452 Basingstoke Road, Reading RG2 0QE
November 2016

Procter & Gamble Ltd
P&G Reading Innovation Centre
Contaminated Land Desk Study



ARUP P&G Gillette

Procter & Gamble Ltd

P&G Reading Innovation Centre

Contamination Desk Study

4-05

Issue 3 | 31 October 2016

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 249756-03

Ove Arup & Partners Ltd
13 Fitzroy Street
London
W1T 4BQ
United Kingdom
www.arup.com

ARUP

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Objective

Procter & Gamble (P&G) intends to redevelop part of the site at 452 Basingstoke Road, Reading. Ove Arup and Partners (Arup) has been commissioned by P&G to complete a ground contamination desk study to support a planning application for the proposed development.

Site description and reconnaissance

The site is located on Basingstoke Road, on an industrial estate, in Reading. The site has been used for industrial uses since the mid-1900s, and more recently as part of Procter & Gamble's Gillette manufacturing facility. The proposed development involves construction of a research and development office, laboratory accommodation, associated warehousing and car parking.

A Groundsure report was ordered for the site that included historic maps and environmental datasets. A Local Authority search was commissioned from Reading Borough Council (RBC). An environmental reconnaissance survey was carried out on 24 June 2016. The majority of areas at ground level were accessible although an old boiler house, located in the centre of the site was not accessible. A recent ground investigation report for the wider P&G site was also reviewed.

Ground conditions and environmental setting

The site is expected to be underlain by Made Ground, London Clay, then Lambeth Group and Chalk. The Lambeth Group is designated as a secondary A aquifer and the Chalk is a principal aquifer. The site is not situated in a source protection zone (SPZ) for potable water supply. The nearest surface water feature is Foudry Brook located approximately 500m to the west. There are no nationally designated ecological receptors within 500m of the site.

Potential for contamination

Potentially contaminative previous site uses or sources have been identified. The main sources identified were historical and existing site uses and historical Made Ground. Made Ground is likely to be present on the site based on the development history and previous ground investigation in the local area.

Off-site sources include a historical steel wool factory, a timber yard, a former sewage works, peat deposits (generating methane) and the adjacent Gillette factory. All are within 100m of the site apart from the sewage works which was located approximately 250m west of the site.

Risk assessment

The results of the preliminary risk assessment are summarised in the table below.

Item	Qualitative assessment
Environmental sensitivity	Low
Development sensitivity	Low
Potential for significant contamination to be present	Generally low to moderate
	Risk assessment
Risk of harm to human health during development	Generally low but increasing if free product or asbestos identified in the ground.
Risk of harm to human health after development	Very low
Risk of pollution to controlled waters	Very low
Building services and materials	Very low

Recommendations

The site has also been identified for future investigation under the Council's Part 2A inspection strategy. Consequently, as part of the planned development it is likely that the Local Authority would require that a ground investigation is carried out. It is recommended that a ground investigation is completed to confirm the contamination status of the site. The results of the ground investigation should be used to inform an interpretative report which would allow the conceptual site model and risk assessment presented within this report to be updated. The results of the investigation would also inform health and safety measures during subsequent site works and the potential waste classification of arisings during development.

While the potential for contamination is considered to be low, depending on the findings of the intrusive ground investigation and risk assessment it may be necessary for remediation to be carried out at the site prior to or as part of the redevelopment. If specific remediation measures are recommended for the site, verification records would need to be kept. This information would then need to be presented in a verification report.

If asbestos is identified in soils on-site, works might need to be licenced under the Control of Asbestos Regulations (CAR) 2012 and/or specific health and safety measures and monitoring might need to be put in place during development.

1 Introduction

1.1 Background

Procter & Gamble (P&G) intends to redevelop part of the site at 452 Basingstoke Road, Reading. The proposed development involves construction of a research and development office, laboratory accommodation and associated warehousing on the south eastern part of the site and construction of a car park on the north eastern part. Ove Arup and Partners (Arup) has been commissioned by P&G to complete a contamination desk study to support a planning application for the proposed development.

1.2 Report objectives

The objectives of this report are to identify and assess the available information relating to ground conditions, environmental setting and development constraints. The report will specifically:

- provide a summary of the site history and environmental setting;
- present details of local geology, hydrogeology and hydrology conditions and the expected ground conditions;
- identify potential sources of contamination;
- use the site reconnaissance data and details of the proposed development to inform an initial conceptual model and preliminary risk assessment;
- comment on the potential for significant contamination associated with previous and recent use; and
- provide recommendations regarding the implications of the findings for the redevelopment of the site and identify any requirement for intrusive ground investigation.

1.3 Information sources

A Groundsure report was commissioned on 20 June 2016 [1] and is included in Appendix A. The Groundsure report comprises three parts:

- an EnviroInsight report (included in Appendix A1) containing information on Environment Agency (EA) permits, consents, pollution notifications and mapping, potentially contaminative land uses and sensitive land uses;
- a GeoInsight report (Appendix A2) which provides information on the geological setting of the site and potential ground hazards; and
- a MapInsight report (Appendix A3) comprising historical Ordnance Survey mapping and aerial photographs.

A Local Authority search was commissioned from Reading Borough Council (RBC) and the results were received on 15 July 2016. The search included information on industrial land use records, a ground investigation on the nearby

Kennet Island development, environmental permits and authorised landfill sites. The Local Authority search is included as Appendix B. British Geological Survey (BGS) borehole logs [2] and a recent ground investigation report at the site [3] were also reviewed. The ground investigation report has been included as Appendix C.

An Arup environmental consultant undertook a site reconnaissance visit on 24 June 2016 and a selection of photographs and information obtained from that walkover are included in Section 2.3 of this report.

1.4 Report structure

This report has the following structure;

- Section 2 outlines the current configuration of the site and environmental setting;
- Section 3 discusses the site history;
- Section 4 describes the anticipated ground conditions, following a review of published records and a recent ground investigation report for the site;
- Section 5 presents the preliminary conceptual model;
- Section 6 details the preliminary risk assessment; and
- Section 7 sets out the conclusions and recommendations.

1.5 Limitations

This report has been produced by Arup for use by P&G in connection with the proposed development of the site. It takes into account our client's particular instructions and requirements and addresses their priorities at the time. It is not intended for, and should not be relied upon by any third party and no responsibility is undertaken to any third party in relation to it, except as provided for in Arup's agreement with P&G.

Arup has based the site appraisal on the sources of information detailed within the report text and believes them to be reliable, but cannot and does not guarantee the authenticity or reliability of this third party information. Notwithstanding the efforts made by the professional team in undertaking this contamination assessment it is possible that ground conditions and contamination other than those potentially indicated by this report may exist at the site. Any subsequent additions or modification to the sources of information may require the findings, conclusions and recommendations made within this report to be revised.

This report have been prepared based on current legislation, statutory requirements, planning policy and industry good practice prevalent at the time of writing. Any subsequent changes or new guidance may require the findings, conclusions and recommendations made to be assessed in the light of the circumstances.

This report considers the implications of ground contamination (including groundwater and ground gas). It does not include an assessment of the implications of hazardous materials in building materials such as asbestos containing materials (ACM) or other hazardous substances or other ground related risks such as unexploded ordnance or non-native invasive plant species.

2 The site

2.1 Site location

The site is located at 452 Basingstoke Road, Reading RG2 0RX at National Grid reference SU 716 705. It is bounded by Basingstoke Road and residential buildings to the east, commercial offices to the north and south and a large housing development called Kennet Island to the west. The site is roughly square in shape and shown on Table 1 below.

Table 1 Site location plan

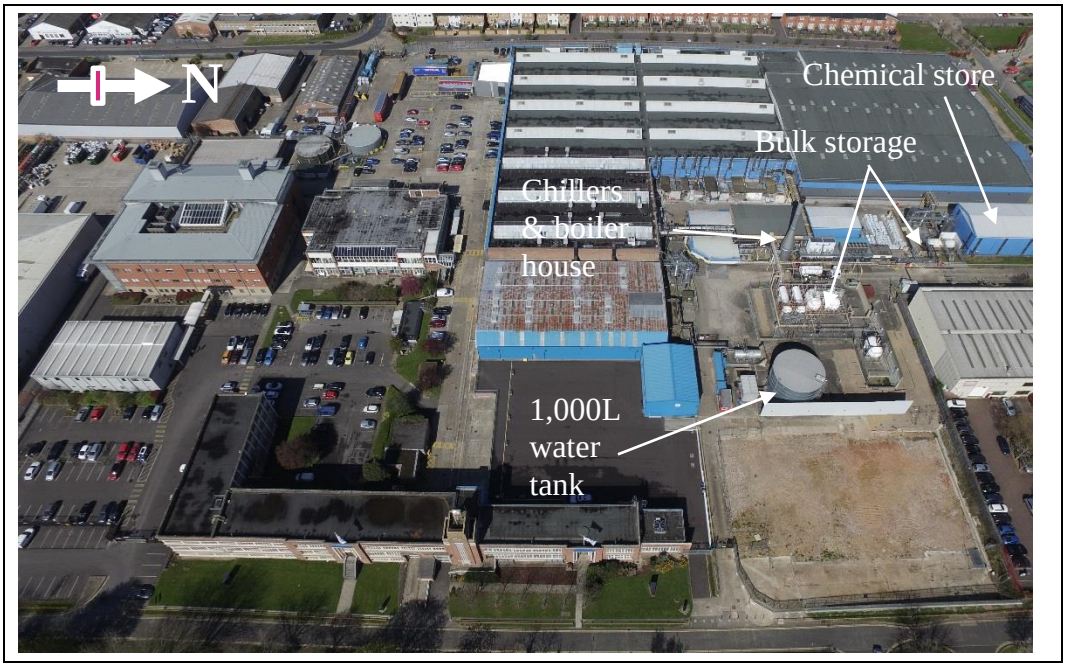


NB: The thinner red lines shown on the image is from a previous development extent that was provided at the time the Groundsure report (where the image is taken from) was commisioned.

2.2 Site description

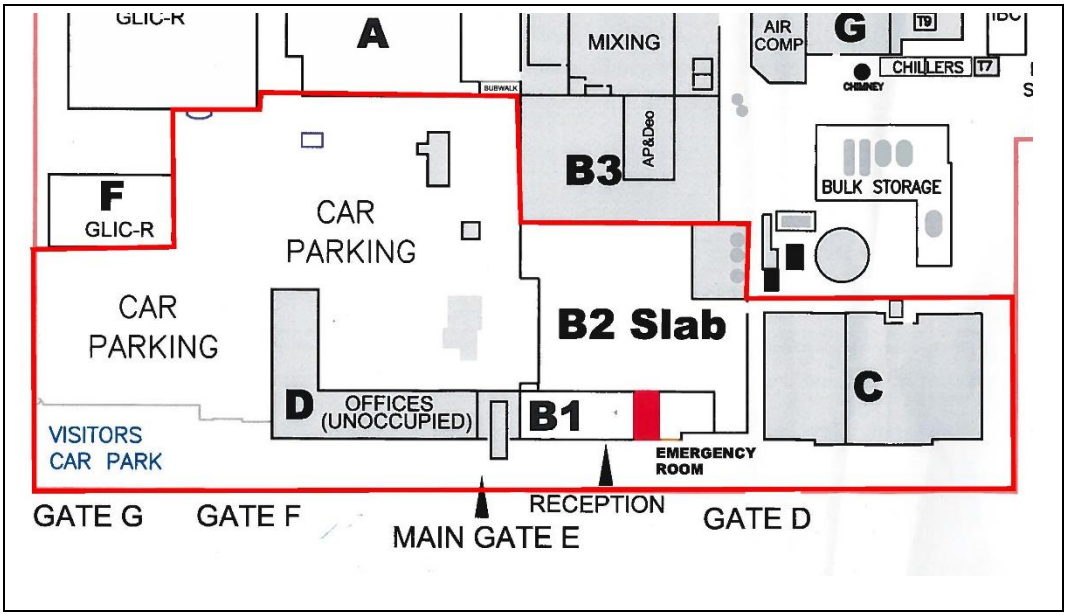
The wider P&G site is currently largely used as a manufacturing plant including for Gillette products, which is a brand owned by P&G. Table 2 shows the most recent aerial image of the site provided by P&G and taken in 2015.

Table 2 Recent aerial image of the site.



