



TIER 1 CONTAMINATED LAND PRELIMINARY RISK ASSESSMENT

400 THAMES VALLEY PARK DR, EARLEY, READING RG6 1PT

REFERENCE: P1202-02/R1/V2

REPORT PREPARED FOR: TVP INVESTMENTS LIMITED

REPORT PREPARED BY: EPS CONSULTING

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PLANNING | DUE DILIGENCE | CONSTRUCTION



QUALITY ASSURANCE

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CONTACT DETAILS

Head Office:

Environment House

39 East Drive

Carshalton Beeches

SM5 4PA

London Office:

Build Studios

203 Westminster Bridge Road

London

SE1 7FR

www.epsconsulting.co.uk





EXECUTIVE SUMMARY	
Site Address	400 Thames Valley Park Dr, Earley, Reading, RG6 1PT
National Grid Reference	SU7417573960
Current Site Use	Office building with associated car parking and landscaping.
Proposed Development	Two-storey upwards extension providing 32 residential units on the 4th and 5th floor with associated plant and car and cycle parking.
Site History	Earliest mapping in c. 1872 shows the site occupied by 'Brick Kilns' and 'Brick Field' until c. 1912 when the site is redeveloped as 'Kiln Farm'. Around the mid-20th century the north of the site is redeveloped as a 'Works' and 'Engineering Works', and in the late 20th century a 'Metal Casement Factory' is constructed in the south. In the early 1990's all structures on site are demolished and by 2003 the current building, and car park are constructed. A railway has been present just to the south of the site from earliest available mapping until present day. An 'Electricity Works' (later 'Power Station') was historically present to the north-east of the site, and a large factory was also historically present to the west of the site.
Environmental Setting	Geology and Hydrogeology ▶ Superficial: Kempton Park Gravel Formation (Secondary A Aquifer); ▶ Bedrock: Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (Principal Aquifer); ▶ Site is underlain by Berkshire Downs Chalk WFD groundwater body; ▶ No active potable groundwater abstractions within 2km; and ▶ The site is not located within a groundwater source protection zone (SPZ). Hydrology ▶ A small pond is located within the north of the site, with a larger pond located just to the north of the site; and ▶ The site is located within the WFD catchment of the River Thames (Reading to Cookham), which is located c. 380m north-west of the site at the closest point. Radon ▶ No radon protection measures are required for new buildings. Sensitive Land Uses ▶ No significant sensitive land uses are located in close proximity to the site.



Conceptual Site Model (CSM)	Potential “Active” Sources On site ▶ Historic tank – indicated to be present on site between 1956 and 1988; ▶ Historic railway sidings – present within the north of the site between 1965 and 1971; ▶ Historic brick field / works – occupying the site until c. 1912; ▶ Historic works / engineering works – located within the north of the site until c. 1993; ▶ Historic metal casement factory – located within the south of the site until c. 1993; and ▶ Made ground – associated with the demolition of former structures on site. Off site ▶ Railway sidings – located adjacent to the south; ▶ Historic factories – c. 40m west of the site; ▶ Historic electricity works / power station – located to the north-east of the site until c. 1993; and ▶ Electricity substations – the closest historically located c. 10m south-east of the site between 1973 and 1988. Potential Pathways ▶ Migration of mobile contaminants on or off site via services, sewers and manmade conduits; ▶ Direct contact, ingestion and inhalation of contaminants on site; ▶ Migration of mobile contaminants into groundwater and transport into surface waters; and ▶ Migration of ground gas and vapours into buildings. Potential Receptors Human Receptors ▶ Future site users; and ▶ Construction workers. Controlled Water Receptors ▶ Secondary A Aquifer contained within the superficial deposits underlying the site; ▶ Principal Aquifer contained within the chalk bedrock underlying the site; and ▶ Ponds located within the north of the site, and c. 10m to the north of the site.
Conclusions	Overall, the preliminary risk classification for onsite risks are considered to be: ▶ Very low to low in terms of human health; and ▶ Low for controlled waters. The preliminary risk classification for off-site risks is considered to be: ▶ Low in terms of human health.



**Recommendations**

Based on the above conclusions, it is recommended that a proportionate programme of site investigation be undertaken in order to establish the presence or absence of contamination and to enable a quantitative assessment of the associated environmental risks.

It should be noted that should groundworks be required, the potential risk to human health, particularly to construction workers, will be increased.

This executive summary forms part of a report prepared by eps consulting and provides an overview of the key findings and conclusions. This summary should not be treated as an independent document.





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1.0 INTRODUCTION

1.1 Background

eps consulting (EPS) has been commissioned by TVP Investments Ltd ('the Applicant') to undertake a Tier 1 Contaminated Land Preliminary Risk Assessment at 400 Thames Valley Park Dr, Earley, Reading RG6 1PT ('the site').

A Site Location and Red Line Boundary Plan is presented as Figure 1 within Appendix I.

1.2 Proposed Development

This report has been prepared in support a Prior Approval Application under Schedule 2, Part 20, Class AA (new dwellinghouses on detached buildings in commercial or mixed use) of the General Permitted Development Order 2015 for a two-storey upwards extension providing 32 residential units on the 4th and 5th floor with associated plant and car and cycle parking.

