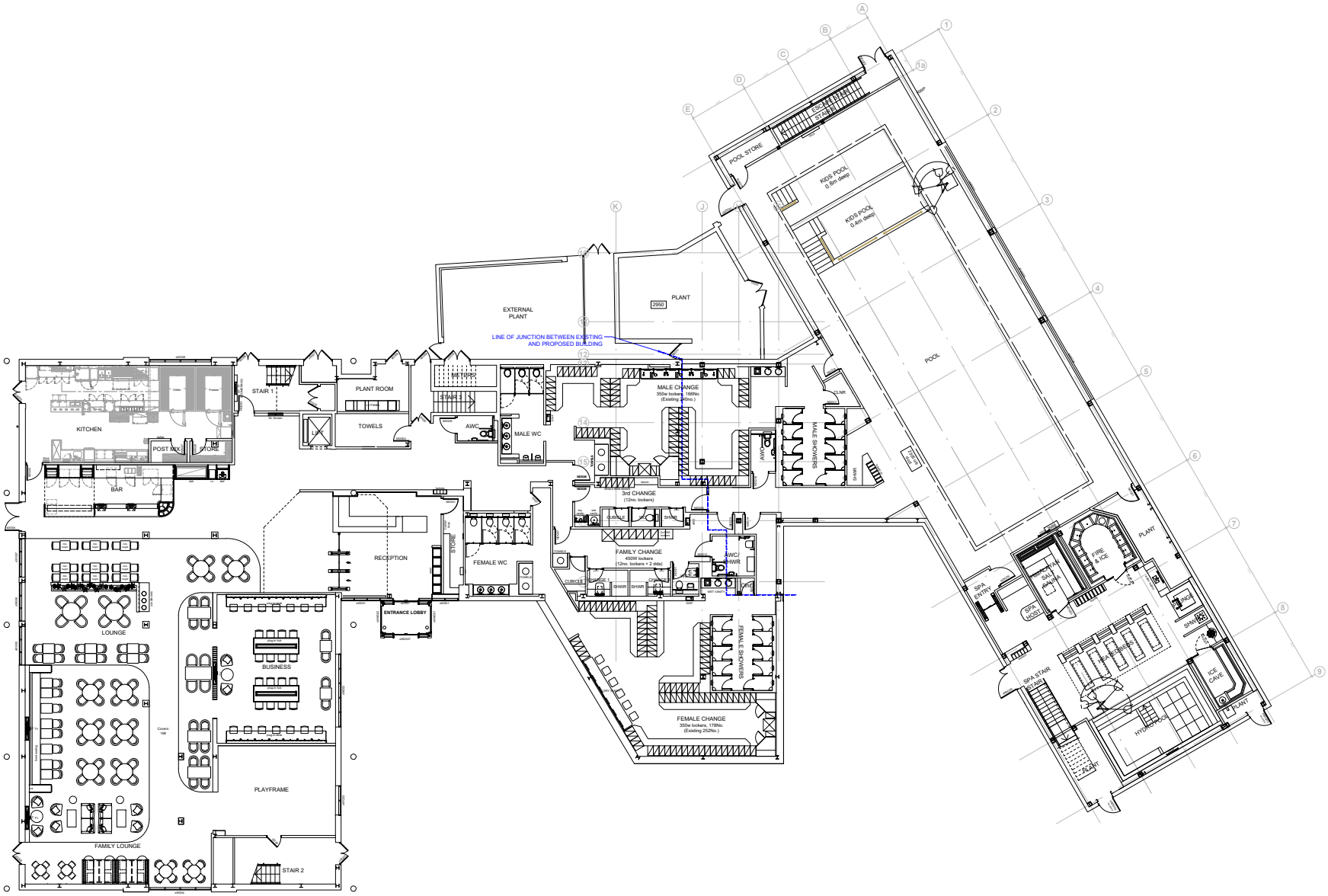
Hadfield Cawkwell Davidson

Broomgrove Lodge, 13 Broomgrove Rd, Sheffield, S10 2LZ T 0114 266 8181 www.hcd.co.uk

HCD PROJECT NO	SCALE	REV
2025-219	1:200 @ A1	T01

PROJECT NO	ORIGINATOR	VOLUME	LEVEL	TYPE	ROLE + NUMBER
25219	HCD	A0	00	DR	A-09-000

S:\Architecture\25219\Drawings\DR - Plotsheets\A-09-000 - Existing Site Plan.dwg



Refer to dwg A-04-018 for Revit Model Extension Plan

Structural Design subject to design development

Co-Ordination with M&E subject to design development of M&E Package

Co-Ordination with Pool Specialist subject to design development

NOTES

Responsibility is not accepted for errors made by others in scaling from this drawing. All construction information should be taken from figured dimensions only.
Verify all dimensions and setting out on site. Notify any discrepancies to the architect.
For structural information, refer to structural engineer's drawings & specifications. For M&E information, refer to M&E engineer's and sub-contractors' drawings & specifications. For health & safety information, refer to health & safety risk assessments.

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REVISION	BY	CHECKED	DATE	
T05	JM	CM	07/10/2026	Tender Issue: Kitchen layout updated. Lounge boomerang screen removed. Reception speed lanes x2
T04	JM	CM	02/10/2026	Tender Issue: Existing pool retained & reduced to 8m width. Extension modified to suit & layout amended to have 4changing rooms.
T03	JM	CM	09/07/2026	Tender Issue: Grid coordinated. Junction to existing shown. Spa stairs revised.
T02	JM	CM	22/06/2026	Grid lines and steel column positions amended.
T01	TD	CM	08/05/2026	Tender Issue
P03	CM	MPB	11/02/2026	Female Change - shower position amended and number as model (10No.) , access route to pool amended. Family Change amended to suit amended Female Change. Male Change Wet vanity amended and Poolside Towels added. Male Change lockers increased to 198No.
P02	CM	MPB	09/02/2026	Changing Room layouts amended - locker layouts amended, female pool access amended, male showers & wet area amended
P01	CM	MPB	30/01/2026	Planning Issue

STATUS

D2 | FOR TENDER

CLIENT

DAVID LLOYD CLUBS

PROJECT

DAVID LLOYD READING
THAMES VALLEY
BUSINESS PARK

TITLE

PROPOSED
GROUND FLOOR PLAN

Hadfield Cawkwell Davidson

Broomgrove Lodge, 13 Broomgrove Rd, Sheffield, S10 2LZ T 0114 266 8181 www.hcd.co.uk