The photograph shows the Gillette manufacturing area of the P&G site towards the top of the image and a number of features are labelled including chemical storage, chiller room, boiler house, bulk storage buildings and above ground tanks including a 1,000 litre water tank. The photograph also includes Building C located in the west of the image, this building was demolished after the photograph was taken and the now cleared site is shown in Photograph 9 in Table 4.

Table 3 Layout plan of the wider P&G and Gillette site



The water tank was constructed approximately five years ago and was founded on deep piles. These features can also be seen on the layout plan in Table 3, which is provided as a larger version in Appendix D.

The site comprises a three storey building in the south western section of the site and a two storey building in the south with open areas of car parking in the central and south eastern sections. The three storey building (labelled as D in Table 3) has been unoccupied since the early 2000s and was previously used as offices. The building does not have a basement but the ground level of the building is approximately 0.5m lower than the ground level outside. The two storey building (labelled F in Table 3) located in the south western part of the site has been newly refurbished and will not be redeveloped as part of the proposed development. There is also an open rectangular area of gravel surfacing in the northeast corner. The area is labelled as C in Table 3 and is the footprint of a former building. The building was demolished in 2015 and had previously been used for industrial manufacturing of P&G products. The northern part of site is approximately 1m higher in elevation than southern part of site.

2.3 Site reconnaissance visit

An environmental reconnaissance survey of site was carried out on 24 June 2016 by an environmental consultant from Arup. The survey was carried out at ground floor level. The majority of areas were accessible although an old boiler house, located in the centre of the site could not be accessed. Areas outside the site boundaries including the area immediately around the 1,000L water tank were also not accessible during the visit.

A selection of photographs from the visit are included in Table 4 below.

Table 4 Key features and potentially contaminative sources on site

No.	Feature	Description
1.		View of Building D looking east. The windows on the ground floor of the building are level with the outside ground floor level. The building on the extreme left of the picture is an old electricity switch station.

No.	Feature	Description
2.		View inside Building D looking west. The photo shows the level change between the inside and outside of the building. The building is unoccupied and has a tiled floor. There was no evidence of leaks or staining.
3.		View inside building D looking east. The ground floor area was used as a plant room and machine shop. There is some evidence of past water ingress, likely due to the elevation change between inside and outside the building. There was no evidence of leaks during the site walkover.
4.		View eastwards from the west side of Building D. The car park is relatively flat.

No.	Feature	Description
5.		View looking south from the centre of site. The grey building is building F. The car park in the foreground of the photo used to be a swimming pool.
6.		View looking west at the centre of site. The white building on the right hand side of the photo is a former pump house that was used to power the swimming pool.
7.		View looking north from the centre of the site. The photo shows a change in elevation between the car park in the centre of site and the area described as the B2 Slab in Table 3.
8.		Photo taken looking north from the centre of site. The southern section (of the photo) has been tarmacked and the northern area is segregated with hoarding and the surface is comprised of loose stones.

No.	Feature	Description
9.		View looking northeast showing the ground surface of the former site of Building C. This building was demolished in late 2015.

Given that previous development has occurred on site, it is likely that some historical Made Ground will be present which may include building rubble from previous buildings.

Site staff during the visit advised that leaks of soap used in the production of shaving foam to the ground have previously been recorded on the wider site and that areas of scalpels and shaving blades found in soils at shallow depth have previously been found and the material removed from site.

2.4 Local Authority search results

The results of the Local Authority environmental search were received on 15 July 2016. The search identifies the wider P&G site as being potentially contaminated due to its former use as an engineering works, which extended onto the central part of the study site.

The site has also been identified for future investigation under the Council's Part 2A inspection strategy. The Local Authority search states that "*in its current industrial/commercial use the site is classified as low risk*" and as a result there is no schedule for investigation to be undertaken at the site (i.e. under the powers granted to the Local Authority for intervention under Part 2A).

The Local Authority search also confirmed that there was one landfill site recorded within 250m of the site receiving inert waste. The search states that RBC have not issued any environmental permits to premises within 250m of the site.

The Local Authority notes that the Berkeley Homes Kennet Island development which was built on a former sewage works, is adjacent to the west of the wider P&G site. The planning application (no. 141735) includes a gas risk assessment report by Environmental Protection Group (EPG) dated October 2014. The Kennet Island development is located approximately 500m north-west of the site.

The investigation comprised four boreholes, nine window samples holes and 11 trial pits. Made Ground thicknesses of up to 5.6m were reported with underlying London Clay across the eastern section of the site and Lambeth Group across the remainder of the site. Ground gas monitoring at the site recorded a maximum peak methane concentration of 82.7% v/v and a maximum carbon dioxide concentration of 8.4% v/v, with a maximum initial flow rate of 42.6 litres/hr,

although this quickly dissipated to a negligible steady state flow rate. Peat was observed in the locations of the highest methane concentrations and was identified as the source. The report recommended gas protection measures suggesting both gas-resistant membranes and passive ventilation systems should be included as part of the residential development.

2.5 Proposed development

The proposed development includes the construction of a two storey research and development facility comprising laboratories, offices, storage warehousing, associated access car parking and soft landscaping works.

The works will comprise:

- Demolition of the south-western wing of the existing Gillette building (Building D as shown in Table 3), the ground floor security gatehouse and ancillary sub-station and external store buildings;
- Refurbishment of the southern half of the retained Gillette building (Building D) and erection of a rear extension in the form of a new research and development office and laboratory accommodation (Class B1) and associated storage warehousing (Class B8);
- Refurbishment of the façade of the northern half of the retained Gillette building;
- Provision of a 190 space multi-storey car park to the south of the Gillette building formed of four storeys comprising eight levels. Further parking at grade, adjacent and in the currently vacant land to the north and rear of the existing Gillette building;
- Ancillary plant and engineering works including switch room, generator and transformer buildings;
- Associated hard and soft landscaping works, including access and circulation; and
- Formation of a new northern vehicular access to the application site.

Appendix E contains the latest proposed development layouts for the site.

2.6 Environmental setting

2.6.1 General

A Groundsure EnviroInsight report was commissioned, and a copy is included in Appendix A1. The following summary is based on the desk based information sources described and the environmental reconnaissance undertaken by Arup.

2.6.2 Sensitive land use

The Groundsure report confirms that there are no nationally designated ecological receptors such as Sites of Special Scientific Interest (SSSI), Special Areas of Conservation (SAC), National Nature Reserves (NNR), Local Nature Reserves (LNR), Special Protection Areas (SPA) or RAMSAR sites on or within 500m of the site.

2.6.3 Environmental permitting and registers

There are four Integrated Pollution Prevention Control (IPPC) permits listed within 250m of the site. All four permits are for the processing of organic chemicals and surface active agents at the Gillette UK Limited site and the closest is located immediately west of the site. There are four records of Part A and Part B activities and enforcements within 250m of the site. The closest permit was for a timber processing plant located 71m south of the site.

There are eight records of radioactive substances within 250m and six records of licensed discharge consents within 500m of the site. The closest two were located 55m north of the site and were for the disposal of radioactive waste and keeping and use of radioactive substances. All eight have been revoked, suspended or superseded.

There are four permits for the storage of hazardous substances at the Gillette site. All are listed as located 40m west of the site and all had no enforcements notified. There were four recorded pollution incidents within 250m of the site. All four pollution incidents, located approximately 100m southeast of the site, were for specific waste materials and had a category 3 (minor) impact on land.

There are no active registered landfill sites within 1km of the site. There is one historic landfill site located 140m west of the site which is recorded to have received inert waste. There is one Control of Major Accident Hazards record (COMAH) and one historic Notifications of Installations Handling Hazardous Substances (NIHHS) identified for the Gillette site. COMAH and NIHHS classifications can imply restrictions on development within a specific zone around those sites (for instance as a blast radius). That advice is outside the scope of this assessment and should be checked.

2.6.4 Hydrogeology and hydrology

Expected ground conditions at the site are Made Ground over London Clay, underlain by the Lambeth Group.

The EA designates the London Clay as unproductive strata. Below the London Clay the site are underlain by Lambeth Group which is classified as a secondary A aquifer and forms part of the Chalk-Basal Sand aquifer, located within the lower sand units of the Lambeth Group and Chalk (a principal aquifer).

The Groundsure EnviroInsight report states that there are two water abstractions within 500m of the site. The closest abstraction is approximately 240m west of site and is for abstraction from the Chalk for laundry use at Clean Linen Services

Ltd. The site is not situated within a source protection zone (SPZ) for potable water supply.

The nearest water feature to the site is Foudry Brook, located approximately 500m west of the site. There are no listed pollution incidents to controlled waters within 500m of the site. There are no records of historic IPC authorisations or harmful discharges to controlled waters within 500m of the site.

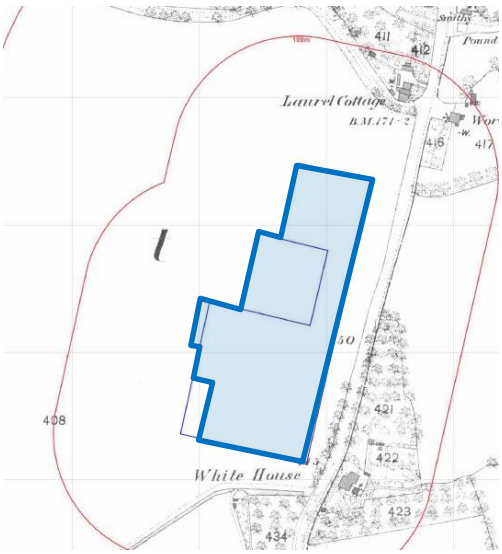
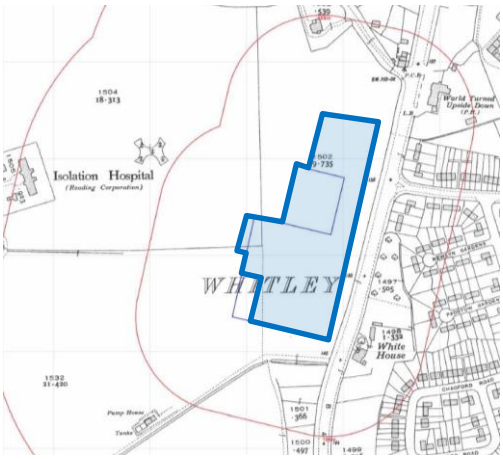
2.6.5 Radon

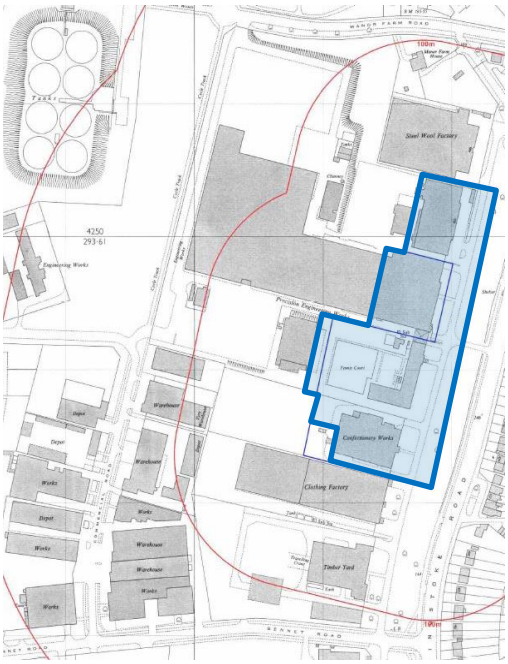
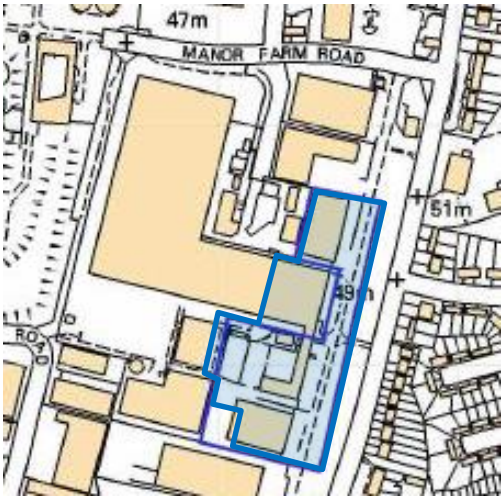
The Groundsure GeoInsight report (included as Appendix A2) confirms that the site are in a lower probability radon area, as less than 1% of homes are above the action level. The report states that in those cases no radon protective measures are necessary.