A Proposed Fourth and Fifth Floor Plan is presented as Figure 2 within Appendix I.

1.3 Objectives

The objective of this report is to assess potential key development constraints from a contaminated land in relation to the development proposals as detailed above. A Conceptual Site Model (CSM) will be developed to inform any subsequent site investigations.

This report has been drafted in accordance with Land Contamination Risk Management (LCRM) guidance produced by the Environment Agency dated October 2020 (updated July 2023).

1.4 Sources of Information

Background information was sought from the following sources:

- ▶ Groundsure: Enviro+Geo Insight (reference: GS-DS6-9FM-UNY-6W3, dated 14th May 2024);
- ▶ Groundsure Insights: County Series Historical mapping dated 1872 to 2024 (reference: GS-17C-L3D-RSF-OYH). A selection of historical maps pertinent to this report are reproduced in Section 3.1;
- ▶ Online planning records held by Wokingham Borough Council (WBC);
- ▶ Environment Agency Groundwater Vulnerability Map;
- ▶ Radon: Guidance on protective measures for new buildings (BRE Document BR 211, 2015) and HPA Indicative Radon Atlas for England and Wales);
- ▶ British Geological Survey Online GeoIndex tool;
- ▶ Sphere25: Planning Overview (dated 19th April 2024); and
- ▶ Rohacs Architects: Existing and Proposed Site Plans (dated, 22nd April 2024).



1.5 Confidentiality

EPS has prepared this report solely for the use of the Applicant and those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed. Should any third party wish to use or rely upon the contents of the report, written approval must be sought from EPS. A charge may be levied against such approval.

1.6 Limitations

The full limitations of this report are presented in Appendix II and within EPS's fee proposal letter dated 22nd April 2024 (ref. P1202/240417/P1).





2.0 SITE SETTING

2.1 Site Details

The site is approximately 0.91ha in size and located to the east of Shepherds House Lane, within Thames Valley Park, Reading, at National Grid Reference (SU7417573960). The site is situated at between c. 43m (in the south-east) and c. 42m (in the north-west) metres above sea level.

2.2 Current Site Use

At the time of the walkover undertaken on 9th May 2024, the site comprised a brick built four storey building (Regus House), with associated car and bicycle parking and landscaping. It was not possible to access the building during the walkover, however it was understood to comprise office space. A small pond surrounded by grass, vegetation and trees was present within the north of the site. The south of the site was occupied by car parking surfaced with block paving. No significant visual or olfactory evidence of potential contamination was observed.

Vehicular and pedestrian access to the site could be made within the north-west from Shepherds House Lane.

A selection of site photographs is presented in Appendix IV.

2.3 Surrounding Area

The surrounding land uses are summarised below in Table 2.3.

Table 2.3 Summary of Surrounding Land Uses

Direction	Land Use
North	Commercial (Thames Valley Park)
East	Commercial (Thames Valley Park)
South	Railway with residential and commercial beyond
West	Commercial (Thames Valley Park)





3.0 SITE HISTORY

3.1 On-Site Historical Development

A review of historical maps pertinent to the site are summarised in Table 3.1 below. The site boundary is represented by the blue polygon.

Table 3.1 Summary of Historical Land Uses

Map Edition	Historical Land Use	Map Extract
1872 (Scale 1:2,500)	The north of the site is occupied by 'Brick Kilns' and the south by 'Brick Fields'. A railway is shown to the south of the site, with the majority of the surrounding areas comprising open fields.	
1898-1899 (Scale 1:2,500)	The 'Brick Works' is now marked as 'disused' with the majority of the buildings within the north no longer shown. No significant changes are noted within the surrounding areas.	





Map Edition	Historical Land Use	Map Extract
1912-1913 (Scale 1:2,500)	Several structures have been constructed within the north, which is now labelled as 'Kiln Farm'. A 'Windpump' associated with 'Kiln Farm' is marked to the north-west. No significant changes to the surrounding area.	
1956 (Scale 1:1,250 partial mapping)	Site has been redeveloped, with the north of now labelled as a 'Works', and the south of labelled as 'Old Works' with several 'drains' also marked. Additional railway sidings have been constructed to the south-east. A large 'Factory' has been constructed c. 100m west. Residential houses have been constructed c. 90m south.	
1964-1965 (Scale 1:1,250)	The far north is labelled as an 'Engineering Works'. The 'Factory' to the west has been extended eastwards to c. 40m from the site. An 'Electricity Works' has been constructed c. 120m north-east, with railway sidings connected to the site.	



Map Edition	Historical Land Use	Map Extract
1973-1974 (scale 1:1,250, partial mapping)	Minor alterations have been made to the north, with the far north now labelled as a 'Building Block Works', and the north-west now labelled as a 'Engineering Works'. The south has been developed as a 'Metal Casement Factory', with an associated Electricity Substation' marked just to the south-east. The 'Factory' to the west is also now labelled as a 'Metal Casement Factory'. The 'Electricity Works' to the north-east is now labelled as a 'Power Station'.	
1993-1995 (scale 1:1,250)	All previous structures on site have been demolished. The 'Factories' to the west and the 'Power Station' to the east have also been demolished. A 'Works' and several 'Warehouses' have been constructed from c. 100m to the south-west.	
2003 (scale 1:1,250)	The site now reflects the current configuration with a building and pond in the north and a car park in the south. The areas to the west, north and east of the site have been redeveloped and reflect the current configuration. 'Electricity Sub Stations' are shown c. 40m west, c. 50m east and c. 100m east.	