HCD PROJECT NO	SCALE	SIZE
2025-219	1:125 @ A1	T05

PROJECT NO	ORIGINATOR	VOLUME	LEVEL	TYPE	ROLE + NUMBER
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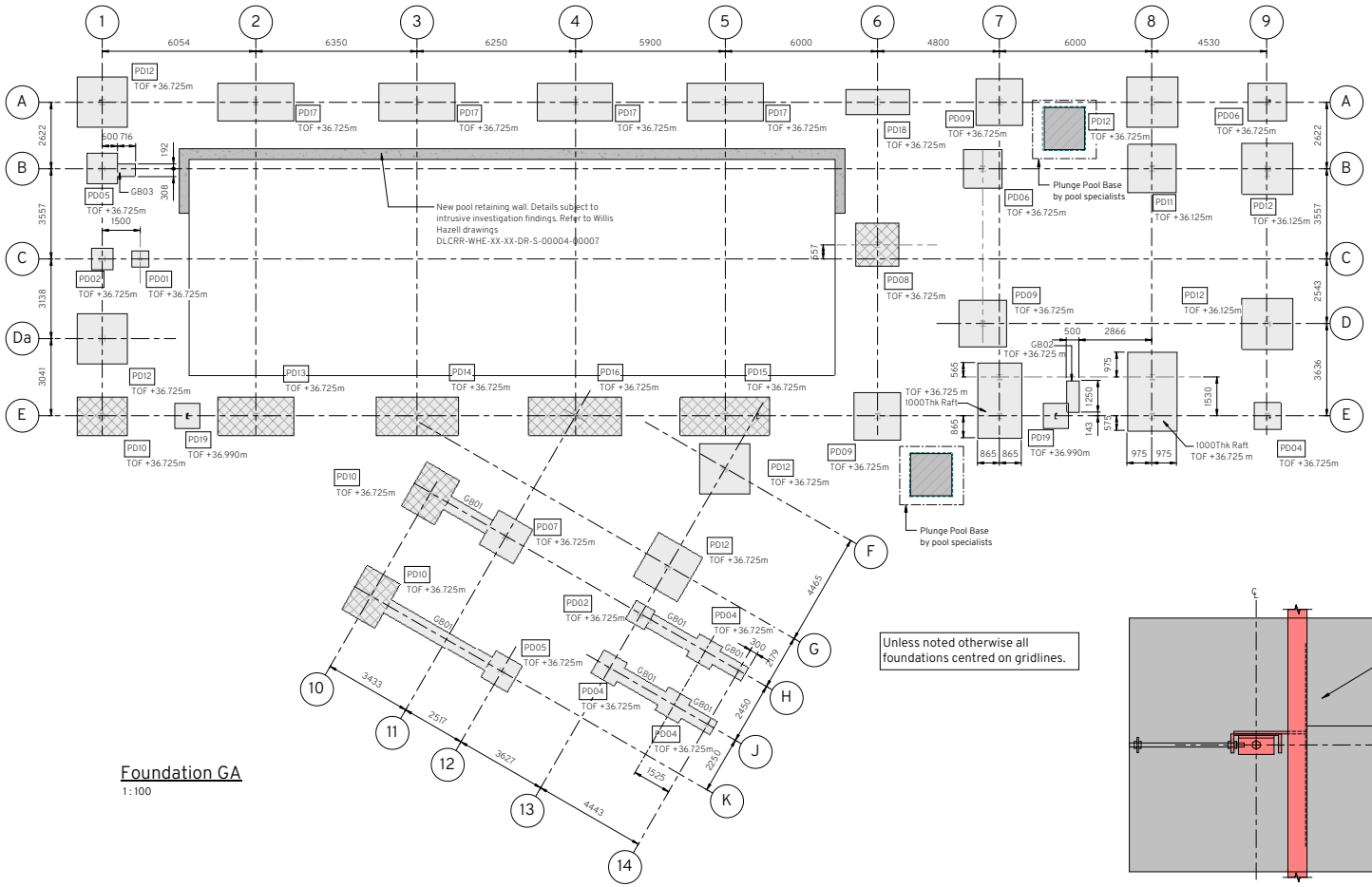
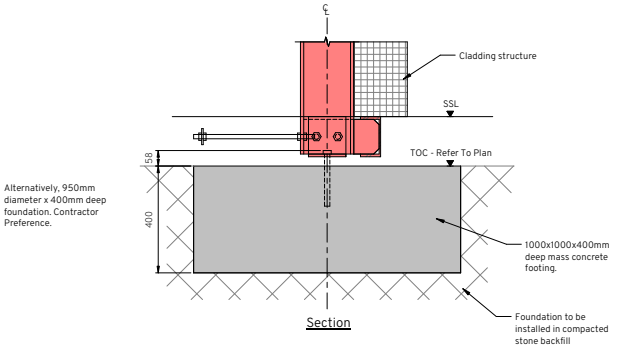


Foundation GA
1 : 100

Unless noted otherwise all foundations centred on gridlines.

Plan



Alternatively, 950mm diameter x 400mm deep foundation. Contractor Preference.

Section

Pad Foundation Schedule

Ref	Length (mm)	Width (mm)	Depth (mm)
PD01	650	650	600
PD02	850	850	650
PD04	1050	1050	600
PD05	1200	1200	650
PD06	1500	1500	750
PD07	1550	1550	750
PD08	1700	1700	1000
PD09	1850	1850	1000
PD10	2000	1500	800
PD11	1900	1900	1000
PD12	2000	2000	1000
PD13	3000	1500	800
PD14	3250	1500	800
PD15	3500	1500	800
PD16	3700	1500	800
PD17	3000	1500	1500
PD18	2500	1000	1200
PD19	1000	1000	400

Ground Beam Schedule

Ref	Width (mm)	Depth (mm)
GB01	600	600
GB02	500	1000
GB03	500	600

Notes

1. All dimensions are in millimetres and levels in metres unless noted otherwise.
2. The drawing is to be read in conjunction with all relevant Architect's and Engineers drawings, specifications and general notes.
3. This drawing has been produced electronically and may have been photo reduced or enlarged when copied. Do not rely on any scales quoted. Work only to figured dimensions (do not scale). All dimensions to be checked on site. Any errors or emissions to be reported to the Engineer immediately.
4. For general notes, refer to drawing: DLCAW-WHE-ZZ-XX-DR-S-001001 to 001004.
5. Ground to be improved using vibro stone columns (VSC). VSC are to provide suitable formation for the pad foundations, with the following requirements needing to be achieved:

   - Minimum allowable bearing pressure for shallow foundations design: 150 kN/m2
   - Residual settlements limited to 25mm/Relative differential settlements limited to 1/500.
6. Refer also to Willis Hazell Ground Improvement Requirements sketch.

Legend

Foundation requiring reinforcement

Rev	Date	Drawn	Description	Chk'd	App'd
C02	27.10.26	SJ	Issued For Construction WIP	DS	RH
C01	16.10.26	MJ	Issued For Construction WIP	DS	RH