3 Site history

A review of historical Ordnance Survey (OS) maps included in the Groundsure MapInsight report (in Appendix A3) is summarised in Table 5 below.

Table 5 Site history

Map extract	Description
	**1877 OS map** **On-site** The site is open fields. **Off-site** A smithy, pound and public house are located approximately 100m northeast of the site. Unnamed buildings are located approximately 25m southwest of the site.
1898 OS map **On-site**: No significant change. **Off-site**: The smithy and pound are no longer identified on the OS map.	
1911 OS map **On- and off-site**: No significant change.	
	**1936 OS map** **On-site** No significant change. **Off-site** Residential buildings are located immediately east of the site. A pump house and tanks are located approximately 150m south west of the site. An isolation hospital is located approximately 250m west of the site.

Map extract	Description
	**1958 OS map** **On-site** Buildings labelled as works partly occupy the northern and central parts of the site and another works is located in the southern part of the site. **Off-site** A depot is located immediately north of the site and a second depot is located approximately 50m south of the site. An unnamed building is located immediately west of the site.
	**1966 OS map** **On-site** There is no change in the configuration of the building located in the north of site, but it is no longer identified as a works. The building on the central part of the site has been extended to the west and is now identified as an engineering works. A tennis court and unnamed building are also located in the centre of the site. The building in the south of the site is now labelled as a confectionery works. **Off-site** The building immediately north of the site is now labelled as a steel wool factory. A clothing factory is located immediately south of the site and a timber yard is located approximately 50m south. The isolation hospital is now an engineering works and immediately north of this there are eight circular features (likely sewage works). There are a number of warehouses approximately 100m southwest of the site.
	**2002 OS map** **On-site** The buildings on site remain in the same configuration but they are no longer labelled. **Off-site** No significant change.

Map extract	Description
	**2014 OS map** **On-site** The building in the southern section of the site has been removed and has been replaced with a smaller building located in the south west corner. There is no change to the configuration of the site. **Off-site** No significant change.

4 Ground conditions

4.1 Geology

The anticipated geology of the site was determined by examining information included in the Groundsure report [1] and BGS records [2] The expected sequence of strata is summarised in Table 6 below.

Table 6 Site stratigraphy

Stratum	Approximate level at top (mOD)	Approximate thickness (m)
Made Ground	Not given	1 to 1.5
London Clay	46.32	11.88
Reading Beds (Lambeth Group)	34.44	18.28
Chalk	16.16	Not proven

A previous investigation was undertaken immediately north of the site, by Norwest Holst in 1982 which comprised three 10m deep boreholes. Made Ground was encountered between 1m and 1.5m below ground level (bgl). Made Ground was underlain by London Clay which was not proven in any of the boreholes. The ground level was not recorded on the borehole log and therefore the levels (in m OD) of the strata could not be determined.

A 76.29m deep borehole located approximately 100m west of the site and also included in the BGS database, recorded 11.88m of London Clay on top of 18.28m of Lambeth Group. The Lambeth Group was reported to be underlain by the Chalk.

4.2 Previous ground investigation

Information in a recent ground investigation report for the Gillette area of the wider P&G site [3] (included as Appendix C) was used to verify the above sequence. The investigation [3] was carried out by Soils Limited in June 2016 to provide and comment on appropriate foundation options for a proposed water treatment plant. No contamination testing was undertaken as part of the investigation. No borehole location plan was provided in the report so the exact distance of the boreholes the proposed development site could not be established but is likely to be within 100m based on the size of the wider P&G site.

The investigation comprised four window sample boreholes. Made Ground was encountered between 0.2m and 0.6m bgl and comprised slightly clayey sandy flint with brick, concrete and tarmac. Made Ground was underlain by Head deposits which comprised sandy clay and occasional flint gravels. No evidence of peat or organic rich material is recorded on the logs. The Head deposits were encountered between 0.5m and 2.0m bgl and were not encountered in all locations. London Clay was identified in two of the window samples boreholes and located beneath the Head deposits. The top of the London Clay was identified to be between 0.4m and 0.6m bgl (i.e. only in locations where Head deposits were not present).

London Clay was described in the logs as slightly silty clay with occasional lenses of silty fine sand.

Hydrocarbon staining was identified in all four window sample boreholes in the head deposits between 0.4m and 2.0m bgl. No contamination testing was undertaken as part of this investigation.

5 Preliminary conceptual model

5.1 Contaminated land framework

Land contamination is regulated under several regimes, including environmental protection, pollution prevention and control, waste management, planning and development control and health and safety. The potential presence of ground contamination at a site could give rise to the following potential effects:

1. Construction related issues, including:
    a. health and safety (on- and off-site) with associated additional mitigation;
    b. increased costs, particularly for materials management and waste disposal or soil treatment;
    c. possible delays;
    d. additional planning conditions and requirements to discharge before, during and after development;
2. Design issues, including:
    a. ground gas protection measures;
    b. aggressive ground conditions;
    c. pile design (limiting pathways to groundwater);
    d. design of cover layers;
    e. remediation design;
3. A potential requirement for statutory remediation, for the current use (Part 2A);
4. The requirement for remediation under planning consent for a change of use; and
5. The requirement for EIA and associated additional mitigation.

The National Planning Policy Framework (NPPF) [4] places responsibility on the developer of the land for ensuring that development is safe and suitable for use for the purpose for which it is intended, which will include dealing with historic contamination of the ground to the satisfaction of the Local Authority and EA.

The UK framework for the assessment of contaminated land endorses the principle of risk assessment and a “suitable for use” approach to contaminated land. Remedial action is only required if there are unacceptable risks to human health or the environment, taking into account the use of the land and its environmental setting. The assessment of the impacts arising from potentially contaminated land is based upon considerations of plausible pollution linkages (PPL) between contamination sources and sensitive receptors.

The methodology of risk assessment is normally set out in terms of significant pollutant linkages (referred to as contaminant linkages in the latest version of the Part 2A statutory guidance [5]) within a source-pathway-receptor model of the

site. All three of these elements must be present for a site, or area of a site, to be determined as contaminated.

A preliminary contamination risk assessment has been undertaken using this framework based on the following information:

- historical or current potentially contaminative activities operating on and in the vicinity of the site;
- sensitivity of the site in the context of the wider environmental setting and ground conditions; and
- sensitivity of the site itself and potential receptors.

5.2 Potential sources of contamination

Potential historical and current sources of ground contamination at the site have been identified based on a review of historical maps, the Local Authority search results, an environmental reconnaissance survey and observations made during a recent ground investigation at the site. They are listed in Table 7 below, together with associated potential contaminants.

Table 7 Summary of potential sources of ground contamination

Potential sources of contamination	Common contaminants
Historical land uses. Light industrial works including a confectionery works and engineering works, a plant room and machinery shop when the derelict building on site was used as part of the Gillette factory.	Oils, fats and surfactants including oxidising agents, electrical equipment may have contained polychlorinated biphenyls (PCBs),
Current land use. Part of the site is used as a car park. The car park may be a source of potential contamination from leaks and spills from vehicles.	Oils and fuel (total petroleum hydrocarbons (TPH) and polycyclic aromatic hydrocarbons (PAH)).
Historical electricity substation	Polychlorinated biphenyls (PCBs), transformer oils
Historical Made Ground	Metals, TPH, PAH, asbestos. Ground gas may be generated by historic fill although typically this would likely be at a low rate.
Observed hydrocarbon staining within the Head Deposits on the Gillette area of the P&G site	Oils and fuel (total petroleum hydrocarbons (TPH) and polycyclic aromatic hydrocarbons (PAH)).
Off-site sources including a steel wool factory, timber yard, a former sewage works, peat deposits (generating high concentrations of methane) and parts of the adjacent Gillette factory including chemical and bulk storage, a boiler house, chiller room and aboveground tanks.	Metals, preservatives containing tar oils (e.g. creosote), tributyltin, phenols, pesticides, asbestos. Ground gas may be generated by historic infilling Oils and fuel (TPH and PAH).

5.3 Potential receptors

The following potential receptors have been identified during construction works and future occupation following development of the site:

- Construction workers and neighbours during development;
- Site users after development. This will include workers, maintenance staff and visitors;
- Groundwater within the secondary A aquifer and principal aquifer; and
- Building materials and services.

5.4 Potential pathways

Potential pathways that may be present during redevelopment and operation include:

- Human health by ingestion of soils and/or dust, dermal contact with soils, dust or groundwater and inhalation of dust, vapour or soil gas;
- Controlled waters by leaching from overlying soils and migration of dissolved phase contamination;
- Controlled waters by migration of free phase contamination (if present, for instance from off-site tanks), or via preferential pathways (if created by piling or penetrative construction techniques) to groundwater aquifers and human receptors by vapour inhalation; and
- Ground gas by ingress into the building.

The current development involves the part retention and refurbishment of the existing building on site, erection of a three storey research and development building, erection of a multi-storey car park with associated access, surface car parking, servicing and soft landscaping.

5.5 Summary

A summary of the initial plausible pollutant linkages related to the proposed development are presented in Table 8 below.

Table 8 Initial plausible pollutant linkages

Sources	Pathways	Receptors
Contaminants within Made Ground arising from historical site uses	Direct contact with soil and dust including dermal contact, ingestion and inhalation	Future site users
	Direct contact with soil and dust including dermal contact, ingestion and inhalation	Construction workers
	Inhalation of soil dust, fibres and vapours	Site neighbours

Sources	Pathways	Receptors
	Leaching of soil contaminants to groundwater and transport via intergranular flow	Secondary A aquifer and principal aquifer underlying the site This will be limited due the presence of impermeable London Clay
	Direct contact with contaminated soil or groundwater	Fabric of building and infrastructure
Free phase hydrocarbons from on-site and/or off-site sources	Inhalation of vapours from soil or groundwater indoors and outdoors	Future site users
	Inhalation of vapours from soil or groundwater outdoors	Construction workers
	Migration via intergranular flow or migration of free phases as a non-aqueous liquid (NAPL)	Secondary A aquifer and principal aquifer underlying the site
Made Ground with a high organic content generating ground gas	Inhalation following ingress into buildings	Future site users and visitors
	Migration into building, build-up of gas leading to explosion	Fabric of building and infrastructure and site users

6 Preliminary risk assessment

6.1 Introduction

A preliminary risk assessment has been undertaken based on the historical use, the environmental setting and current use of the site. The risk characterisations provided below have been qualitatively assessed using a range from very high to very low. The risk classifications have been based on the CIRIA guidance C552 [6] and professional judgement.

An additional classification of negligible risk is used when there is no PPL between identified hazards and the receptors due to the absence of a pathway or receptor (i.e. without intervention).

6.2 Site sensitivity

With regard to land use and ecology the site is not located in an environmentally sensitive area and there are no designated sensitive areas within 500m.

The closest surface water receptor is Foudry Brook located approximately 500m to the west. Beneath Made Ground, the ground conditions comprise Head deposits, London Clay which is unproductive and the Lambeth Group which includes lower permeable layers designated as a secondary A aquifer and which forms part of the Chalk-Basal Sands aquifer. The Made Ground and Head deposits are separated from the underlying aquifer by a thickness of London Clay of approximately 10m.

The site is not situated within a SPZ for potable water supply. The closest groundwater abstraction is from the Chalk and located 240m west of the site.

The proposed development is envisaged to comprise the redevelopment of Building D, and an extension to this building for laboratory and office use; as well as the construction of car parking areas on the site. There will be some soft landscaping proposed as part of this development.

The sensitivity of the site is considered to be **low**.

6.3 Potential for contamination

Potential sources of contamination on site relate to the current site use as a car park, historical light industrial uses and as part of the Gillette factory. Historical Made Ground is likely to be present based on the recent ground investigation and the underlying Head deposits may be contaminated with hydrocarbons as noted on the adjoining Gillette area of the P&G site. The building that was located on the northern section of site which was demolished in 2015 and surfacing on this area now comprises loose gravel. Depending on how much material was excavated during demolition, Made Ground is likely to remain and may be a source of contamination.

No evidence of fuel storage was identified on site (the current building is derelict) although an old boiler house was inaccessible during the site reconnaissance. It may have used coal and/or heating oil for fuel in the past.