A review of potentially contaminative land uses identified on historical Ordnance Survey maps and within the environmental database within a 250m radius of the site are summarised below as Table 3.2.



**Table 3.2 Summary of Potentially Contaminative Off-Site Historical Land Uses within 250m**

Surrounding Feature	Distance (m)	Dates	Direction
Unspecified Tank	0 (nearest)	1956-1988	N/A
Disused Brickworks	0	1898	N/A
Unspecified Factory	0 (nearest)	1989	N/A
Unspecified Works	0 (nearest)	1977	N/A
Railway Sidings	0	1989	N/A
Wind Pump	1	1933	North-west
Electricity Substation	10 (nearest)	1973 - 1988	South-east
Power Station	30	1977	North
Nursery	55	1913	South
Unspecified Pits	160	1962-1994	South-east
Railway Building	240	1989 - 1994	East

3.2 Recent Industrial Land Uses

A review of potentially contaminative recent industrial land uses identified within the environmental database within a 250m radius of the site are summarised below as Table 3.3.

Table 3.3 Summary of Potentially Contaminative Recent Industrial Land Uses within 250m

Company	Activity	Distance (m)	Direction
Print Worx	Plate Makers, Print Finishers and Type Setters	0	N/A
The Local Septic Tank Co	Waste Collection, Processing and Disposal Equipment	0	N/A
Ferro Metal & Chemical Corporation	Colours, Chemicals and Water Softeners and Supplies	0	N/A
Electricity Sub Station	Electrical Features	40 (nearest)	West
Pumping Station	Water Pumping Stations	190	North
Moog Reading Ltd	Industrial Engineers	210	South-west

Whilst several recent industrial land uses are registered on the site, it is assumed that these relate to office support and that any associated potentially contaminative activities are located off site. Furthermore, given the nature of the recent off site industrial land uses recorded and the distances from the site, these are not considered to be viable sources of contamination that could affect the site.





3.3 Planning History

EPS has undertaken a review of recent online planning records held by WBC for the site and the surrounding areas. Several planning applications are listed, however all of these relate to 'certificate of lawfulness' applications for the use of office space within the existing building for use as a taxi operator, and do not contain any environmentally pertinent information. No environmentally pertinent information was noted in relation to applications for adjacent sites either.



4.0 ENVIRONMENTAL SETTING

4.1 Geology & Hydrogeology

The British Geological Survey (BGS) memoirs and geological maps indicates the site to be underlain by the following geological sequence:

Table 4.1 Summary of Geological and Hydrogeological Data

Geological Unit	Classification	Description	Aquifer Classification	Permeability	Vulnerability
Kempton Park Gravel Formation	Superficial	Sand And Gravel	Secondary A	High to very high	High
Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (undifferentiated)	Bedrock	Chalk	Principal	Very high	High

Langley Silt Member (clay and silt) is recorded encroaching just onto the south of the site.

No historical BGS borehole records are available for the site.

The site is indicated to be underlain by Berkshire Downs Chalk WFD groundwater body, which has an overall, chemical and quantitative ratings of poor based on data from 2019.

There are no active potable groundwater abstractions recorded within 2km of the site. Two active groundwater abstractions are recorded within 2km of the site, one c. 1km and another c. 1.10km north of the site. Both are located at Deans Farm and are operated by Tarmac Aggregates Limited for general use and mineral washing.

The site is not located within a groundwater source protection zone (SPZ).

The soil leaching potential of the site is categorised is classified as high. The risk of groundwater flooding on site is moderate to high.





4.2 Geotechnical Risks

Geotechnical data presented within the environmental data search identifies the following risks on site.

Table 4.3 Summary of Data Search Information

Hazard	Designation	Comments
Shrink-Swell Clay	Negligible	Ground conditions are predominantly non-plastic, with the exception of the southern boundary where they are predominantly low.
Landslides	Very low	Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the Site should always be considered.
Ground Dissolution	Very low	Soluble rocks are present within the ground. Few dissolution features are likely to be present. Potential for difficult ground conditions or localised subsidence are at a level where they need not be considered.
Compressible Ground	Negligible	Compressible strata are not thought to occur.
Collapsible Deposits	Very Low	Deposits with the potential to collapse when loaded and saturated are unlikely to be present.
Running Sands	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.

4.3 Mining and Ground Workings

The site is recorded as being located within an area of surface ground workings. The following ground workings are indicated to be present within 250m of the site:

- ▶ Disused brick works – on site;
- ▶ New Town Brick Works surface mineral working of clay and shale - c. 20m east; and
- ▶ Unspecified pit – c. 160m south-east.

4.4 Unexploded Ordnance (UXO)

A review of online preliminary mapping (provided by Zetica) indicates that the site is located within a low risk area for UXO. However, this does not constitute a formal assessment.

4.5 Hydrology

A small pond is present within the north of the site, and a larger pond is located c. 10m to the north of the site, with further ponds located elsewhere within Thames Valley Park.