Status: CONSTRUCTION

Client: David Lloyd CLUBS

Main Contractor: FOXTON CONSTRUCTION

Civil & Structural Engineer: Willis Hazell ENGINEERS

Project Title: Reading

Drawing Title: Foundation General Arrangement

Suitability Status: A5- Stage 5 Purpose

WHE Project Number	Scale @ A1	Rev
1096	As indicated	C02

Drawing Number: DLCRR-WHE-MB-FN-DR-S-21101

Willis Hazell Engineers Limited (www.willishazell.com)
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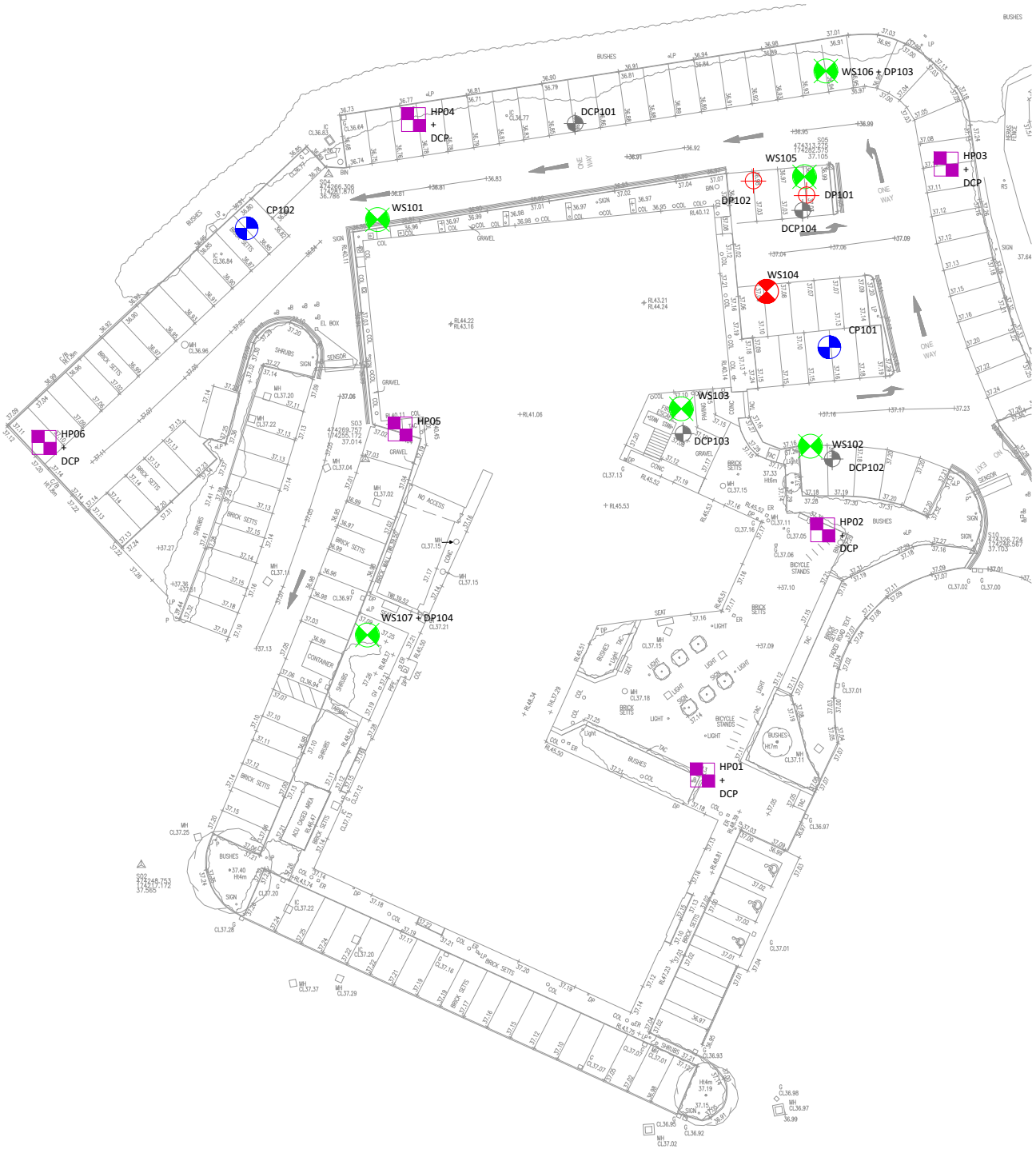
Appendix B

Ground investigation logs



Notes;

1. Do not scale from this drawing.
2. This drawing shall be printed in full colour.
3. Exploratory hole locations are based on JPP survey data (November 2025 and April 2026).
4. TRL DCP tests not surveyed in.
5. This drawing is based on N2684-R0-2D.dwg/ REV 0, produced by Laser Surveys Ltd.

Key;

- WS — Windowless sample borehole
- WS — Windowless sample borehole with monitoring well installation
- DCP — Approximate location of TRL dynamic cone penetration test.
- BH — Cable-Percussion borehole with monitoring well installation
- HP — Hand dug trial pit with TRL DCP test
- DP — Dynamic Probe location

jpp The JPP Group

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- Highways
- Structural Engineering
- Development Planning
- Geotechnical & Environmental
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Client	David Lloyd Leisure Ltd
Project	Thames Valley Business Park Reading, RG6 1PT
Title	Exploratory Hole Location Plan

Scale	Drawn by	Checked by	Date
NTS	MG	ES	22 May 2026

Status	Project ref	Drawing no.	Revision
FOR INFORMATION	30799	02	-

Trial Pit Log

Project Name: Thames Valley Business Park	Client: David Lloyd Leisure Ltd	Date: 13/11/2025
Location: Reading		Co-ords: E474301.33 N174225.60
Project Number: 30799		Equipment: Hand Tools

Location Number	Location Type	Level	Logged By	Scale	Page Number
HP01	TP	36.98m AOD	AH	1:10	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth Base (m bgl) Thickness (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
					(0.07)			Paving slab.
					0.07	36.91		
					(0.07)			Light orange brown very gravelly silty fine coarse SAND. Gravel consists of fine to medium subrounded to subangular sandstone flint and granite. (SUBBASE)
					0.14	36.84		
					(0.16)			Reddish brown sandy fine to coarse subangular granite GRAVEL with rare roots. Sand is fine to coarse. (SUBBASE)
					0.30	36.68		
		0.40	D		(0.17)			Orange brown slightly clayey silty very gravelly fine to medium SAND. Gravel consists of fine to coarse subrounded to subangular concrete brick flint and sandstone. (MADE GROUND)
					0.47	36.51		
					(0.53)			Black and brown silty very gravelly fine to medium SAND. Gravel consists of fine to coarse subrounded to subangular concrete brick flint and sandstone. (MADE GROUND)
		0.80	ES					
					1.00	35.98		End of Trial Pit at 1.00m

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
0.30	0.30	Stable					

Remarks

Trial pit dry and stable during and on completion of excavation.

Trial Pit Log

Project Name: Thames Valley Business Park	Client: David Lloyd Leisure Ltd	Date: 13/11/2025
Location: Reading		Co-ords: E474312.58 N174248.57
Project Number: 30799		Equipment: Hand Tools

Location Number	Location Type	Level	Logged By	Scale	Page Number
HP02	TP	37.12m AOD	AH	1:10	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth Base (m bgl) Thickness (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
					(0.07)			Block Paving.
					0.07	37.05		
					(0.10)			Light orange brown and beige very gravelly silty fine coarse SAND. Gravel consists of fine subangular to angular sandstone and flint. (MADE GROUND)
					0.17	36.95		
		0.20	ES					Orange brown and beige very silty very gravelly fine to coarse SAND with a low cobble content. Gravel consists of fine to coarse rounded to subangular brick flint granite sandstone and metal. Cobbles are subangular flint. (MADE GROUND)
					(0.13)			
					0.30	36.82		
								Orange brown slightly clayey silty gravelly fine to coarse SAND with rare pockets of very soft very sandy gravelly clay. Gravel consists of fine to coarse subrounded to subangular concrete brick flint and sandstone. (MADE GROUND)
					(0.53)			
		0.60	D					
					0.83	36.29		
		0.90	D					Very soft to soft black and orange brown very sandy very gravelly CLAY. Sand is fine to coarse. Gravel consists of fine to coarse subrounded to subangular flint and brick. (MADE GROUND)
					(0.17)			
					1.00	36.12		End of Trial Pit at 1.00m

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
0.30	0.30	Stable					

Remarks

Trial pit dry and stable during and on completion of excavation.

Trial Pit Log

Project Name: Thames Valley Business Park	Client: David Lloyd Leisure Ltd	Date: 13/11/2025
Location: Reading		Co-ords: E474324.16 N174282.82
Project Number: 30799		Equipment: Hand Tools

Location Number	Location Type	Level	Logged By	Scale	Page Number
HP03	TP	37.06m AOD	AH	1:10	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth Base (m bgl) Thickness (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
					(0.08) 0.08	36.98		Blacktop.
		0.20	ES		(0.62)			Orange brown and beige slightly silty very gravelly fine to coarse SAND with a low to medium cobble content. Gravel consists of fine to coarse subrounded to subangular flint brick sandstone concrete and plastic. Cobbles are subangular concrete. (MADE GROUND)
	▽	0.60	D		0.70	36.36		End of Trial Pit at 0.70m

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
0.30	0.30	Stable					

Remarks

Water seepage at the base of the hand pit upon completion. Standing water level at 0.69m bgl 10 minutes after observation. Hand pit terminated at 0.70m bgl due to difficulty excavating.