The recent use as a car park may have resulted in localised contamination due to spills and leaks of oils and fuels from vehicles. The site is considered to have a generally **low to moderate** potential for significant contamination.

6.4 Risk of harm to human health

6.4.1 Construction workers and neighbours during development

During development, construction workers may come into contact with historical Made Ground through dermal contact, ingestion and inhalation. In addition, neighbours may be affected by fugitive dust, odours and/ or vapour during excavation works.

The risk of harm to human health during construction works can be mitigated by wearing appropriate PPE and adopting good hygiene practices, and good site management, including hygiene facilities and having separate designated areas for work. If more elevated contamination is identified; which might include spills and leaks, asbestos in the Made Ground, or buried wastes; then additional precautions and measures during the works may be required.

Construction workers and neighbours may be at risk from inhalation of soil dust, fibres and vapours. There is a potential for asbestos contamination in Made Ground. The presence of asbestos could pose a risk to construction workers and neighbours via inhalation of fibres and would require mitigation.

The risk of harm to construction workers and neighbours is considered to be **low** across the site, assuming asbestos is not encountered and no wide spread contamination is confirmed by the investigation in the Made Ground. The ground conditions should be confirmed by ground investigation.

6.4.2 Site users after development

The anticipated development involves the existing building on site being part demolished and then extended for laboratory and office use. The remainder of the site will comprise a multi-storey car park, which may include a basement level, and surface level parking. There will be no excavation of the ground beneath the existing building (although piling may be undertaken) and so it is likely that the ground floor slab will provide a significant barrier to any potential contamination for the ingestion and dermal contact pathways. If a basement level is included during the construction of the car park then the basement slab should provide a significant barrier to any potential contamination.

The surface parking will be hard cover and after development there will be no active PPL between underlying soils and future users of the car park. If significant maintenance occurs in the future, workers may encounter Made Ground. The risk

to maintenance workers will be defined following investigation, in a similar manner to that described in 6.4.1.

There will be some soft landscaping which will be provided as part of the development.

The risk of harm to human health of future site users is assessed to be **low**. Ground investigation will be required to identify if there is any contamination related to the previous site uses which may require remediation.

6.5 Risk of pollution to controlled waters

The site has a low environmental sensitivity due to the distance to any potential surface water receptors, and the low sensitivity of the deep aquifer and lack of abstractions in the vicinity.

There is the potential, although low, for free product or dissolved phase organic contaminants (hydrocarbons and chlorinated solvents) to be present on site, possibly related to contamination from historical off-site sources migrating onto site. The potential for migration of any contamination that is on-site, to a controlled waters receptor (principally the secondary aquifer in the Lambeth Group) will be limited by the presence of the underlying London Clay. There are no surface water receptors close to the site.

The risk of pollution to controlled waters is assessed to be **very low**.

6.6 Building materials and services

Building materials including concrete, metal and plastic placed within contaminated ground can be subject to degradation from contact with contaminants. This is particularly an issue with plastic water supply pipes laid within hydrocarbon impacted soils, which can ultimately lead to contamination of drinking water supplies.

The proposed development on site involves the renovation and extension of the existing building and therefore it is expected that there will be a need to specify concrete class for use in foundations, along with other materials and water supply pipes. If significant contamination is identified it may also be necessary to lay services within clean service corridors.

With regard to development of surface parking, new drainage services may be installed and concrete will be directly in contact with Made Ground. The drainage is unlikely to be affected by the chemical ground conditions and the results of the investigation reported low levels of hydrocarbons. The concrete class will be specified based on the results which will resist potentially aggressive ground.

The risk of damage due to materials and services due to direct contact with contaminated soils is assessed to be **very low**.

7 Conclusions and recommendations

7.1 Conclusions

A desk based review and assessment of potential risks from contamination has been undertaken for the site using the information sources described.

A review of the site history has identified that the site has been used for light industrial uses since the late 1950's. The existing building (Building D in Table 3) on site has been derelict since the early 2000s. The building in the northern section of the site was demolished in 2015 and currently comprises a flat area covered in loose stone.

Potentially contaminative sources have been identified based on the previous use of the site, review of Local Authority search results and activities identified during a site reconnaissance visit. The main sources identified were historical and existing uses and historical Made Ground. Made Ground is likely to be present. It is not unusual for Made Ground to include demolition materials and ash. Most significant previous industrial uses and fuel storage has been off site.

The potential for significant widespread contamination on site is considered to be generally **low**.

The site has been identified as having a **low** environmental sensitivity based on the existing site conditions. There are no nationally designated ecological receptors within 500m of the site and the closest surface water feature is Foudry Brook located approximately 500m away. The site is not situated in an SPZ for potable water supply. The closest groundwater abstraction is from the Chalk and located 240m to the west. There is London Clay below the Made Ground, likely to be over 10m thick, protecting the secondary aquifer. The proposed development is considered to have a **low** sensitivity as it does include some areas of soft landscaping.

A summary of the appraisal included in this report is presented in Table 9 below.

Table 9 Summary of qualitative risk assessment for site

Item	**Qualitative assessment**
Environmental sensitivity	Low
Development sensitivity	Low
Potential for significant contamination to be present	Generally low to moderate
	Risk assessment
Risk of harm to human health during development	Generally low but increasing if free product or asbestos identified in the ground.
Risk of harm to human health after development	Low
Risk of pollution to controlled waters	Very low
Building services and materials	Very low

7.2 Recommendations

7.2.1 Ground investigation

The site has also been identified for future investigation under the Council's Part 2A inspection strategy. Although the Local Authority would not be likely to instigate such intervention, as part of the planned development it is likely that the Local Authority would require that a ground investigation is carried out, in relation to the potential presence of existing or historical sources of contamination, as part of conditions placed on any planning permission.

It is recommended that a ground investigation is carried out as part of the redevelopment of the site. The geoenvironmental investigation, which can be undertaken in parallel and combined with any geotechnical investigation required prior to development, should comprise excavation of boreholes, trial pits or windowless sampling holes spaced across the site to provide general spatial coverage. In addition, the investigation should include targeted locations near any identified potential point sources of contamination, and at the boundary with off-site sources.

The scope of the ground investigation should comprise sampling and testing of soil strata, and in particular the Made Ground. The investigation would also include installation, monitoring and sampling of groundwater and gas and vapour monitoring wells. Ground investigation may be undertaken in multiple phases, for example prior to and post-demolition depending on the access available. The ground investigation techniques should be in accordance with BS10175 2013 [7] and other British Standards. The results of the investigation would inform health and safety measures during subsequent site works and the potential waste classification of arisings during development.

7.2.2 Risk assessment

The results of the ground investigation should be used to inform an interpretative report which would quantify the levels of contamination in terms of the risks to the receptors. The conceptual site model and preliminary risk assessment presented here should be updated in light of the ground investigation findings, and, if required, a remediation strategy should be devised to mitigate any identified risks.

7.2.3 Remediation

Depending on the findings of the intrusive investigation and the levels of contamination identified, on-site remediation measures could be required. These could include targeted excavation and removal of contamination hotspots, and/or other techniques such as specific clean-up techniques for on-site contamination if identified.

If specific remediation measures are recommended for the site, verification records will need to be kept, which could include: verification soil sampling results, air or dust monitoring records and waste disposal tickets and testing. This

information will then need to be presented in a verification report. General records should be kept in any case demonstrating good practice in safety, materials management and waste disposal.

7.2.4 Asbestos in soils

If asbestos was identified in soils on site, works may need to be licenced or notifiable under the Control of Asbestos Regulations (CAR) 2012 and/or specific health and safety measures and monitoring may need to be put in place during development.

7.2.5 Decommissioning

Development on the site is envisaged to comprise renovation and subsequent extension of the existing building. Given the age of the existing building on site, materials will require careful control and handling during renovation works. Prior to development works all potential contamination sources identified during the site reconnaissance visit, should be safely decommissioned and removed from site.

References

[1] Groundsure (2016) Groundsure Report, Procter & Gamble, 452 Basingstoke Road, Reading RG2 0QE. Reference: GS-2723760.

[2] British Geological Survey, OpenGeoscience website (historical borehole log scans) – accessed June 2016. http://www.bgs.ac.uk/opengeoscience/

[3] Soils Limited (2016) Ground Investigation Report, Reference 15573/GIR.

[4] Department for Communities and Local Government (2012): National Planning Policy Framework, HMSO.

[5] Department for Environment, Food and Rural Affairs (April 2012), Environmental Protection Act 1990: Part 2A, Contaminated Land Statutory Guidance.

[6] CIRIA (2001) Contaminated Land Risk Assessment – Guide to Good Practice (C552).

[7] BSI (2013) Investigation of potentially contaminated sites – Code of practice (BS10175 A1:2013).

Appendix A

Groundsure report

A1 EnviroInsight

Ove Arup & Partners International Ltd

OVE ARUP & PARTNERS,13, FITZROY STREET, LONDON, W1T 4BQ

Groundsure Reference:	GS-3078902
Your Reference:	249765-00
Report Date	20 Jun 2016
Report Delivery Method:	Email - pdf

Groundsure Enviro Insight

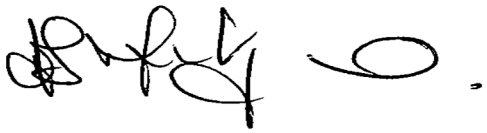
Address: Procter & Gamble, 452, BASINGSTOKE ROAD, READING, RG2 0QE

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Enviro Insight** as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above Groundsure reference number.

Yours faithfully,



Managing Director
Groundsure Limited

Enc.
Groundsure Enviroinsight

Groundsure Enviro Insight

Address:	**Procter & Gamble, 452, BASINGSTOKE ROAD, READING, RG2 0QE**
Date:	**20 Jun 2016**
Reference:	**GS-3078902**
Client:	**Ove Arup & Partners International Ltd**

NW N NE



W E

SW S SE

Aerial Photograph Capture date:	11-Jul-2013
Grid Reference:	471647,170386
Site Size:	1.59ha

Report Reference: GS-3078902
Client Reference: 249765-00

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Overview of Findings

For further details on each dataset, please refer to each individual section in the main report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Section 1: Historical Industrial Sites	On-site	0-50	51-250	251-500
1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	9	2	33	89
1.2 Additional Information – Historical Tank Database	0	10	56	81
1.3 Additional Information – Historical Energy Features Database	4	4	19	65
1.4 Additional Information – Historical Petrol and Fuel Site Database	0	0	0	0
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	0	0	5	1
1.6 Potentially Infilled Land	0	0	5	14

Section 2: Environmental Permits, Incidents and Registers	On-site	0-50m	51-250	251-500
2.1 Industrial Sites Holding Environmental Permits and/or Authorisations				
2.1.1 Records of historic IPC Authorisations	0	0	0	0
2.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	4	0
2.1.3 Records of Red List Discharge Consents	0	0	0	0
2.1.4 Records of List 1 Dangerous Substances Inventory sites	0	0	0	2
2.1.5 Records of List 2 Dangerous Substances Inventory sites	0	0	0	8
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	0	3	2
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	8	0
2.1.8 Records of Licensed Discharge Consents	0	0	0	6
2.1.9 Records of Water Industry Referrals	0	0	0	0
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	4	0	0
2.2 Records of COMAH and NIHHS sites	2	0	0	1
2.3 Environment Agency Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	0	0	4	1
2.3.2 National Incidents Recording System, List 1	0	0	0	0
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0

Section 3: Landfill and Other Waste Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-1500
3.1 Landfill Sites						
3.1.1 Environment Agency Registered Landfill Sites	0	0	0	0	2	Not searched
3.1.2 Environment Agency Historic Landfill Sites	0	0	1	1	7	1
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	2	0
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	0	0	0	7	0
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	1	Not searched	Not searched
3.2.2 Environment Agency Licensed Waste Sites	0	0	5	3	10	12

Section 4: Current Land Use

	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	1	2	49	Not searched
4.2 Records of Petrol and Fuel Sites	0	0	0	0
4.3 National Grid Underground Electricity Cables	0	0	0	0
4.4 National Grid Gas Transmission Pipelines	0	0	0	0

Section 5: Geology

5.1 Are there any records of Artificial Ground and Made Ground present beneath the study site?	No
5.2 Are there any records of Superficial Ground and Drift Geology present beneath the study site?	None
5.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.	