The site is located within the WFD catchment of the River Thames (Reading to Cookham), which is located c. 380m north-west of the site at the closest point, and has an overall rating of poor and a chemical rating of fail based on data from 2019.

No active surface water abstractions are recorded within 2km of the site.

The highest risk of surface water flooding on the site is 1 in 30 year, 0.3m - 1.0m.

4.6 Radon Risk Potential

The north of the site is indicated to be located within an area where between 1% and 3% of properties are affected by radon, and the south of the site is located within an area where less than 1% of properties are affected by radon. As such, no radon protection measures are required for new buildings.

4.7 Sensitive Land Uses

Two Local Nature Reserves (LNR) are located c. 1.3km south-east and c. 1.8km north-east of the site. Nine Designated Ancient Woodlands are recorded within 2km of the site, with the nearest located c. 870m south-east of the site. No further environmentally sensitive land uses are recorded within 2km of the site.

4.8 Site Sensitivity Assessment

The site is considered to be located within a **low-moderate** sensitivity setting due to the following:

- ▶ The Site lies within a predominantly commercial area;
- ▶ The nearest residential properties are located beyond the railway c. 45m south of the site;
- ▶ The site is underlain by a secondary A aquifer contained within the superficial deposits and a principal aquifer contained within the underlying chalk bedrock;
- ▶ The site is indicated to be underlain by Berkshire Downs Chalk WFD groundwater body, which has an overall, chemical and quantitative ratings of poor based on data from 2019;
- ▶ The Site is not located within a groundwater SPZ;
- ▶ The Site is located within a WFD Surface Water Body Catchment of the River Thames located c. 380m north-west of the site at the closest point; and
- ▶ No significant sensitive ecological receptors are located in close proximity to the site.





5.0 CONSULTATIONS

5.1 Local Authority Liaison

A chargeable service is offered by WBC for a search request of contaminated land records. However, this is unlikely to provide information beyond that included within the comprehensive environmental data search procured from Groundsure and has therefore not been purchased.

However, within an email correspondence dated 15th May 2024 received from Chris Christofis, a Senior Environmental Protection Officer stated that the site *“does show on historic maps as a former brickworks pre war and then and a metal casement works on 1977 overlay”*, and indicated that WBC would require *“intrusive phase 2 investigation and soil testing if any ground breaking building is proposed”*.

5.2 Landfill Sites and Waste Treatment Sites

There are two records of historic landfills within 250m of the site as detailed below:

- ▶ Thames Valley Park, located c. 220m north-west of the site and last recorded as accepting special waste in 1989; and
- ▶ Thames Valley Park, located c. 240m north-east of the site and last recorded as accepting special waste in 1989.

5.3 Regulatory Database

No sites are designed as ‘Contaminated Land’ under Part 2a of the Environmental Protection Act 1990 within 500m of the Site.

The following information has been obtained from a commercially available environmental database. The summary table below includes records not otherwise detailed in this report.

Table 5.1 Summary of Data

Activity	Distance from site (m)		Details
	0-249	250-500	
Licenced Industrial Activities	5	7	There is a historic consent on site for discharge of sewage to the River Thames, which was revoked in 2015. A historic trade discharge into Early Ditch c. 80m north of the site was revoked in 1980.
Pollution Incidents	2	1	The most significant and nearest relates to a diesel spill c. 10m west of the site in 2003 which resulted in minor (Category 3) impact to water only.

Given the historic on-site sewage discharge record is to an off-site receiving water, this is not considered to have the potential to affect the site. All other recorded discharges are also not considered to affect the site, given the distance and age.





6.0 CONCEPTUAL SITE MODEL (CSM)

6.1 Initial CSM

In accordance with Environment Agency, LCRM Published 8th October 2020 (updated July 2023) and BSI 10175 (Code of Practice for Investigation of Potentially Contaminated Land), EPS has developed an initial CSM to identify potential contamination sources, migration pathways and receptors within the study area.

6.2 Contaminant Sources

Based on the information presented in the above sections, the following on and off-site sources of potential contamination have been identified. Duplicate sources and those greater than 250m from the Site have not been included as they are deemed to not pose a risk to the Site.

On site

Potential sources of contamination identified on Site include:

- ▶ **Historic tank** – indicated to be present on site between 1956 and 1988;
- ▶ **Historic railway sidings** – present within the north of the site between 1965 and 1971;
- ▶ **Historic brick field / works** – occupying the site until c. 1912;
- ▶ **Historic works / engineering works** – located within the north of the site until c. 1993;
- ▶ **Historic metal casement factory** – located within the south of the site until c. 1993; and
- ▶ **Made ground** – associated with the demolition of former structures on site.

Off site

- ▶ **Railway sidings** – located adjacent to the south;
- ▶ **Historic factories** – c. 40m west of the site;
- ▶ **Historic electricity works / power station** – located to the north-east of the site until c. 1993;
- ▶ **Electricity substations** – the closest historically located c. 10m south-east of the site between 1973 and 1988;
- ▶ **Historic nursery** – located c. 55m south of the site in c. 1913. Given the low potential for significant contamination to be generated and the time passed, this is not considered to be a viable source of contaminants which may affect the site; and
- ▶ **Historic unspecified pits** – located c. 160m south-east of the site. Mapping does not indicate that these have been infilled and as such they are not considered to be a viable source of contaminants which may affect the site.