Trial Pit Log

Project Name: Thames Valley Business Park	Client: David Lloyd Leisure Ltd	Date: 13/11/2025
Location: Reading		Co-ords: E474274.26 N174287.00
Project Number: 30799		Equipment: Hand Tools

Location Number	Location Type	Level	Logged By	Scale	Page Number
HP04	TP	36.71m AOD	AH	1:10	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth Base (m bgl) Thickness (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
					(0.09)			Block Paving.
		0.11	D		0.09 (0.04) 0.13	36.62 36.58		Dark grey slightly sandy fine possible granite GRAVEL. Sand is fine to coarse. (SUBBASE)
		0.30	D		(0.37)			Grey very gravelly subangular limestone COBBLES. Gravel consists of medium to coarse subangular limestone. (MADE GROUND)
					0.50	36.21		End of Trial Pit at 0.50m

1

2

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
0.30	0.30	Unstable					

Remarks

Trial pit dry during and on completion of excavation. Trial pit terminated at 0.50m bgl due to pit instability.

Trial Pit Log

Project Name: Thames Valley Business Park	Client: David Lloyd Leisure Ltd	Date: 13/11/2025
Location: Reading		Co-ords: E474273.00 N174257.96
Project Number: 30799		Equipment: Hand Tools

Location Number	Location Type	Level	Logged By	Scale	Page Number
HP05	TP	37.06m AOD	AH	1:10	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth Base (m bgl) Thickness (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
					(0.10)			Dark brown beige and white clayey very sandy fine to coarse rounded to subangular flint GRAVEL. Sand is fine to coarse. (MADE GROUND)
					0.10	36.96		*Concrete obstruction at 0.10m bgl. Possible foundation.*
								End of Trial Pit at 0.10m

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
0.30	0.30	Stable					

Remarks

Trial pit dry during and on completion of excavation. Trial pit terminated at 0.10m bgl due to encountering possible concrete foundation.

Trial Pit Log

Project Name: Thames Valley Business Park	Client: David Lloyd Leisure Ltd	Date: 13/11/2025
Location: Reading		Co-ords: E474239.70 N174256.76
Project Number: 30799		Equipment: Hand Tools

Location Number	Location Type	Level	Logged By	Scale	Page Number
HP06	TP	37.06m AOD	AH	1:10	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth Base (m bgl) Thickness (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
					(0.09)			Block Paving.
					0.09	36.97		
					(0.05)			Dark grey slightly sandy fine possible granite GRAVEL. Sand is fine to coarse. (SUBBASE)
					0.14	36.92		
					(0.38)			Grey very gravelly subangular limestone COBBLES. Gravel consists of medium to coarse subangular limestone. (MADE GROUND)
		0.55	D		0.52	36.54		
					(0.08)			Orange brown silty very gravelly fine to coarse SAND. Gravel consists of fine to coarse subrounded to subangular flint and brick. (MADE GROUND)
					0.60	36.46		End of Trial Pit at 0.60m

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
0.30	0.30	Unstable					

Remarks

Trial pit dry during and on completion of excavation. Trial pit terminated at 0.60m bgl due to difficulty excavating.

Cable-Percussion Borehole Log

Project Name: Thames Valley Business Park	Client: David Lloyd Leisure Ltd	Date: 30/03/2026 - 31/03/2026
Location: Reading	Contractor:	Co-ords: E474313.21 N174265.67
Project Number: 30799	Crew Name:	Drilling Equipment: Dando 2000

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
CP101	CP	37.08m AOD	AH	1:50	Sheet 1 of 3

Well	Water Strikes	Sample and In Situ Testing			Depth Base (m bgl) Thickness (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
					(0.10)	36.98		Blacktop
		0.20	ES		0.10			Orange brown mottled beige slightly silty slightly clayey very gravelly fine to coarse SAND. Gravel consists of fine to coarse subrounded to angular brick, concrete, sandstone, flint and clinker. (SUBBASE)
		0.30 - 0.50	B		(0.30)	36.68		
		0.60	ES		0.40			
	▼	0.80 - 1.20	B		(0.40)			
		0.90	ES		0.80	36.28		
		0.90	PP	40 kPa				Orange brown and grey fine to coarse very sandy subrounded to angular brick, concrete, sandstone, flint, timber and metal GRAVEL. Sand is fine to coarse. (MADE GROUND)
					(0.70)			
		1.50 - 2.00	B		1.50	35.58		Soft dark brown mottled black gravelly very sandy CLAY with occasional decomposed roots. Gravel consists of fine to coarse flint brick and clinker. Sand is fine to coarse. (MADE GROUND)
		1.50	SPT	N=22 (4,5/7,6,5,4)				
		2.30 - 2.50	B					
		2.50 - 3.00	B					Loose black slightly clayey silty gravelly fine SAND. Gravel consists of fine to coarse subangular ash, clinker and slag. (MADE GROUND)
		2.50	SPT	N=6 (1,2/2,1,2,1)				
	▼							*Becoming loose at 2.50m bgl.*
		3.50 - 3.95	SPTL					*Becoming very loose at 3.50m bgl.*
		3.50	SPT	N=1 (1,0/0,1,0,0)				
		4.50 - 5.00	B		(6.00)			
		4.50	SPT	N=1 (1,0/0,0,1,0)				
		5.50 - 6.00	B					
		5.50	SPT	N=1 (1,0/0,1,0,0)				
	▽	7.00	D					*Soft green sandy silty CLAY observed mixed with ash at 7.00m bgl.*
		7.00 - 7.45	SPTL					
		7.00 - 7.50	B					
		7.00	SPT	N=9 (1,2/2,2,2,3)	7.50	29.58		Medium dense orange and brown fine to coarse subrounded to angular flint GRAVEL. (KEMPTON PARK GRAVEL MEMBER)
								Becoming loose at 7.50m bgl.
		8.50 - 9.00	B		(2.00)			
		8.50	SPT	N=29 (7,15/10,7,6,6)				
					9.50	27.58		Structureless CHALK composed of an off white silty sandy gravelly CLAY. Sand is fine to medium. Gravel consists of fine to coarse subangular chalk. Clasts are fine to medium weak low to medium density chalk. (SEAFORD CHALK FORMATION/NEWHAVEN CHALK FORMATION Grade Dm)
		10.00	D		(1.00)			

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation
7.50	200	7.50	200								
20.00	150	20.00	150								

Remarks

Service avoidance hand pit dug to 0.80m bgl. Groundwater strike at 7.00m bgl, standing water level recorded at 3.10m bgl after 20 minutes. Monitoring well installed to 20.00m bgl with a flush cover, targeting Chalk strata.

Cable-Percussion Borehole Log

Project Name: Thames Valley Business Park	Client: David Lloyd Leisure Ltd	Date: 30/03/2026 - 31/03/2026
Location: Reading	Contractor:	Co-ords: E474313.21 N174265.67
Project Number: 30799	Crew Name:	Drilling Equipment: Dando 2000

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
CP101	CP	37.08m AOD	AH	1:50	Sheet 2 of 3

Well	Water Strikes	Sample and In Situ Testing			Depth Base (m bgl) Thickness (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
		10.00 - 10.45	SPTL					Structureless CHALK composed of an off white silty sandy gravelly CLAY. Sand is fine to medium. Gravel consists of fine to coarse subangular chalk. Clasts are fine to medium weak low to medium density chalk. (SEAFORD CHALK FORMATION/NEWHAVEN CHALK FORMATION Grade Dm)
		10.00	SPT	N=8 (1,2/2,2,2,2)	10.50	26.58		
		11.50 - 11.95	UT					Structureless CHALK composed of an off white silty sandy fine to coarse subangular chalk GRAVEL. Sand is fine to medium. (SEAFORD CHALK FORMATION/NEWHAVEN CHALK FORMATION Grade Dc)
		13.00	D					
		13.00 - 13.45	SPTL					
		13.00	SPT	N=28 (3,4/6,7,8,7)				
		13.50 - 13.95	UT					
		14.00	D					
		15.00	D					
					(9.95)			
		16.00	D					
		16.00 - 16.45	SPTL					
		16.00	SPT	N=25 (3,5/5,5,7,8)				
		17.00	D					
		17.00 - 17.45	UT					
		18.00	D					
		19.00	D					
		19.00 - 19.45	SPTL					
		19.00	SPT	N=23 (3,7/7,5,6,5)				
		20.00	D					

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation
7.50	200	7.50	200								
20.00	150	20.00	150								

Remarks

Service avoidance hand pit dug to 0.80m bgl. Groundwater strike at 7.00m bgl, standing water level recorded at 3.10m bgl after 20 minutes. Monitoring well installed to 20.00m bgl with a flush cover, targeting Chalk strata.