Section 6: Hydrogeology and Hydrology

	0-500m
6.1 Are there any records of Strata Classification in the Superficial Geology within 500m of the study site?	Yes
6.2 Are there any records of Strata Classification in the Bedrock Geology within 500m of the study site?	Yes

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
6.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	1	1	5	27
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	7
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	2	18
6.6 Source Protection Zones (within 500m of the study site)	0	0	0	0	Not searched	Not searched
6.7 Source Protection Zones within Confined Aquifer	0	0	0	0	Not searched	Not searched
6.8 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site)	0	0	0	1	Not searched	Not searched

	On-site	0-50m	51-250	251-500	501-1000	1000-1500

Section 6: Hydrogeology and Hydrology	0-500m					
6.9 Is there any Environment Agency information on river quality within 1500m of the study site?	No	No	No	No	Yes	Yes
6.10 Detailed River Network entries within 500m of the site	0	0	0	2	Not searched	Not searched
6.11 Surface water features within 250m of the study site	No	No	No	Not searched	Not searched	Not searched

Section 7: Flooding	
7.1 Are there any Enviroment Agency Zone 2 floodplains within 250m of the study site?	No
7.2 Are there any Environment Agency Zone 3 floodplains within 250m of the study site	No
7.3 What is the Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site?	Very Low
7.4 Are there any Flood Defences within 250m of the study site?	No
7.5 Are there any areas benefiting from Flood Defences within 250m of the study site?	No
7.6 Are there any areas used for Flood Storage within 250m of the study site?	No
7.7 What is the maximum BGS Groundwater Flooding susceptibility within 50m of the study site?	Not Prone
7.8 What is the BGS confidence rating for the Groundwater Flooding susceptibility areas?	Not Applicable

Section 8: Designated Environmentally Sensitive Sites	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	0	0
8.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
8.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	0
8.4 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
8.5 Records of Ramsar sites	0	0	0	0	0	0
8.6 Records of Ancient Woodlands	0	0	0	0	0	2
8.7 Records of Local Nature Reserves (LNR)	0	0	0	0	0	1
8.8 Records of World Heritage Sites	0	0	0	0	0	0
8.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0
8.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	0	0

Section 8: Designated Environmentally Sensitive Sites	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.11 Records of National Parks	0	0	0	0	0	0
8.12 Records of Nitrate Sensitive Areas	0	0	0	0	0	0
8.13 Records of Nitrate Vulnerable Zones	1	0	0	1	0	2
8.14 Records of Green Belt land	0	0	0	0	0	0

Section 9: Natural Hazards

9.1 What is the maximum risk of natural ground subsidence?	Low
9.1.1 What is the maximum Shrink-Swell hazard rating identified on the study site?	Low
9.1.2 What is the maximum Landslides hazard rating identified on the study site?	Very Low
9.1.3 What is the maximum Soluble Rocks hazard rating identified on the study site?	Negligible
9.1.4 What is the maximum Compressible Ground hazard rating identified on the study site?	Negligible
9.1.5 What is the maximum Collapsible Rocks hazard rating identified on the study site?	Very Low
9.1.6 What is the maximum Running Sand hazard rating identified on the study site?	Negligible
9.2 Radon	
9.2.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.
9.2.2 Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	No radon protective measures are necessary.

Section 10: Mining

10.1 Are there any coal mining areas within 75m of the study site?	No
10.2 Are there any Non-Coal Mining areas within 50m of the study site boundary?	Yes
10.3 Are there any brine affected areas within 75m of the study site?	No

Using this report

The following report is designed by Environmental Consultants for Environmental Professionals bringing together the most up-to-date market leading environmental data. This report is provided under and subject to the Terms & Conditions agreed between Groundsure and the Client. The document contains the following sections:

1. Historical Industrial Sites

Provides information on past land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. Potentially Infilled Land features are also included. This search is conducted using radii of up to 500m.

2. Environmental Permits, Incidents and Registers

Provides information on Regulated Industrial Activities and Pollution Incidents as recorded by Regulatory Authorities, and sites determined as Contaminated Land. This search is conducted using radii up to 500m.

3. Landfills and Other Waste Sites

Provides information on landfills and other waste sites that may pose a risk to the study site. This search is conducted using radii up to 1500m.

4. Current Land Uses

Provides information on current land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. These searches are conducted using radii of up to 500m. This includes information on potentially contaminative industrial sites, petrol stations and fuel sites as well as high pressure gas pipelines and underground electricity transmission lines.

5. Geology

Provides information on artificial and superficial deposits and bedrock beneath the study site.

6. Hydrogeology and Hydrology

Provides information on productive strata within the bedrock and superficial geological layers, abstraction licenses, Source Protection Zones (SPZs) and river quality. These searches are conducted using radii of up to 2000m.

7. Flooding

Provides information on river and coastal flooding, flood defences, flood storage areas and groundwater flood areas. This search is conducted using radii of up to 250m.

8. Designated Environmentally Sensitive Sites

Provides information on the Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, Local Nature Reserves (LNR), Areas of Outstanding Natural Beauty (AONB), National Parks (NP), Environmentally Sensitive Areas, Nitrate Sensitive Areas, Nitrate Vulnerable Zones and World Heritage Sites and Scheduled Ancient Woodland. These searches are conducted using radii of up to 2000m.

9. Natural Hazards

Provides information on a range of natural hazards that may pose a risk to the study site. These factors include natural ground subsidence and radon..

10. Mining

Provides information on areas of coal and non-coal mining and brine affected areas.

11. Contacts

This section of the report provides contact points for statutory bodies and data providers that may be able to provide further information on issues raised within this report. Alternatively, Groundsure provide a free Technical Helpline (08444 159000) for further information and guidance.

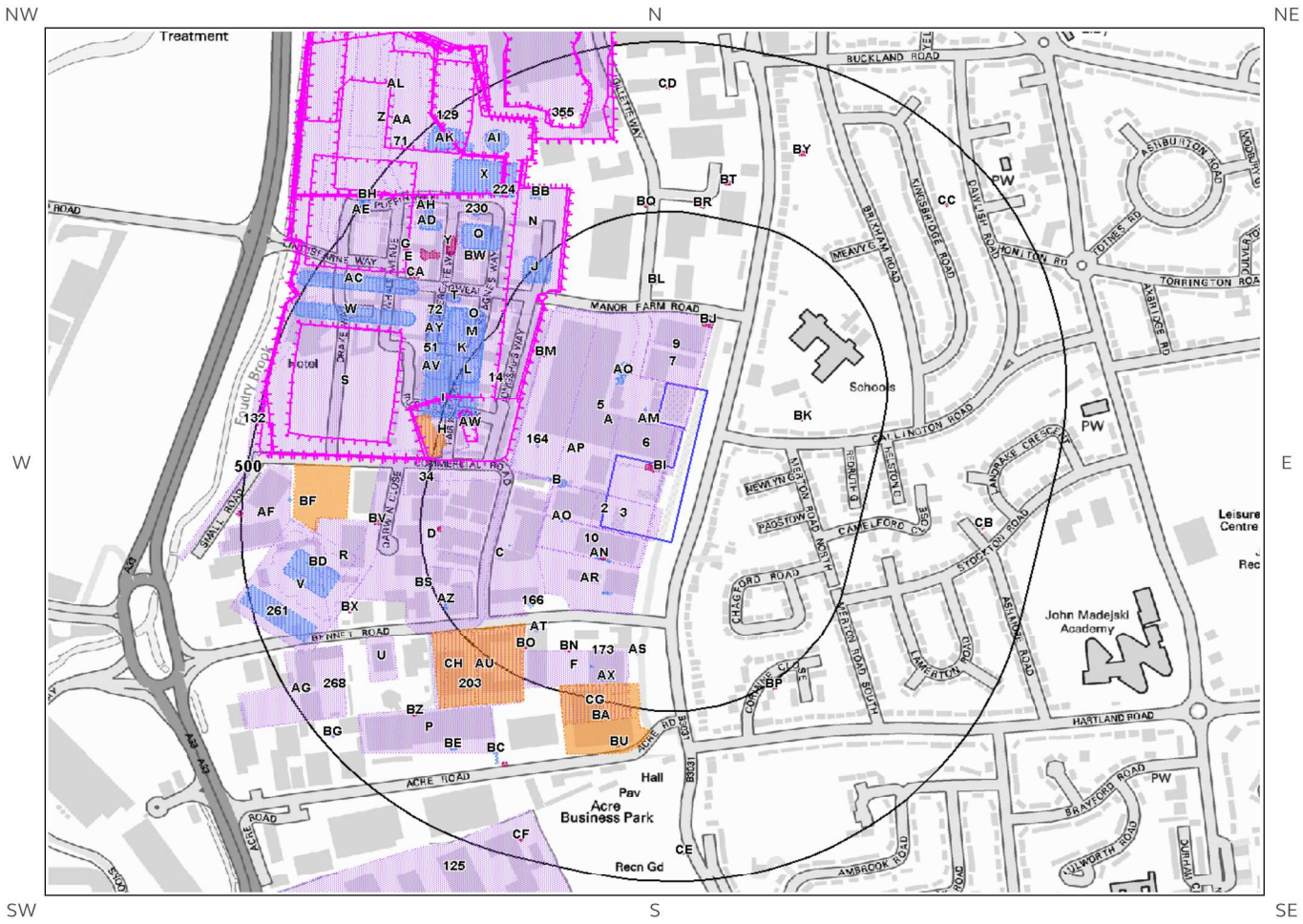
Note: Maps

Only certain features are placed on the maps within the report. All features represented on maps found within this search are given an identification number. This number identifies the feature on the mapping and correlates it to the additional information provided below. This identification number precedes all other information and takes the following format -Id: 1, Id: 2, etc. Where numerous features on the same map are in such close proximity that the numbers would obscure each other a letter identifier is used instead to represent the features. (e.g. Three features which overlap may be given the identifier “A” on the map and would be identified separately as features 1A, 3A, 10A on the data tables provided).

Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as “Not Shown”.

All distances given in this report are in Metres (m). Directions are given as compass headings such as N: North, E: East, NE: North East from the nearest point of the study site boundary.

1. Historical Land Use



Historical 1:10,000 and 1:10,560 scale mapping

Industrial Land Use

Potentially Infilled Land

Site Outline

Search Buffers (m)

250

500

Historical 1:2,500, 1:1,250 and 1:500 scale mapping

Energy Features

Petrol Stations

Tanks

Garages

1. Historical Industrial Sites

1.1 Potentially Contaminative Uses identified from 1:10,000 scale Mapping

The systematic analysis of data extracted from standard 1:10,560 and 1:10,000 scale historical maps provides the following information:

Records of sites with a potentially contaminative past land use within 500m of the search boundary: 133

ID	Distance [m]	Direction	Use	Date
1A	0	On Site	Unspecified Commercial/Industrial	1971
2	0	On Site	Unspecified Works	1962
3	0	On Site	Unspecified Works	1977
4A	0	On Site	Unspecified Factory	1989
5	0	On Site	Unspecified Factory	1977
6	0	On Site	Unspecified Works	1962
7	0	On Site	Unspecified Depot	1962
8A	0	On Site	Unspecified Factory	1994
9	0	N	Unspecified Factory	1977
10	3	S	Unspecified Factory	1977
11AR	47	S	Unspecified Depot	1962
12B	67	W	Unspecified Tank	1989
13B	67	W	Unspecified Tank	1994
14	74	W	Unspecified Commercial/Industrial	1962
15C	77	W	Unspecified Works	1962
16C	77	W	Unspecified Commercial/Industrial	1971
17D	139	W	Unspecified Works	1994
18D	139	W	Unspecified Works	1989
19E	148	W	Sewage Works	1989
20E	148	W	Sewage Works	1994
21G	159	NW	Sewage Purification Works	1977
22AS	169	S	Unspecified Tank	1913
23F	170	S	Unspecified Factory	1989
24F	170	S	Unspecified Factory	1977
25F	170	S	Unspecified Factory	1994
26AU	181	SW	Bus Depot	1962
27G	190	NW	Sewage Purification Works	1971
28AW	194	W	Unspecified Heap	1962
29H	204	W	Isolation Hospital	1962
30H	204	W	Unspecified Works	1977
31I	214	W	Unspecified Tanks	1989