6.3 Potential Pathways

Receptors may be potentially at risk from the identified potential sources of contamination via the following pathways:





- ▶ Migration of mobile contaminants on or off site via services, sewers and manmade conduits;
- ▶ Direct contact, ingestion and inhalation of contaminants on site;
- ▶ Migration of mobile contaminants into groundwater and transport into surface waters; and
- ▶ Migration of ground gas and vapours into buildings.

6.4 Potential Receptors

Human Receptors

- ▶ **Future site users;** and
- ▶ **Construction workers.**

Controlled Waters

- ▶ **Secondary A Aquifer** contained within the superficial deposits;
- ▶ **Principal Aquifer** contained within the chalk bedrock;
- ▶ **Ponds** located within the north of the site, and c. 10m to the north;
- ▶ **River Thames** – whilst the site is located within the WFD catchment of the River Thames, given the distance from the site (c. 380m) this is not considered to be a viable receptor which could be affected by contamination originating from on site.

6.5 Risk Assessment

CIRIA 552: Contaminated Land Risk Assessment 'A Guide to Good Practice' provides guidance on risk assessment taking into account factors such as severity of the potential harm that may arise from a successful pollutant linkage, potential magnitude of the hazard, and the sensitivity of the target receptor. Risk assessment is initially assessed by determining the severity of the potential hazard, which takes into account receptor sensitivity and the magnitude of the potential impact as detailed in Tables 6.1 and 6.2 below.

6.5.1 Severity

Table 6.1 Receptor Sensitivity

Category	Human sensitivity	Environmental sensitivity
Very Low	Ground workers	Non-sensitive water course
Low	Commercial / Industrial	Secondary Aquifer
Medium	Residential without plant uptake	Principal Aquifer / Sensitive Watercourse
High	Residential with plant uptake	Groundwater Source Protection Zone



**Table 6.2 Magnitude of Impact**

Category	Example
No Impact	No identified or potential pollutants present
Slight Impact	Minor leaks and spills from fuel infrastructure, inert landfills / Made Ground
Moderate Impact	Major leaks and spills from fuel infrastructure
Gross Impact	Heavily contaminated industrial sites, hazardous landfills

Severity is subsequently assessed considering the potential receptor and magnitude of impact as outlined within Table 6.3, overleaf.

Table 6.3 Determination of Level of Severity for Potential Hazards

	Receptor Sensitivity			
	Very Low	Low	Medium	High
No Impact	Minor	Minor	Minor	Minor
Slight Impact	Minor	Minor	Minor	Mild
Moderate Impact	Minor	Minor	Mild	Medium
Gross Impact	Minor	Mild	Medium	Severe

6.5.2 Likelihood

The likelihood of an event is assessed while considering the potential for presence of a contaminant, presence of receptor, and the substantiality of the pollutant pathway. Likelihood is broken down into four separate categories within the CSM as shown in Table 6.4 below:

Table 6.4 Definitions of Likelihood Categories

Category	Definition
Unlikely	Pollutant linkage may be present, but the circumstances under which harm would occur are improbable.
Low Likelihood	Pollutant linkage may be present, and there is a possibility of the risk occurring, although there is no certainty that it will do so.
Likely	Pollutant linkage may be present, and it is probable that the risk will occur over the long term.
High Likelihood	Pollutant linkage may be present, and risk is almost certain to occur in long term, or there is evidence of harm to the receptor.

6.5.3 Risk Rating

Table 6.5 demonstrates the methodology used to provide an overall risk rating within the preliminary CSM with respect to any potential sources of contamination that may affect the site. An overall risk rating is assigned to each potential contaminant considering the assessed likelihood and severity as determined using the methodologies within Tables 6.1 to 6.4:



**Table 6.5 Level of Risk Rating for Hazard Definition**

Likelihood	Severity			
	Minor	Mild	Medium	Severe
Unlikely	Very Low	Very Low	Low	Low / Moderate
Low Likelihood	Very Low	Low	Low / Moderate	Moderate
Likely	Low	Low / Moderate	Moderate	High
High Likelihood	Low / Moderate	Moderate	High	Very High

6.6 Conceptual Site Model

A site specific CSM has therefore been created using the above information and is provided on the following page.




Table 6.6 Conceptual Site Model

Source	Contaminant	Potential migration pathway	Potential Receptors	Likelihood of Occurrence	Severity	Overall Risk Rating	Active / Inactive
On-Site							
Historic tank, railway sidings, brickfield / works, engineering works and metal casement factory Made Ground associated with the potential infilling of former brick pits and the demolition of former structures on site	Asbestos Heavy Metals & Metalloids PAHs TPH VOCs	Inhalation of fibres	Future site users Construction workers	Likely	Minor	Low	Potentially Active - it is recommended that a shallow investigation is undertaken to further assess the potential pollutant pathways.
		Ingestion / Dermal contact with soils	Future site users Construction workers	Likely	Minor	Low	
		Vertical and Lateral Migration	Aquifers Ponds	Likely	Minor	Low	
Historic tank and engineering works	TPH	Vertical migration of vapours	Future site users	Unlikely	Minor	Very Low	Inactive – given that the residential accommodation is proposed on the fourth and fifth floors only, the pathway for vapours and ground gases is considered inactive.
Made Ground associated with the potential infilling of former brick pits and the demolition of former structures on site	Ground gases (CH ₄ and CO ₂)	Build up and inhalation of ground gases	Future Site Users	Unlikely	Minor	Very Low	