Cable-Percussion Borehole Log

Project Name: Thames Valley Business Park	Client: David Lloyd Leisure Ltd	Date: 30/03/2026 - 31/03/2026
Location: Reading	Contractor:	Co-ords: E474313.21 N174265.67
Project Number: 30799	Crew Name:	Drilling Equipment: Dando 2000

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
CP101	CP	37.08m AOD	AH	1:50	Sheet 3 of 3

Well	Water Strikes	Sample and In Situ Testing			Depth Base (m bgl) Thickness (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
		20.00 - 20.45 20.00	SPTL SPT	N=44 (3,8/8,6,17,13)	20.45	16.63		Structureless CHALK composed of an off white silty sandy fine to coarse subangular chalk GRAVEL. Sand is fine to medium. (SEAFORD CHALK FORMATION/NEWHAVEN CHALK FORMATION Grade Dc) End of Borehole at 20.45m

21 22 23 24 25 26 27 28 29 30

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation
7.50 20.00	200 150	7.50 20.00	200 150								

Remarks

Service avoidance hand pit dug to 0.80m bgl. Groundwater strike at 7.00m bgl, standing water level recorded at 3.10m bgl after 20 minutes. Monitoring well installed to 20.00m bgl with a flush cover, targeting Chalk strata.

Cable-Percussion Borehole Log

Project Name: Thames Valley Business Park	Client: David Lloyd Leisure Ltd	Date: 31/03/2026 - 02/04/2026
Location: Reading	Contractor:	Co-ords: E474258.62 N174276.81
Project Number: 30799	Crew Name:	Drilling Equipment: Dando 2000

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
CP102	CP	36.78m AOD	AH	1:50	Sheet 1 of 3

Well	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth Base (m bgl) Thickness (m)	Level (m AOD)	Legend	Stratum Description
					(0.09)	36.69		Block paving.
		0.20 - 0.50	B		0.09	36.65		Dark grey slightly sandy fine angular granite GRAVEL. Sand is fine to coarse.
					(0.04)			(SUBBASE)
					0.13	36.28		
		0.70 - 1.20	B		(0.37)			Grey very gravelly subangular limestone COBBLE. Gravel consists of medium to coarse subangular limestone.
					0.50			(MADE GROUND)
					(1.00)			*Geotextile membrane observed at 0.13m bgl.*
		1.50 - 2.00	B		1.50	35.28		Orange brown silty very gravelly fine to coarse SAND. Gravel consists of fine subangular brick and flint.
		1.50	SPT	N=10 (2,2/2,3,3,2)				(MADE GROUND)
		1.75	PP	50 kPa				*Geotextile membrane observed at 0.60m bgl.*
		2.00 - 2.50	B					Black slightly clayey silty gravelly fine SAND. Gravel consists of fine to coarse subangular ash and clinker.
	▼	2.25	PP	15 kPa				(MADE GROUND)
		2.50 - 3.00	B		(2.00)			
		2.50	SPT	N=7 (1,1/1,2,2,2)				
	▽							
		3.50 - 4.00	B		3.50	33.28		Medium dense orange brown very sandy fine to coarse rounded to subangular flint GRAVEL. Sand is fine to coarse.
		3.50	SPT	N=13 (2,2/3,4,3,3)				(KEMPTON PARK GRAVEL MEMBER)
		4.50 - 5.00	B					
		5.50 - 6.00	B					
		5.50	SPT	N=17 (2,3/3,4,4,6)				
					(5.00)			
		7.00 - 7.50	B					
		7.00	SPT	N=40 (3,6/7,15,10,8)				*Becoming dense at 7.00m bgl.*
	▼	8.50 - 9.00	B		8.50	28.28		Structureless CHALK composed of an off white silty fine to coarse subangular flint and chalk GRAVEL. Sand is fine to medium.
		8.50	SPT	N=12 (2,2/3,3,3,3)				(SEAFORD CHALK FORMATION/NEWHAVEN CHALK FORMATION Grade Dc)
		10.00 - 10.45	SPTL					

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation
4.50	200	4.50	200								
20.00	150	20.00	150								

Remarks

Service avoidance hand pit dug to 1.20m bgl. Groundwater strike at 3.20m bgl rising to 2.20m bgl after 20 minutes, sealed with casing. Dual monitoring wells installed; to 10.00m bgl targeting Kempton Park Gravel Member and 20.00m bgl targeting Chalk strata. Both with a single flush cover.

Cable-Percussion Borehole Log

Project Name: Thames Valley Business Park	Client: David Lloyd Leisure Ltd	Date: 31/03/2026 - 02/04/2026
Location: Reading	Contractor:	Co-ords: E474258.62 N174276.81
Project Number: 30799	Crew Name:	Drilling Equipment: Dando 2000

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
CP102	CP	36.78m AOD	AH	1:50	Sheet 2 of 3

Well	Water Strikes	Sample and In Situ Testing			Depth Base (m bgl) Thickness (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
		10.00	SPT	N=7 (2,1/2,2,1,2)				Structureless CHALK composed of an off white silty fine to coarse subangular flint and chalk GRAVEL. Sand is fine to medium. (SEAFORD CHALK FORMATION/NEWHAVEN CHALK FORMATION Grade Dc)
		10.50 - 11.00	B					
		11.50 - 11.95	SPTL					
		11.50	SPT	N=17 (2,2/3,6,5,3)				
		12.00	D					
		13.00	D					
		13.00 - 13.45	SPTL					
		13.00	SPT	N=15 (4,6/1,1,6,7)				
		14.00	D					
		14.00	SPT	N=39 (4,7/8,8,10,13)				
		14.50 - 15.00	B		(11.95)			
		16.00	D					
		16.00 - 16.45	SPTL					
		16.00	SPT	N=28 (2,4/6,7,7,8)				
		17.00	D					
		17.00 - 17.45	UT					
		18.00	D					
		19.00	D					
		19.00 - 19.45	SPTL					
		19.00	SPT	N=42 (7,10/8,10,12,12)				
WW		20.00	D					

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation
4.50 20.00	200 150	4.50 20.00	200 150								

Remarks

Service avoidance hand pit dug to 1.20m bgl. Groundwater strike at 3.20m bgl rising to 2.20m bgl after 20 minutes, sealed with casing. Dual monitoring wells installed; to 10.00m bgl targeting Kempton Park Gravel Member and 20.00m bgl targeting Chalk strata. Both with a single flush cover.