32I	214	W	Unspecified Tanks	1994
33CG	219	S	Unspecified Warehouse	1962
34	219	W	Unspecified Works	1977
35K	222	NW	Unspecified Tanks	1962
36J	225	NW	Unspecified Tanks	1994
37J	225	NW	Unspecified Tanks	1977
38J	225	NW	Unspecified Tanks	1989
39K	227	NW	Unspecified Tanks	1989
40K	227	NW	Unspecified Tanks	1977
41K	227	NW	Unspecified Tanks	1994
42L	229	NW	Unspecified Tank	1971
43CH	236	SW	Unspecified Depot	1977
44K	242	NW	Unspecified Tank	1971
45L	253	NW	Unspecified Tank	1971
46M	258	NW	Unspecified Tank	1971
47K	265	NW	Unspecified Tank	1971
48O	274	NW	Unspecified Tanks	1971
49AV	278	NW	Unspecified Tank	1971
50M	279	NW	Unspecified Tank	1971
51	289	NW	Unspecified Tank	1971
52N	293	NW	Unspecified Tank	1938
53N	293	NW	Unspecified Tank	1913
54O	295	NW	Unspecified Tanks	1971
55AY	303	NW	Unspecified Tank	1971
56P	304	SW	Unspecified Works	1989
57P	304	SW	Unspecified Works	1977
58P	304	SW	Unspecified Works	1994
59Q	307	NW	Unspecified Tanks	1994
60Q	307	NW	Unspecified Tanks	1989
61Q	307	NW	Unspecified Tanks	1977
62R	309	W	Unspecified Depot	1977
63R	309	W	Unspecified Depot	1989
64R	309	W	Unspecified Depot	1994
65S	316	W	Filter Bed	1994
66S	316	W	Filter Bed	1977
67S	316	W	Filter Bed	1989
68T	316	W	Unspecified Tanks	1994
69T	316	W	Unspecified Tanks	1977
70T	316	W	Unspecified Tanks	1989
71	316	NW	Unspecified Works	1962
72	317	NW	Unspecified Tank	1971
73T	318	W	Unspecified Tank	1971
74Q	323	NW	Unspecified Tanks	1971
75V	324	W	Unspecified Works	1962
76U	332	SW	Unspecified Works	1977

77U	332	SW	Unspecified Commercial/Industrial	1989
78U	332	SW	Unspecified Commercial/Industrial	1994
79Q	332	NW	Unspecified Tanks	1971
80	332	NW	Railway Sidings	1962
81V	342	W	Unspecified Tanks	1962
82V	342	W	Unspecified Tanks	1971
83W	349	NW	Unspecified Tanks	1994
84W	349	NW	Unspecified Tanks	1971
85W	349	NW	Unspecified Tanks	1977
86W	349	NW	Unspecified Tanks	1989
87X	350	NW	Unspecified Tanks	1994
88X	350	NW	Unspecified Tanks	1989
89X	350	NW	Unspecified Tanks	1977
90Y	355	NW	Unspecified Tanks	1994
91Y	355	NW	Unspecified Tanks	1989
92Y	355	NW	Unspecified Tanks	1977
93Y	355	NW	Unspecified Tanks	1971
94Z	357	NW	Corporation Sewage Works	1933
95Z	358	NW	Sewage Works	1938
96AA	360	NW	Sewage Works	1938
97AA	360	NW	Sewage Works	1938
98AB	366	N	Unspecified Heap	1962
99AB	366	N	Unspecified Ground Workings	1971
100AJ	366	N	Unspecified Ground Workings	1977
101AC	373	NW	Unspecified Tanks	1994
102AC	373	NW	Unspecified Tanks	1989
103AC	373	NW	Unspecified Tanks	1971
104AC	373	NW	Unspecified Tanks	1977
105AD	392	NW	Unspecified Tanks	1994
106AD	392	NW	Unspecified Tanks	1989
107AD	392	NW	Unspecified Tanks	1971
108AD	392	NW	Unspecified Tanks	1977
109AE	398	NW	Filter Bed	1994
110AE	398	NW	Filter Bed	1989
111AE	398	NW	Filter Bed	1977
112AF	399	W	Unspecified Works	1977
113AF	399	W	Unspecified Works	1989
114AF	399	W	Unspecified Works	1994
115AG	401	SW	Unspecified Depot	1989
116AG	401	SW	Unspecified Depot	1994
117AH	411	NW	Unspecified Tanks	1994
118AH	411	NW	Unspecified Tanks	1971

119AH	411	NW	Unspecified Tanks	1989
120AH	411	NW	Unspecified Tanks	1977
121AI	412	NW	Unspecified Tank	1994
122AI	412	NW	Unspecified Tank	1989
123AJ	416	N	Unspecified Warehouse	1994
124AJ	416	N	Unspecified Warehouse	1989
125	428	S	Industrial Estate	1988
126AK	440	NW	Unspecified Tanks	1994
127AK	440	NW	Unspecified Tanks	1989
128AL	443	NW	Filter Beds	1977
129	446	NW	Unspecified Tanks	1971
130AL	456	NW	Railway Sidings	1933
131AL	459	NW	Railway Sidings	1938
132	476	NW	Tramway Sidings	1913
133AE	496	NW	Tramway Sidings	1913

1.2 Additional Information – Historical Tank Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical tanks within 500m of the search boundary: 147

ID	Distance (m)	Direction	Use	Date
134AM	9	W	Unspecified Tank	1996
135AM	13	W	Unspecified Tank	1989
136AM	17	W	Unspecified Tank	1988
137AM	18	W	Unspecified Tank	1988
138AN	43	S	Unspecified Tank	1996
139AN	43	S	Unspecified Tank	1989
140AN	44	S	Unspecified Tank	1966
141AN	44	S	Unspecified Tank	1968
142AN	46	S	Unspecified Tank	1996
143AN	47	S	Unspecified Tank	1989
144AO	52	W	Unspecified Tank	1996
145AO	52	W	Unspecified Tank	1989
146AP	56	W	Unspecified Tank	1989
147AP	56	W	Unspecified Tank	1996
148AQ	58	W	Tanks	1965
149AQ	58	W	Tanks	1966
150AQ	58	W	Unspecified Tank	1988
151AQ	59	W	Unspecified Tank	1988
152AQ	59	W	Tanks	1988
153B	59	W	Unspecified Tank	1996

154B	60	W	Unspecified Tank	1989
155AQ	60	W	Tanks	1988
156AQ	60	NW	Tanks	1988
157AQ	61	NW	Tanks	1988
158AQ	66	W	Tanks	1988
159AQ	68	W	Tanks	1988
160B	75	W	Unspecified Tank	1996
161B	84	W	Unspecified Tank	1989
162AR	92	S	Unspecified Tank	1966
163AR	92	S	Unspecified Tank	1968
164	109	W	Unspecified Tank	1974
165C	127	W	Unspecified Tank	1974
166	143	SW	Tanks	1936
167AS	167	S	Unspecified Tank	1911
168AS	167	S	Unspecified Tank	1936
169AT	175	SW	Unspecified Tank	1974
170AT	176	SW	Unspecified Tank	1995
171AT	176	SW	Unspecified Tank	1987
172AU	177	SW	Gas Depot	1974
173	182	S	Unspecified Tank	1966
174F	203	S	Unspecified Tank	1996
175F	204	S	Unspecified Tank	1989
176AV	205	W	Tanks	1993
177AW	205	W	Tanks	1987
178AW	205	W	Tanks	1987
179AW	205	W	Tanks	1995
180AX	215	S	Unspecified Tank	1996
181AX	216	S	Unspecified Tank	1989
182J	221	NW	Tanks	1988
183J	221	NW	Tanks	1988
184K	223	NW	Tanks	1958
185K	223	NW	Tanks	1966
186AY	224	NW	Tanks	1976
187K	224	NW	Tanks	1965
188AY	224	NW	Tanks	1980
189K	224	NW	Tanks	1957
190J	230	NW	Tanks	1976
191J	231	NW	Tanks	1993
192J	231	NW	Tanks	1980
193AZ	241	SW	Tanks	1974
194AZ	241	SW	Tanks	1987
195AZ	241	SW	Tanks	1987
196AZ	241	SW	Tanks	1995
197AZ	242	SW	Unspecified Tank	1966
198AZ	242	SW	Unspecified Tank	1967
199AZ	243	SW	Tanks	1974

200BS	259	W	Unspecified Tank	1995
201BA	274	S	Unspecified Tank	1989
202BA	275	S	Unspecified Tank	1996
203	292	SW	Tanks	1974
204N	297	NW	Unspecified Tank	1911
205Q	305	NW	Tanks	1976
206Q	305	NW	Tanks	1980
207Q	306	NW	Tanks	1993
208T	312	NW	Unspecified Tank	1980
209T	312	NW	Unspecified Tank	1976
210T	313	NW	Tanks	1993
211BB	320	NW	Unspecified Tank	1988
212Q	321	NW	Digestion Tanks	1965
213Q	321	NW	Digestion Tank	1966
214BB	322	NW	Tanks	1980
215W	343	NW	Tanks	1966
216X	344	NW	Tanks	1976
217X	344	NW	Tanks	1965
218W	344	NW	Tanks	1976
219W	344	NW	Tanks	1980
220W	344	NW	Tanks	1965
221X	345	NW	Tanks	1980
222W	345	NW	Tanks	1993
223X	345	NW	Tanks	1966
224	349	NW	Sludge Tanks	1936
225Y	351	NW	Gas Holders	1980
226Y	352	NW	Gas Holders	1966
227Y	352	NW	Gas Holders	1976
228Y	352	NW	Gas Holders	1965
229Y	353	NW	Gas Holders	1993
230	358	NW	Unspecified Tank	1993
231BC	359	SW	Unspecified Tank	1995
232BC	367	SW	Unspecified Tank	1997
233AC	367	NW	Tanks	1980
234AC	368	NW	Tanks	1966
235AC	368	NW	Tanks	1976
236AC	368	NW	Tanks	1965
237AC	369	NW	Tanks	1993
238BD	370	W	Tanks	1958
239BD	370	W	Tanks	1966
240V	371	W	Tanks	1967
241V	371	W	Tanks	1958
242X	374	NW	Sludge Tanks	1932
243BE	380	SW	Tanks	1967
244BE	380	SW	Tanks	1974
245BE	380	SW	Tanks	1966

246BE	380	SW	Tanks	1987
247BE	380	SW	Tanks	1987
248AD	387	NW	Tanks	1980
249AD	388	NW	Tanks	1976
250AD	389	NW	Tanks	1993
251V	392	W	Tanks	1958
252V	392	W	Tanks	1966
253AD	407	NW	Tanks	1980
254BF	407	W	Unspecified Tank	1987
255BF	407	W	Unspecified Tank	1987
256AD	407	NW	Tanks	1976
257BF	408	W	Unspecified Tank	1995
258BF	408	W	Unspecified Tank	1974
259AI	411	NW	Unspecified Tank	1980
260AI	412	NW	Unspecified Tank	1993
261	421	W	Settling Tanks	1936
262BF	431	W	Unspecified Tank	1987
263BF	431	W	Unspecified Tank	1987
264BF	432	W	Unspecified Tank	1974
265BF	432	W	Unspecified Tank	1995
266AK	435	NW	Tanks	1980
267AK	437	NW	Tanks	1993
268	438	SW	Unspecified Tank	1995
269AK	458	NW	Tanks	1976
270BG	481	SW	Unspecified Tank	1987
271BG	481	SW	Unspecified Tank	1987
272AE	489	NW	Tanks	1958
273AK	489	NW	Unspecified Tank	1980
274AE	489	NW	Tanks	1957
275AE	490	NW	Tanks	1958
276AE	491	NW	Tanks	1958
277BH	495	NW	Tanks	1958
278BH	497	NW	Tanks	1958
279BH	498	NW	Tanks	1958
280BH	499	NW	Tanks	1958

1.3 Additional Information – Historical Energy Features Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical energy features within 500m of the search boundary: 92