Source	Contaminant	Potential migration pathway	Potential Receptors	Likelihood of Occurrence	Severity	Overall Risk Rating	Active / Inactive
Off-Site							
Railway sidings Historic factories, electricity works / power station	Asbestos Heavy Metals & Metalloids PAHs TPH VOCs	Lateral migration through permeable geology	Future site users Construction workers	Low	Minor	Very low	Potentially Active – given the historic industrial land uses in close proximity to the site and the permeable nature of the underlying geology, the pollutant pathway is considered potentially active and should be investigated.
Historic electricity substations (nearest c. 10m south-east)	PCBs	Lateral migration through permeable geology	Future site users Construction workers	Low	Minor	Very low	Inactive – whilst the nearest historic substation is only 10m from the site, given the low mobility of PCBs and the proposed use of the adjacent area of the site for car parking this pollutant pathway is considered inactive.



7.0 CONCLUSIONS

7.1 Contaminated Land

EPS has utilised the available data to classify the Site on the basis of its likely contaminated land liability in relation to the property development. The risk classification definitions are summarised below:

Table 7.1 Risk Classification

Risk	Definition
Very Low	Low likelihood that harm could arise to a receptor. Such harm is unlikely to be any worse than mild.
Low	There are unlikely to be significant contaminated land liabilities associated with the property. Such harm, at worst, would normally be relatively mild. Some limited site investigation maybe required.
Low-Moderate	There are unlikely to be significant contaminated land liabilities associated with the property with regard to the proposed use. However, issues may require further consideration via site investigation in the event of a future redevelopment of the site etc. Remediation works (if required) are likely to be limited in extent.
Moderate	Some potential contaminated land liabilities are likely to affect the property as a result of historical and/or current activities. The risks identified are unlikely to pose an immediate significant issue but the purchaser/developer may wish to make further enquiries of the vendor or undertake further environmental improvements. Redevelopment of the site will likely require further site investigation. Some remedial works maybe required in the long term.
High	Significant potential contaminated land liabilities have been identified at the property. Further assessment including intrusive ground investigation will be required to determine to level of risk and associated liability. Remediation works may be required in the short-term, but likely required in the long term.
Very High	Severe harm to a receptor may already be occurring, or a high likelihood severe harm will arise to a receptor, unless immediate remedial works / mitigation measures are undertaken. The risk if realised is likely to result in substantial liability. Urgent investigation required.

Overall Environmental Risk Assessment

Overall, the preliminary risk classification for onsite risks are considered to be:

- ▶ **Very low to low** in terms of human health; and
- ▶ **Low** for controlled waters.

The preliminary risk classification for off-site risks is considered to be:

- ▶ **Low** in terms of human health.





8.0 RECOMMENDATIONS

Based on the above conclusions, it is recommended that a proportionate programme of site investigation be undertaken in order to establish the presence or absence of contamination and to enable a quantitative assessment of the associated environmental risks. Should groundworks be required for the proposed scheme, the potential risk to human health, particularly construction workers, will be increased.

END OF REPORT





APPENDIX I

FIGURES



KEY:



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Job No. & Title:

P1202
400 Thames Valley Park

Client:

TVP Investments Limited

Drawn by:

TC

Approved by:

SP

Date:

May 2024

Notes:

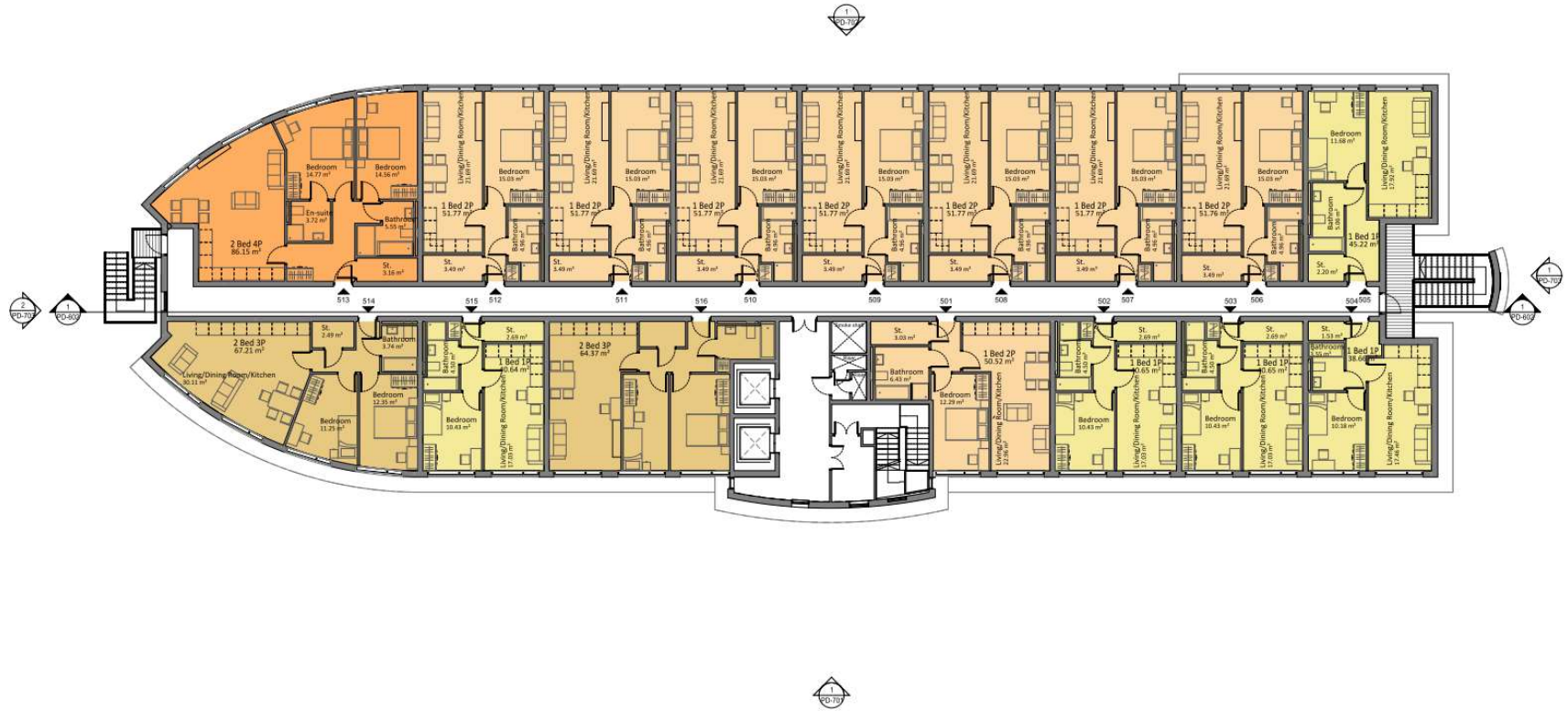
NOT DRAWN TO SCAL

Based on PD-001

Drawing Title:

Figure 1
Site Location and Red Line
Boundary Plan

KEY:



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P1202-02
400 Thames Valley Park

Client:

TVP Investments Limited

Drawn by:

TC

Approved by:

SP

Date:

May 2024

Notes:

Based on PD-504

Drawing Title:

Figure 2
Proposed Fourth and
Fifth Floor Plan



APPENDIX II – LIMITATIONS

1. This report and its findings should be considered in relation to the terms of reference and objectives agreed between EPS and the Client.
2. For the work, reliance has been placed on publicly available data obtained from the sources identified. The information is not necessarily exhaustive and further information relevant to the site may be available from other sources. When using the information, it has been assumed it is correct. No attempt has been made to verify the information.
3. This report has been produced in accordance with current UK policy and legislative requirements for land and groundwater contamination which are enforced by the local authority and the Environment Agency. Liabilities associated with land contamination are complex and requires advice from legal professionals.
4. During the site walkover reasonable effort has been made to obtain an overview of the site conditions. However, during the site walkover no attempt has been made to enter areas of the site that are unsafe or present a risk to health and safety, are locked, barricaded, overgrown, or the location of the area has not been made known or accessible.
5. Site sensitivity assessments have been made based on available information at the time of writing and are ultimately for the decision of the regulatory authorities.
6. The executive summary, conclusions and recommendations sections of the report provide an overview and guidance only and should not be specifically relied upon without considering the context of the report in full.
7. EPS cannot be held responsible for any use of the report or its contents for any purpose other than that for which it was prepared. The copyright in this report and other plans and documents prepared by EPS is owned by them and no such plans or documents may be reproduced, published or adapted without written consent. Complete copies of this may, however, be made and distributed by the Client as is expected in dealing with matters related to its commission. Should the Client pass copies of the report to other parties for information, the whole report should be copied, but no professional liability or warranties shall be extended to other parties by EPS in this connection without their explicit written agreement there to by EPS.
8. New information, revised practices or changes in legislation may necessitate the re-interpretation of the report, in whole or in part.





APPENDIX III

GLOSSARY

TERMS

AST	Above Ground Storage Tank
BGS	British Geological Survey
BSI	British Standards Institute
CSM	Conceptual Site Model
MBGL	Metres Below Ground Level
PAH	Poly Aromatic Hydrocarbon
PCB	Poly-Chlorinated Biphenyl
UST	Underground Storage Tank