Cable-Percussion Borehole Log

Project Name: Thames Valley Business Park	Client: David Lloyd Leisure Ltd	Date: 31/03/2026 - 02/04/2026
Location: Reading	Contractor:	Co-ords: E474258.62 N174276.81
Project Number: 30799	Crew Name:	Drilling Equipment: Dando 2000

Borehole Number	Hole Type	Level	Logged By	Scale	Page Number
CP102	CP	36.78m AOD	AH	1:50	Sheet 3 of 3

Well	Water Strikes	Sample and In Situ Testing			Depth Base (m bgl) Thickness (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
		20.00 - 20.45 20.00	SPTL SPT	N=48 (4,6/10,10,12,16)	20.45	16.33		Structureless CHALK composed of an off white silty fine to coarse subangular flint and chalk GRAVEL. Sand is fine to medium. (SEAFORD CHALK FORMATION/NEWHAVEN CHALK FORMATION Grade Dc) End of Borehole at 20.45m

21 22 23 24 25 26 27 28 29 30

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation
4.50 20.00	200 150	4.50 20.00	200 150								

Remarks

Service avoidance hand pit dug to 1.20m bgl. Groundwater strike at 3.20m bgl rising to 2.20m bgl after 20 minutes, sealed with casing. Dual monitoring wells installed; to 10.00m bgl targeting Kempton Park Gravel Member and 20.00m bgl targeting Chalk strata. Both with a single flush cover.

Windowless Sampling Borehole Log

Project Name: Thames Valley Business Park	Client: David Lloyd Leisure Ltd	Date: 01/04/2026
Location: Reading		Co-ords: E474270.88 N174277.62
Project Number: 30799		Drilling Equipment: Dart 310

Borehole Number	Hole Type	Ground Level	Logged By	Scale	Page Number
WS101	WS	36.83m AOD	AH	1:40	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth Base (m bgl) (Thickness) (m)	Level (m AOD)	Legend	Stratum Description	Scale
					(0.10)	36.73		Blacktop.	
					0.10			Very dense light orange brown slightly silty very gravelly fine to coarse SAND. Gravel consists of fine to coarse subrounded to subangular brick, flint, concrete and chalk fragments. (SUBBASE)	
		0.30	ES		(0.30)				
		0.30	SPT	50 (25 for 60mm/50 for 50mm)	0.40	36.43			
		0.90	ES		(0.90)			Stiff becoming firm dark brown and black gravelly very sandy CLAY. Sand is fine to coarse. Gravel consists of fine to coarse subangular to angular brick and flint. (MADE GROUND)	1
		1.00	PP	100 kPa					
		1.00	SPT	N=29 (1,2/5,11,8,5)					
		1.40	D		1.30	35.53		Medium dense orange brown clayey very sandy fine to coarse subrounded to angular flint GRAVEL. Sand is fine to coarse. (MADE GROUND)	
					(0.25)				
		1.60	PP	60 kPa	1.55	35.28			
		1.70	D		(0.25)				
		1.75	PP	40 kPa	1.80	35.03		Soft to firm greenish brown gravelly very sandy CLAY. Sand is fine to coarse. Gravel consists of fine to medium rounded to subrounded flint. (MADE GROUND)	
		2.00	SPT	N=31 (6,8/8,8,8,7)					2
		2.30	ES					Dense black silty fine SAND. (MADE GROUND)	
		2.50	D					Fibrous material observed at 1.80m bgl.	
		3.00	SPT	N=0 (0,0/0,0,0,0)				Becoming clayey at 3.00m bgl.	3
					(3.05)			Becoming very loose at 3.00m bgl, SPT penetrated under self-weight.	
								Becoming gravelly and damp at 3.70m bgl.	
		4.00	SPT	N=0 (0,0/0,0,0,0)				Very loose at 4.00m bgl, SPT penetrated under self-weight.	4
					4.85	31.98			
		5.00	SPT	N=5 (1,0/1,1,2,1)	(0.15)	31.83		Very soft greenish brown gravelly very sandy CLAY. Sand is fine to coarse. Gravel consists of fine to medium subrounded to subangular flint. (MADE GROUND)	5
					5.00				
					(0.50)			Loose black silty fine SAND. (MADE GROUND)	
					5.50	31.33		Very soft dark green gravelly very sandy CLAY. Sand is fine to medium. Gravel consists of fine to medium rounded to subrounded flint. (MADE GROUND)	
		5.60	PP	5 kPa					
		5.70	ES						
		5.80	PP	0 kPa					
		5.90	D		(0.95)				6
		6.00	PP	0 kPa					
		6.00	SPT	N=1 (1,0/0,1,0,0)					
					6.45	30.38		End of Borehole at 6.45m	
									7
									8

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Service avoidance hand pit dug to 0.50m bgl. Groundwater strike at 3.70m bgl, water level recorded at 2.00m bgl 15 minutes after completion. Borehole cased to 6.00m bgl. Monitoring well installed to 5.80m bgl with a flush cover, targeting Made Ground strata.

Windowless Sampling Borehole Log

Project Name: Thames Valley Business Park	Client: David Lloyd Leisure Ltd	Date: 01/04/2026
Location: Reading		Co-ords: E474311.43 N174256.40
Project Number: 30799		Drilling Equipment: Dart 310

Borehole Number	Hole Type	Ground Level	Logged By	Scale	Page Number
WS102	WS	37.13m AOD	AH	1:40	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth Base (m bgl) (Thickness) (m)	Level (m AOD)	Legend	Stratum Description	Scale
					(0.10)	37.03		Blacktop.	
		0.20	ES		0.10			Dense [est] light orange brown and beige slightly silty very gravelly fine to coarse SAND. Gravel consists of fine to coarse subrounded to subangular flint, brick, concrete and sandstone. (SUBBASE)	
					(0.50)				
		0.70	PP	70 kPa	0.60	36.53		Firm dark grey and black gravelly very sandy CLAY. Sand is fine to coarse. Gravel consists of fine to coarse subangualr flint and brick. (MADE GROUND)	
		0.80	ES						
		0.90	PP	90 kPa					
		1.00	SPT	N=37 (1,1/3,7,16,11)	(0.80)				1
		1.10	D						
					1.40	35.73		Medium dense light orange brown and beige slightly silty very gravelly fine to coarse SAND. Gravel consists of fine to coarse subrounded to subangular flint brick concrete and sandstone. (MADE GROUND)	
		1.60	ES		(0.30)				
					1.70	35.43		Firm dark grey and black gravelly very sandy CLAY. Sand is fine to coarse. Gravel consists of fine to coarse subangualr flint and brick. (MADE GROUND)	
		1.90	PP	80 kPa	(0.30)				
		2.00	SPT	N=14 (2,4/4,2,3,5)	2.00	35.13		Medium dense dark grey and black slightly clayey slightly silty slightly gravelly fine SAND. Gravel consists of fine rounded to subrounded flint. (MADE GROUND)	2
		2.20	ES						
		3.00	SPT	N=4 (0,2/1,0,1,2)				Recovered as damp from 3.00m bgl.	3
		3.20	D					Becoming dark greyish from 3.00m to 3.30m bgl. Becoming very loose at 3.00m bgl.	
W		4.00	SPT	N=0 (0,0/0,0,0,0)					4
					(4.45)				
		5.00	SPT	N=0 (0,0/0,0,0,0)					5
		6.00	SPT	N=0 (0,0/0,0,0,0)					6
					6.45	30.68		End of Borehole at 6.45m	7
									8

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Borehole collapsed to 4.00m bgl upon completion. No groundwater encountered during drilling. Monitoring well installed to 4.00m bgl with a flush cover, targeting Made Ground strata.