ID	Distance (m)	Direction	Use	Date

281BI	0	On Site	Electricity Substation	1989
282BI	0	On Site	Electricity Substation	1966
283BI	0	On Site	Electricity Substation	1996
284BI	0	On Site	Electricity Substation	1968
285AN	43	S	Electricity Substation	1996
286AN	43	S	Electricity Substation	1989
287AN	44	S	Electricity Substation	1966
288AN	44	S	Electricity Substation	1968
289BJ	91	N	Electricity Substation	1988
290BJ	93	N	Electricity Substation	1988
291BK	136	E	Electricity Substation	1996
292BK	137	E	Electricity Substation	1989
293BL	145	N	Gas Governor	1988
294BL	145	N	Gas Governor	1988
295BM	171	W	Electricity Substation	1988
296BM	172	W	Electricity Substation	1988
297AU	177	SW	Gas Depot	1974
298BN	186	S	Electricity Substation	1996
299BN	187	S	Electricity Substation	1989
300BO	204	SW	Electricity Substation	1974
301BO	205	SW	Electricity Substation	1987
302BO	205	SW	Electricity Substation	1987
303BO	205	SW	Electricity Substation	1995
304D	222	W	Electricity Substation	1974
305D	222	W	Electricity Substation	1987
306D	222	W	Electricity Substation	1987
307D	223	W	Electricity Substation	1995
308BP	255	SE	Electricity Substation	1996
309BP	255	SE	Electricity Substation	1968
310BP	255	SE	Electricity Substation	1966
311BP	255	SE	Electricity Substation	1989
312BQ	257	N	Electricity Substation	1988
313BQ	258	N	Electricity Substation	1988
314BR	260	N	Electricity Substation	1988
315BR	261	N	Electricity Substation	1988
316BS	268	W	Electricity Substation	1987
317BS	268	W	Electricity Substation	1987
318BS	270	W	Electricity Substation	1995
319BT	300	N	Electricity Substation	1988
320BT	300	N	Electricity Substation	1988
321BU	304	S	Electricity Substation	1989
322BU	305	S	Electricity Substation	1968
323BU	305	S	Electricity Substation	1966
324BV	305	W	Electricity Substation	1974
325BV	305	W	Electricity Substation	1987
326BV	305	W	Electricity Substation	1987

327BU	305	S	Electricity Substation	1996
328BV	306	W	Electricity Substation	1995
329BW	322	NW	Electricity Substation	1980
330BW	322	NW	Electricity Substation	1976
331BW	323	NW	Electricity Substation	1993
332BW	351	NW	Gas Holders	1980
333BW	352	NW	Gas Holders	1966
334BW	352	NW	Gas Holders	1965
335BW	352	NW	Gas Holders	1976
336BW	353	NW	Gas Holders	1993
337Y	365	NW	Power House	1936
338BX	368	W	Electricity Substation	1987
339BX	368	W	Electricity Substation	1974
340BX	369	W	Electricity Substation	1995
341BY	369	N	Electricity Substation	1988
342BY	370	N	Electricity Substation	1988
343BC	371	S	Electricity Substation	1995
344BC	371	S	Electricity Substation	1997
345BC	371	S	Electricity Substation	1985
346BC	371	S	Electricity Substation	1982
347BC	371	S	Electricity Substation	1985
348BC	371	S	Electricity Substation	1974
349BZ	375	SW	Electricity Substation	1974
350BZ	375	SW	Electricity Substation	1987
351BZ	375	SW	Electricity Substation	1987
352F	378	NW	Gas Governors	1976
353CA	384	NW	Gas Governors	1980
354CA	385	NW	Gas Governors	1993
355	414	N	Electricity Substation	1988
356CB	418	E	Electricity Substation	1985
357CB	419	E	Electricity Substation	1996
358CC	427	NE	Electricity Substation	1986
359CC	427	NE	Electricity Substation	1993
360CD	431	N	Electricity Substation	1988
361CD	432	N	Electricity Substation	1988
362CE	454	S	Gas Governor	1974
363CE	455	S	Gas Governor	1982
364CE	456	S	Gas Governor	1996
365CF	468	S	Electricity Substation	1985
366CF	468	S	Electricity Substation	1985
367CF	469	S	Electricity Substation	1995
368CF	469	S	Electricity Substation	1997
369AF	498	W	Electricity Substation	1987
370AF	498	W	Electricity Substation	1987
371AF	499	W	Electricity Substation	1974
372AF	499	W	Electricity Substation	1995

1.4 Additional Information – Historical Petrol and Fuel Site Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical petrol stations and fuel sites within 500m of the search boundary: 0

Database searched and no data found.

1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical garage and motor vehicle repair sites within 500m of the search boundary: 6

ID	Distance (m)	Direction	Use	Date
373AU	177	SW	Gas Depot	1974
374BA	214	S	Garage	1989
375CG	217	S	Garage	1996
376CH	233	SW	Transport Repair Depot	1974
377H	235	W	Motor Engineering Works	1974
378BF	353	W	Motor Body Works	1974

1.6 Potentially Infilled Land

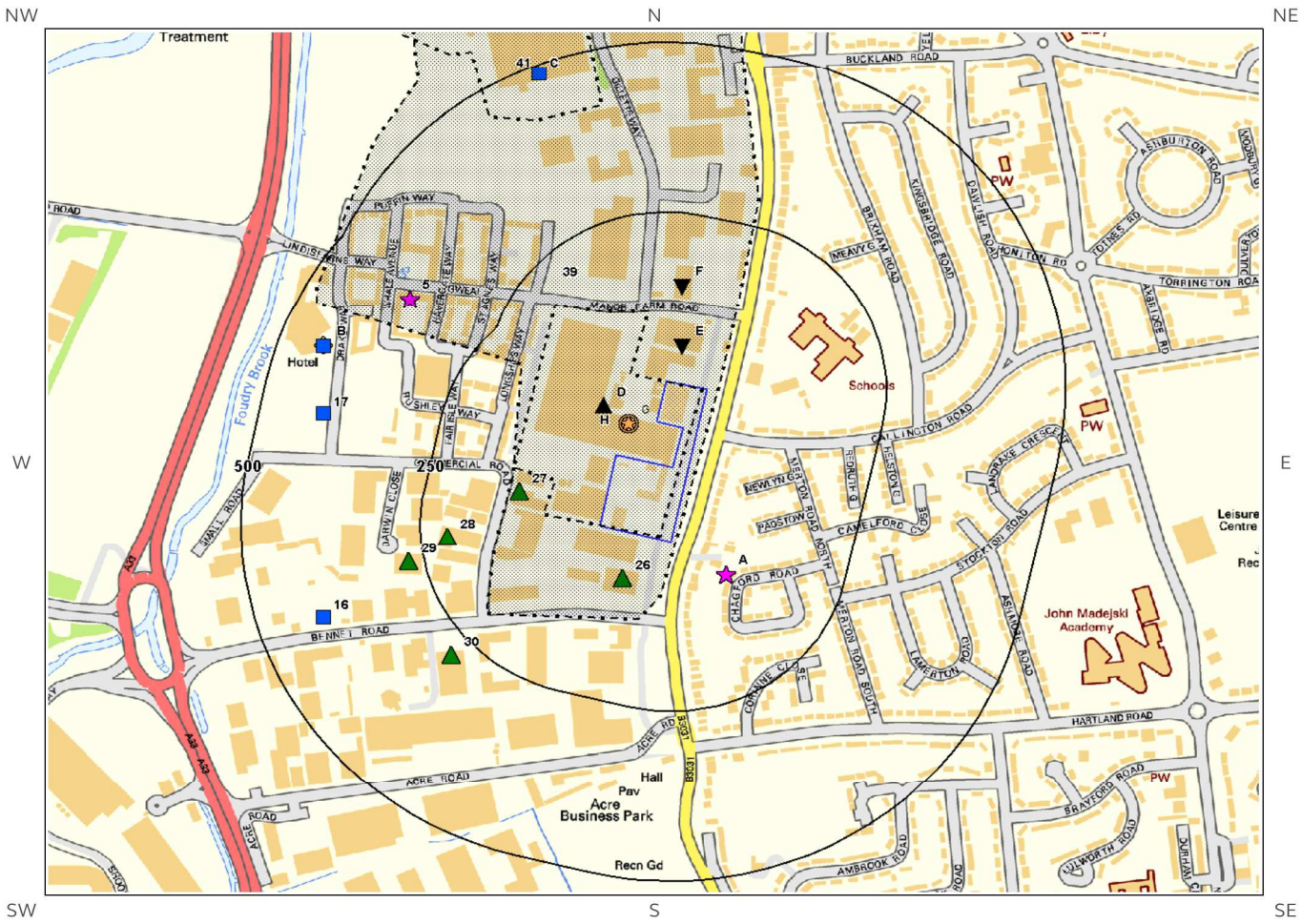
Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 19

The following Historical Potentially Infilled Features derived from the Historical Mapping information is provided by Groundsure:

ID	Distance(m)	Direction	Use	Date
379E	148	W	Sewage Works	1994
380E	148	W	Sewage Works	1989
381G	159	NW	Sewage Purification Works	1977
382G	190	NW	Sewage Purification Works	1971
383AW	194	W	Unspecified Heap	1962
384S	316	W	Filter Bed	1994
385S	316	W	Filter Bed	1989
386S	316	W	Filter Bed	1977
387Z	357	NW	Corporation Sewage Works	1933
388Z	358	NW	Sewage Works	1938

389Z	360	NW	Sewage Works	1938
390Z	360	NW	Sewage Works	1938
391AB	366	N	Unspecified Ground Workings	1971
392AB	366	N	Unspecified Heap	1962
393AJ	366	N	Unspecified Ground Workings	1977
394AE	398	NW	Filter Bed	1994
395AE	398	NW	Filter Bed	1977
396AE	398	NW	Filter Bed	1989
397AL	443	NW	Filter Beds	1977

2. Environmental Permits, Incidents and Registers Map



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- Site Outline
- 250 / 500 Search Buffers (m)
- Recorded Pollution Incident
- Dangerous Substances (List 1)
- Dangerous Substances (List 2)
- Water Industry Referrals
- Licenced Discharge Consents
- Red List Discharge Consents
- RAS 3 & 4 Authorisations
- Part A(1) Authorised Processes and Historic IPC Authorisations
- Part A(2) and Part B Authorised Processes
- COMAH / NIHHS Sites
- Sites Determined as Contaminated Land
- Hazardous Substance Consents and Enforcements

2. Environmental Permits, Incidents and Registers

2.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency and Local Authorities reveal the following information:

2.1.1 Records of historic IPC Authorisations within 500m of the study site:

0

Database searched and no data found.

2.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site:

4

The following Part A(1) and IPPC Authorised Activities are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details	
46H	72	N	471590 170510	Operator: Gillette Uk Limited Installation Name: Soap Manufacture Gillette Reading Process: ORGANIC CHEMICALS; SURFACE-ACTIVE AGENTS	Permit Number: EP3732NR Original Permit Number: LP3238LS EPR Reference: - Issue Date: 20/8/2013 Effective Date: 20/8/2013 Last date noted as effective: 2016-01-01 Status: Effective
47D	72	N	471590 170510	Operator: Gillette Uk Limited Installation Name: Soap Manufacture Gillette Reading Process: ORGANIC CHEMICALS; SURFACE-ACTIVE AGENTS	Permit Number: LP3238LS Original Permit Number: LP3238LS EPR Reference: - Issue Date: 15/6/2007 Effective Date: 15/6/2007 Last date noted as effective: 2016-01-01 Status: Superceded
48D	72	N	471590 170510	Operator: Gillette Uk Limited Installation Name: Soap Manufacture Gillette Reading Process: ORGANIC CHEMICALS; SURFACE-ACTIVE AGENTS	Permit Number: GP3234CM Original Permit Number: LP3238LS EPR Reference: - Issue Date: 13/7/2012 Effective Date: 13/7/2012 Last date noted as effective: 2016-01-01 Status: Superceded

ID	Distance (m)	Direction	NGR	Details	
49D	72	N	471590 170510	Operator: Gillette Uk Limited Installation Name: Soap Manufacture Gillette Reading Process: ORGANIC CHEMICALS; SURFACE-ACTIVE AGENTS	Permit Number: NP3739KE Original Permit Number: LP3238LS EPR Reference: - Issue Date: 19/1/2010 Effective Date: 19/1/2010 Last date noted as effective: 2016-01-01 Status: Superceded

2.1.3 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site:

0

Database searched and no data found.