APPENDIX IV

PHOTOGRAPHS





Photograph 1 – Entrance to site and existing building

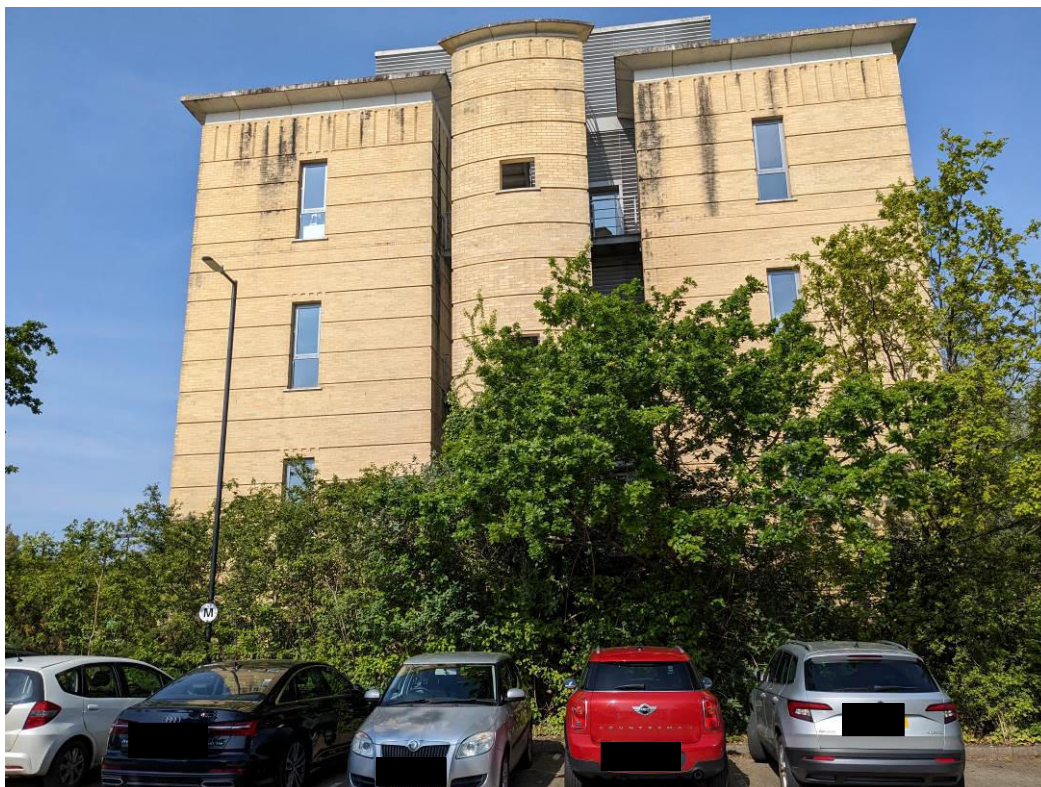


Photograph 2 – Pond within north

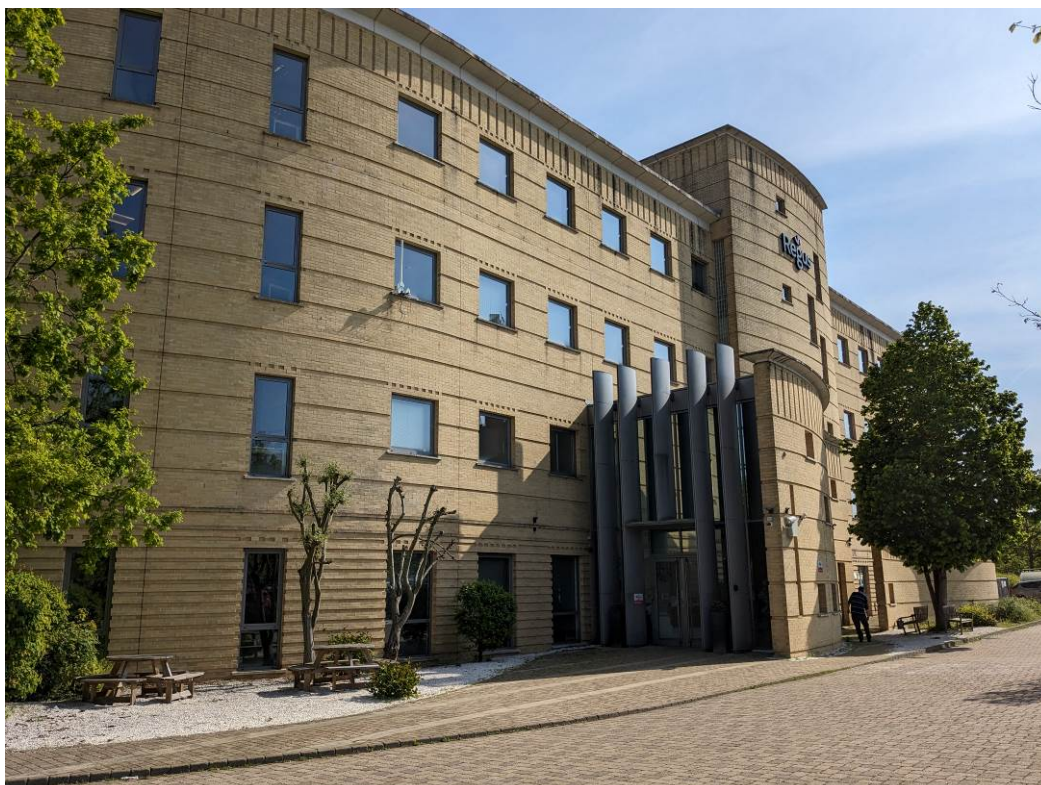




Photograph 3 – View of east of building from adjacent site



Photograph 4 – Front of building





Photograph 5 – South of building and access road



Photograph 6 – View from building from south-east corner of site





Photograph 7 – South-east corner of site



Photograph 8 – Carpark within south of site