Windowless Sampling Borehole Log

Project Name: Thames Valley Business Park	Client: David Lloyd Leisure Ltd	Date: 01/04/2026
Location: Reading		Co-ords: E474299.34 N174259.90
Project Number: 30799		Drilling Equipment: Dart 310

Borehole Number	Hole Type	Ground Level	Logged By	Scale	Page Number
WS103	WS	37.10m AOD	FH	1:40	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth Base (m bgl) (Thickness) (m)	Level (m AOD)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
					(0.10)	37.00		Loose [est] brown fine to medium subangular to subrounded flint GRAVEL. (MADE GROUND)	
		0.15	ES		0.10				
					(0.20)	36.80		Firm brown gravelly very sandy CLAY. Sand is fine to coarse. Gravel consists of fine to coarse subangular to angular flint, brick and chalk fragments. (MADE GROUND)	
		0.40	PP	100 kPa	0.30				
		0.45	ES						
		0.60	PP	200 kPa					
		0.70	D						
		0.80	PP	150 kPa	(1.10)				
		1.00	PP	105 kPa				Firm dark grey sandy gravelly CLAY. Sand is fine to coarse. Gravel consists of fine to coarse subangular to angular flint and brick. (MADE GROUND)	1
		1.00	SPT	N=27 (1,2/2,6,9,10)					
					1.40	35.70		Cobble of angular brick at 0.30m bgl.	
		1.50	ES		(0.30)				
					1.70	35.40		Medium dense [est] orange brown very sandy fine to coarse subrounded to angular flint GRAVEL. Sand is fine to coarse. (MADE GROUND)	
		1.80	D		(0.30)				
		1.80	PP	40 kPa				Recovered as damp from 1.40m bgl.	2
		2.00	PP	40 kPa	2.00	35.10			
		2.00	SPT	N=19 (3,3/5,4,4,6)	(0.30)				
		2.30	ES		2.30	34.80		Firm brown sandy gravelly CLAY. Sand is fine to coarse. Gravel consists of fine to coarse subrounded to subangular flint. (MADE GROUND)	
		2.60	ES		(0.70)				
					3.00	34.10		Medium dense orange brown very sandy fine to coarse subrounded to angular flint GRAVEL. Sand is fine to coarse. (MADE GROUND)	3
								Medium dense dark grey and black slightly clayey slightly silty slightly gravelly fine SAND. Gravel consists of fine rounded to subrounded flint. (MADE GROUND)	
								Wood fragments observed at 2.30m bgl.	
								End of Borehole at 3.00m	4
									5
									6
									7
									8

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Groundwater strike at 1.60m bgl. Borehole terminated at 3.00m bgl due to instability. Borehole redrilled to 3.50m bgl and collapsed to 1.80m bgl upon completion. Monitoring well installed to 1.80m bgl with flush cover, targeting Made Ground strata.

Windowless Sampling Borehole Log

Project Name: Thames Valley Business Park	Client: David Lloyd Leisure Ltd	Date: 01/04/2026
Location: Reading		Co-ords: E474306.17 N174271.14
Project Number: 30799		Drilling Equipment: Dart 310

Borehole Number	Hole Type	Ground Level	Logged By	Scale	Page Number
WS104	WS	37.03m AOD	AH	1:40	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing Depth (m)	Type	Results	Depth Base (m bgl) (Thickness) (m)	Level (m AOD)	Legend	Stratum Description
					(0.10)	36.93		Blacktop.
					0.10			Light orange brown and beige slightly silty very gravelly fine to coarse SAND. Gravel consists of fine to coarse subrounded to angular flint, brick, concrete, sandstone and glass. (SUBBASE)
		0.30	ES		(0.34)			
		0.40	SPT	N=29 (15,10/10,9,5,5)	0.44	36.59		
					(0.56)			Firm dark grey and black gravelly very sandy CLAY. Sand is fine to coarse. Gravel consists of fine to coarse subangular to angular flint brick and glass. (MADE GROUND)
		0.90	PP	170 kPa				
		1.00	ES		1.00	36.03		
		1.00	SPT	N=40 (3,4/3,15,12,10)				
		1.30	D		(0.66)			
		1.50	PP	10 kPa				Very soft dark greenish brown sandy silty gravelly CLAY. Sand is fine to coarse. Gravel consists of fine to medium flint. (MADE GROUND)
	▼				1.66	35.37		
	▽				(0.24)			
					1.90	35.13		Medium dense orange brown and beige very sandy fine to coarse subrounded to angular flint chalk and sandstone GRAVEL. Sand is fine to coarse. (MADE GROUND)
		2.00	SPT	N=15 (4,4/3,3,4,5)				
					(0.70)			
					2.60	34.43		Medium dense dark greenish brown slightly clayey very sandy fine to coarse subrounded to subangular flint GRAVEL. Sand is fine to coarse. (MADE GROUND)
		2.80	D		(0.40)			
		3.00	SPT	N=6 (1,2/1,1,2,2)	3.00	34.03		Loose black slightly clayey silty fine SAND. (MADE GROUND)
								End of Borehole at 3.00m

Scale: 1, 2, 3, 4, 5, 6, 7, 8

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Groundwater strike at 2.00m bgl, water level at 1.72m bgl 10 minutes on completion. Borehole collapsed to 2.00m bgl during drilling. Borehole terminated at 3.00m bgl due to instability. Borehole backfilled with arisings.

Windowless Sampling Borehole Log

Project Name: Thames Valley Business Park	Client: David Lloyd Leisure Ltd	Date: 02/04/2026
Location: Reading		Co-ords: E474310.88 N174281.64
Project Number: 30799		Drilling Equipment: Dart 310

Borehole Number	Hole Type	Ground Level	Logged By	Scale	Page Number
WS105	WS	36.94m AOD	AH	1:40	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth Base (m bgl) (Thickness) (m)	Level (m AOD)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
					(0.10) 0.10	36.84		Blacktop.	
		0.30	ES		(0.30) 0.40	36.54		Dense [est] orange brown and beige slightly silty very gravelly fine to coarse SAND. Gravel consists of fine to coarse subrounded to angular brick, flint, concrete, sandstone and metal. (SUBBASE)	
		0.60	ES		(0.30) 0.70	36.24		Dense [est] dark orange brown silty very gravelly fine to coarse SAND. Gravel consists of fine to coarse subrounded to angular brick and flint. (MADE GROUND)	1
W		1.00	ES		(0.30) 1.00	35.94		Firm to stiff dark orange brown and black very sandy gravelly CLAY. Sand is fine to coarse. Gravel consists of fine to coarse subrounded to angular brick, flint, glass and wood. (MADE GROUND)	2
		1.00	SPT	50 (2,11/50 for 85mm)				End of Borehole at 1.00m	3
									4
									5
									6
									7
									8

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Service avoidance hand pit dug to 0.50m bgl. Borehole terminated at 1.00m bgl due to refusal. Monitoring well installed to 1.00m bgl with a flush cover, targeting Made Ground strata.

Windowless Sampling Borehole Log

Project Name: Thames Valley Business Park	Client: David Lloyd Leisure Ltd	Date: 02/04/2026
Location: Reading		Co-ords: E474312.88 N174291.54
Project Number: 30799		Drilling Equipment: Dart 310

Borehole Number	Hole Type	Ground Level	Logged By	Scale	Page Number
WS106	WS	36.90m AOD	AH	1:40	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth Base (m bgl) (Thickness) (m)	Level (m AOD)	Legend	Stratum Description	Scale
					(0.08)	36.82		Block paving.	
					0.08			Loose grey fine to medium subangular granite GRAVEL. (SUBBASE)	
					(0.22)	36.60			
					0.30			Medium dense grey medium to coarse subangular limestone GRAVEL. (MADE GROUND)	
					(0.30)	36.30			
		0.80	ES		0.60			Geotextile membrane observed at 0.30m bgl.	
					(0.30)				
					0.90	36.00		Loose orange brown and beige silty very gravelly fine to coarse SAND. Gravel consists of fine to medium subrounded to subangular flint and brick. (MADE GROUND)	1
		1.30	ES		(0.75)			Geotextile membrane observed at 0.82m bgl.	
		1.50	D						
		1.70	PP	0 kPa	1.65	35.25		Loose beige slightly silty very gravelly fine to coarse SAND. Gravel consists of fine to coarse subrounded to subangular flint. (MADE GROUND)	
		1.80	ES		(0.25)				
		1.80	PP	10 kPa	1.90	35.00		Grey medium to coarse subangular flint GRAVEL observed from 1.30m to 1.40m bgl.	2
		2.50	D					Recovered as damp from 1.50m bgl.	
		2.80	ES					Soft beige very sandy CLAY. Sand is fine to medium. (MADE GROUND)	
								Loose becoming very loose black slightly clayey slightly gravelly silty fine SAND. Gravel consists of fine to medium subangular clinker and possible slag. (MADE GROUND)	3
		3.50	ES					Recovered as damp from 2.00m - 2.50m bgl.	
								Recovered as damp from 3.60m bgl.	
					(4.10)				4
								Becoming very silty from 4.10m - 4.20m bgl.	
								Very soft dark grey mottled dark brown very silty very sandy CLAY observed from 4.20m - 4.68m bgl.	
		4.50	ES					Becoming very silty from 4.60m bgl.	5
		5.50	ES						
W					6.00	30.90		End of Borehole at 6.00m	6
									7
									8

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Drilled in same position as DP103 - SPTs not carried out. Borehole remained dry and stable on completion. Monitoring well installed to 5.90m bgl with a flush cover, targeting Made Ground strata.

Windowless Sampling Borehole Log

Project Name: Thames Valley Business Park	Client: David Lloyd Leisure Ltd	Date: 02/04/2026
Location: Reading		Co-ords: E474269.93 N174238.71
Project Number: 30799		Drilling Equipment: Dart 310

Borehole Number	Hole Type	Ground Level	Logged By	Scale	Page Number
WS107	WS	37.17m AOD	FH	1:40	Sheet 1 of 1

Well	Water Strikes	Sample and In Situ Testing			Depth Base (m bgl) (Thickness) (m)	Level (m AOD)	Legend	Stratum Description	Scale
		Depth (m)	Type	Results					
		0.05	ES		(0.10) 0.10	37.07		Grass over dark brown slightly clayey slightly gravelly sandy TOPSOIL with occasional roots and rootlets. Gravel consists of fine to coarse subangular to angular flint concrete and chalk fragments.	
		0.50	ES		(0.50) 0.60	36.57		Dense [est] light grey very gravelly fine to coarse SAND with a low cobble content. Gravel consists of fine to coarse subangular to angular flint, brick, concrete and chalk fragments. Cobbles are subangular concrete. (MADE GROUND)	
W		1.00	ES		(0.50)				1
		1.10	SPT	N=50 (9,10/50 for 235mm)	1.10	36.07		Very dense light brown very gravelly fine to coarse SAND with a low cobble content. Gravel consists of fine to coarse subrounded to angular flint and chalk. Cobbles are subangular flint and concrete. (MADE GROUND)	
								End of Borehole at 1.10m	2
									3
									4
									5
									6
									7
									8

Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation

Remarks

Service avoidance hand pit dug to 1.10m bgl. Position terminated at 1.10m bgl due to hand pit and borehole refusal. Monitoring well installed to 1.10m bgl with flush cover, targeting Made Ground strata. Borehole drilled in the same location as DP104.

Appendix C

Gas Monitoring Results

Gas Monitoring Results

Project: David Lloyd, Reading
Project Ref: 30799
Date: 01/06/2026

Revision:

Notes:
1. Monitoring equipment used Geotech GA5000

T: 01604 781811
E: mail@jppgroup.co.uk
W: www.jppgroup.co.uk

Borehole ref.	Date	Atmospheric pressure mb	Temp. °C	Weather conditions	Differential pressure (mbar)	Flow l/hr		Methane %v/v		LEL (%)		Carbon dioxide %v/v		Oxygen %v/v		Depth to water (m)	Top of response zone (m)	Base of response zone (m)	Notes/observations
						Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady	Min	Steady				
WS101	06/05/2026	1006/1007	11	Overcast/sunny	0.2	0.0	0.0	0.3	0.3	6.0	6.0	0.2	0.2	5.9	5.9	1.60	1.00	5.85	Balance: 93.6%
WS102	06/05/2026	1006/1007	11	Overcast/sunny	0.1	0.0	0.0	1.9	1.8	80.0	76.0	0.2	0.1	0.4	0.4	1.73	1.00	3.90	Balance: 96.7%
WS103	06/05/2026	1006/1007	11	Overcast/sunny	-0.1	0.0	0.0	0.3	0.2	8.0	4.0	0.6	0.6	19.1	19.2	Dry	0.50	1.60	Balance: 80.0%
WS105	06/05/2026	1006/1007	11	Overcast/sunny	0.0	0.0	0.0	1.9	1.9	18.0	8.0	0.2	0.1	15.2	15.2	Dry	0.50	1.00	Balance: 82.8%
WS106	06/05/2026	1006/1007	11	Overcast/sunny	-0.2	0.0	0.0	0.3	0.3	6.0	6.0	1.3	0.9	15.0	16.1	1.91	1.90	5.88	Balance: 82.7%
WS107	06/05/2026	1006/1007	11	Overcast/sunny	0.0	0.0	0.0	0.3	0.3	6.0	6.0	0.1	0.1	20.0	20.6	Dry	0.50	1.15	Balance: 79.0%
WS101	18/05/2026	1005	10	Overcast/Drizzl	0.0	0.0	0.0	0.3	0.3	6.0	6.0	0.3	0.3	4.8	5.8	1.68	1.00	5.85	Balance: 93.7%
WS102	18/05/2026	1005	10	Overcast/Drizzl	0.0	0.0	0.0	4.0	3.8	80.0	76.0	0.2	0.1	0.1	0.1	1.84	1.00	3.90	Balance: 95.0%
WS103	18/05/2026	1005	10	Overcast/Drizzl	0.0	0.1	0.0	0.4	0.2	8.0	4.0	1.0	1.0	18.0	18.0	Dry	0.50	1.60	Balance: 80.8%
WS105	18/05/2026	1005	10	Overcast/Drizzl	-0.2	-0.1	0.0	0.9	0.4	18.0	8.0	0.1	0.0	3.2	19.3	Dry	0.50	1.00	Balance: 80.3%
WS106	18/05/2026	1005	10	Overcast/Drizzl	-0.1	0.1	0.1	0.3	0.3	6.0	6.0	1.2	0.9	15.4	17.5	1.99	1.90	5.88	Balance: 81.3%
WS107	18/05/2026	1005	10	Overcast/Drizzl	0.1	0.1	0.1	0.3	0.3	6.0	6.0	0.2	0.1	20.8	21.0	Dry	0.50	1.15	Balance: 78.6%
WS101	01/06/2026	1008	20	Raining	0.12	0.0	0.0	0.4	0.4	8.0	8.0	0.2	0.2	3.7	3.7	1.74	1.00	5.78	Balance 95.6%
WS102	01/06/2026	1008	20	Raining	0.32	0.1	0.1	6.9	5.1	138.0	102.0	0.8	0.8	0.2	0.2	1.89	1.00	3.89	Balance 94.0%
WS103	01/06/2026	1008	20	Raining	0.05	0.0	0.0	0.7	0.3	14.0	6.0	1.4	1.4	15.0	15.0	1.59	1.00	1.60	Balance 83.2%
WS105	01/06/2026	1008	20	Raining	0.18	0.0	0.0	4.0	0.8	80.0	16.0	0.1	0.0	14.0	18.9	Dry	0.50	1.00	Balance 80.3%
WS106	01/06/2026	1008	20	Raining	0.04	0.0	0.0	0.4	0.4	8.0	8.0	1.8	1.2	17.1	17.1	1.98	1.90	5.84	Balance 81.2%
WS107	01/06/2026	1008	20	Raining	0.26	0.0	0.0	0.4	0.4	8.0	8.0	0.5	0.5	20.4	20.4	Dry	0.50	1.15	Balance 78.7%

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