2.1.4 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site:

2

The following List 1 Dangerous Substance Inventory Site records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details	
6B	438	W	471200 170600	Name: Reading Stw Status: Active Receiving Water: -	Authorised Substances: -
7B	438	W	471200 170600	Name: Reading Stw Status: Active Receiving Water: Kennet	Authorised Substances: Cadmium

2.1.5 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site:

8

The following List 2 Dangerous Substance Inventory Site records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details	
8B	438	W	471200 170600	Name: Moog Componants Group Ltd, Suttons Business Park, Reading Status: Active Receiving Water: Kennet	Authorised Substances: Chromium, Copper, Cyanide, Lead, Nickel, Zinc
9B	438	W	471200 170600	Name: Veolia Es West Berkshire Ltd Status: Active Receiving Water: -	Authorised Substances: Chromium, Copper, Lead, Nickel, Zinc

ID	Distance (m)	Direction	NGR	Details	
10B	438	W	471200 170600	Name: Precision Aircraft Ltd, 215 Cardiff Rd, Reading Status: Active Receiving Water: Kennet	Authorised Substances: Chromium, Copper, Cyanide, Lead, Nickel, Zinc
11B	438	W	471200 170600	Name: Oxkem Ltd, Loverock Rd, Reading Status: Active Receiving Water: Kennet	Authorised Substances: Chromium, Copper, Lead, Nickel
12B	438	W	471200 170600	Name: Quick Circuits Ltd, 1 Lovelock Rd, Reading Status: Active Receiving Water: Kennet	Authorised Substances: Chromium, Copper, Lead, Nickel
13B	438	W	471200 170600	Name: Unimet Enamellers Ltd Status: Active Receiving Water: Kennet	Authorised Substances: Chromium, Copper, Nickel, Zinc
14B	438	W	471200 170600	Name: Reading Stw, Thames Water Utilities Status: Active Receiving Water: Kennet	Authorised Substances: Iron
15B	438	W	471200 170600	Name: Reading Scientific Services Ltd Status: Active Receiving Water: -	Authorised Substances: Zinc

2.1.6 Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site:

5

The following Part A(2) and Part B Activities are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details	
26	71	S	471616 170255	Address: Harcros, Basingstoke Rd, RG2 0QX Process: timber process Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
27	120	W	471473 170384	Address: Vanguard Rental (UK) Limited, National Car Rental, 6-8 Commercial Road, Reading, Berks, RG2 0QZ Process: PG1/14 (06) Unloading of Petrol into Storage at Service Stations Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
28	213	W	471373 170317	Address: Reading Accident Repairs Limited, 10 Commercial Road, Reading, Berks, RG2 0QZ Process: PG6/34 (04) Respraying of Road Vehicles Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified
29	273	W	471318 170280	Address: Clydebridge Chemicals Limited, 7 Darwin Close, Reading, Berks, RG2 0TB Process: PG6/44 (04) Manufacture of Coating Materials Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified

ID	Distance (m)	Direction	NGR	Details	
30	284	SW	471378 170142	Address: Renault Trucks South, Bennet Road, Reading, Berks, RG2 0QX Process: PG6/34 (04) Respraying of Road Vehicles Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements Notified

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

8

The following RAS Licence (3 or 4) records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Address	Operator	Type	Permission Number	Dates	Status
50E	55	N	471700 170600	Thames Water Utilities Ltd, Spencer House Laboratories, Manor Farm Complex, Manor Farm Road, Reading, Berkshire, RG2 0JN	Thames Water Utilities Ltd	Disposal Of Radioactive Waste (was Rsa60 Section 6).	CD0987	Date of Approval:12/1/2009 Effective from:9/2/2009 Last date of update:2015-01-01	Revoked/cancelled
51E	55	N	471700 170600	Thames Water Utilities Ltd, Spencer House Laboratories,manor Farm Complex,manor Farm Road, Reading, Berkshire, RG2 0JN	Thames Water Utilities Ltd	Keeping And Use Of Radioactive Materials (was Rsa60 Section 1).	CD1002	Date of Approval:12/1/2009 Effective from:12/1/2009 Last date of update:2015-01-01	Revoked/cancelled
52F	144	N	471700 170690	Thames Water Utilities Ltd, Spencer House,manor Farm Road, Reading, Berkshire, RG2 0JN	Thames Water Utilities Ltd	Keeping And Use Of Radioactive Materials (was Rsa60 Section 1).	AM1097	Date of Approval:24/4/1999 Effective from:24/4/1999 Last date of update:2015-01-01	Superseded By Variation
53F	144	N	471700 170690	Thames Water Utilities Ltd, Spencer House,manor Farm Road, Reading, Berkshire, RG2 0JN	Thames Water Utilities Ltd	Keeping And Use Of Radioactive Materials (was Rsa60 Section 1).	AM1097	Date of Approval:9/1/2003 Effective from:10/1/2003 Last date of update:2015-01-01	Revoked/cancelled
54F	144	N	471700 170690	Thames Water Utilities Ltd, Spencer House, Manor Farm Road, Reading, Berkshire, RG2 0JN	Thames Water Utilities Ltd	Disposal Of Radioactive Waste (was Rsa60 Section 6).	AM8172	Date of Approval:9/5/1994 Effective from:6/6/1994 Last date of update:2015-01-01	Superseded By Variation

ID	Distance (m)	Direction	NGR	Address	Operator	Type	Permission Number	Dates	Status
55F	144	N	471700 170690	Thames Water Utilities Ltd, Spencer House, Manor Farm Road, Reading, Berkshire, RG2 0JN	Thames Water Utilities Ltd	Disposal Of Radioactive Waste (was Rsa60 Section 6).	AM8172	Date of Approval:17/5/2000 Effective from:31/5/2000 Last date of update:2015-01-01	Superseded By Variation
56F	144	N	471700 170690	Thames Water Utilities Ltd, Spencer House, Manor Farm Road, Reading, Berkshire, RG2 0JN	Thames Water Utilities Ltd	Disposal Of Radioactive Waste (was Rsa60 Section 6).	AM8172	Date of Approval:22/11/1995 Effective from:23/11/1995 Last date of update:2015-01-01	Superseded By Variation
57F	144	N	471700 170690	Thames Water Utilities Ltd, Spencer House, Manor Farm Road, Reading, Berkshire, RG2 0JN	Thames Water Utilities Ltd	Disposal Of Radioactive Waste (was Rsa60 Section 6).	AM8172	Date of Approval:10/1/2003 Effective from:6/2/2003 Last date of update:2015-01-01	Revoked/cancelled

2.1.8 Records of Licensed Discharge Consents within 500m of the study site:

6

The following Licensed Discharge Consents records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details	
16	408	W	471200 170200	Address: Reading, Lower Whitley, Reading, Lower Whitley, -, - Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: TEMP.1774 Permit Version: 1	Receiving Water: Status: REVOKED - UNSPECIFIED Issue date: 02/11/1989 Effective Date: 02-Nov-1989 Revocation Date: 27/01/1997
17	411	W	471200 170500	Address: LAND BETWEEN CIRCUIT LANE PS, & MAN, LAND BETWEEN CIRCUIT LANE PS, &, MANOR FARM STW, READING, -, - Effluent Type: MISCELLANEOUS DISCHARGES - MINE/GROUNDWATER AS RAISED Permit Number: CNTM.0374 Permit Version: 1	Receiving Water: Status: REVOKED - UNSPECIFIED Issue date: 24/06/1992 Effective Date: 24-Jun-1992 Revocation Date: 29/10/1992
18B	438	W	471200 170600	Address: READING STW, MANOR FARM ROAD, READI, READING STW, MANOR FARM ROAD, RE, ADING, BERKSHIRE, -, - Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: CTCR.0326 Permit Version: 1	Receiving Water: Status: REVOKED - UNSPECIFIED Issue date: 12/06/1958 Effective Date: 31-Jan-1985 Revocation Date: 15/02/1991

ID	Distance (m)	Direction	NGR	Details	
19B	438	W	471200 170600	Address: MANOR FARM STW, READING, BERKS, MANOR FARM STW, READING, BERKS, -, -, - Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: CTCR.1327 Permit Version: 1	Receiving Water: Status: REVOKED - UNSPECIFIED Issue date: 12/02/1973 Effective Date: 31-Jan-1985 Revocation Date: 16/08/1990
20C	486	N	471500 171000	Address: Reading, Upper Whitley, Reading, Upper Whitley, -, - Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: TEMP.1778 Permit Version: 1	Receiving Water: Status: TEMPORARY CONSENTS (WATER ACT 1989, SECTION 113) Issue date: 02/11/1989 Effective Date: 02-Nov-1989 Revocation Date: 02/09/2010
21C	486	N	471500 171000	Address: Reading, Upper Whitley, Reading, Upper Whitley, -, - Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: TEMP.1778 Permit Version: 2	Receiving Water: Status: SURRENDERED UNDER EPR 2010 Issue date: 03/09/2010 Effective Date: 03-Sep-2010 Revocation Date: 13/10/2015

2.1.9 Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site:

0

Database searched and no data found.

2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site:

4

The following records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	Application Reference Number	NGR	Application Status	Application Date	Address	Details	Details of Enforcement Action
58G	40	W	09/00868/HAZARD	471624 170486	Approved	05/06/2009	Gillette UK Ltd, 452 Basingstoke Road, Reading, Berkshire, RG2 0QE	Increased storage of Liquefied Petroleum Gas from 152 Tonnes to 319 Tonnes.	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified
59G	40	W	92/00699/HAZARD	471624 170486	Historical Consent	28/08/1992	Gillette UK Ltd, 452 Basingstoke Road, Reading, Berkshire, RG2 0QE	Storage of hazardous substances (hydrocarbon Repellant - L.p.g.)	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified

ID	Distance (m)	Direction	Application Reference Number	NGR	Application Status	Application Date	Address	Details	Details of Enforcement Action
60G	40	W	09/00377/HAZARD	471624 170486	Withdrawn	07/04/2009	452 Basingstoke Road, Reading, Berkshire, RG2 0QE	Increased storage of Liquefied Petroleum Gas from 152 Tonnes to 319 Tonnes.	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified
61G	40	W	92/00699/HAZARD	471624 170486	Historical Consent	28/08/1992	Gillette UK Ltd, 452 Basingstoke Road, Reading, Berkshire, RG2 0QE	Hazardous Substance Consent to allow for increased storage sf Liquefied Petroleum Gas from 152 tonnes to 319 tonnes	Enforcement: No Enforcements Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified

2.2 Dangerous or Hazardous Sites

Records of COMAH & NIHHS sites within 500m of the study site: 3

The following COMAH & NIHHS Authorisation records provided by the Health and Safety Executive are represented as polygons or buffered points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	Company	Address	Operational Status	Tier
39	0	On Site	Gillette Uk Ltd	Gillette Uk Ltd, Manor Farm Ind Est, Off Basingstoke Road, Reading, RG2 0QE	Historical NIHHS Site	-
40H	0	On Site	Gillette Uk Ltd	Gillette Uk Ltd, Reading Gillette Factory Site, Basingstoke Road, Reading, Berkshire, RG2 0QE	Current COMAH Site	COMAH Lower Tier Operator
41	416	N	Dhl Exel Supply Chain Limited	Dhl Exel Supply Chain Limited, Gillette Way, Reading, Manor Farm Industrial Estate, Gillette Way, Reading, Berkshire, RG2 0DS	Current COMAH Site	COMAH Top Tier Operator

2.3 Environment Agency Recorded Pollution Incidents

2.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site:

5

The following NIRS List 2 records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details	
1A	90	SE	471760 170263	Incident Date: 23-Oct-2002 Incident Identification: 116399 Pollutant: Specific Waste Materials Pollutant Description: Vehicles and Vehicle Parts	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)

ID	Distance (m)	Direction	NGR	Details	
2A	90	SE	471760 170263	Incident Date: 23-Oct-2002 Incident Identification: 116399 Pollutant: Specific Waste Materials Pollutant Description: Tyres	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
3A	90	SE	471760 170263	Incident Date: 23-Oct-2002 Incident Identification: 116399 Pollutant: Specific Waste Materials Pollutant Description: Household Waste	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
4A	90	SE	471760 170263	Incident Date: 23-Oct-2002 Incident Identification: 116399 Pollutant: Specific Waste Materials:Specific Waste Materials:Specific Waste Materials Pollutant Description: Household Waste:Tyres:Vehicles and Vehicle Parts	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
5	369	NW	471320 170670	Incident Date: 02-Jan-2003 Incident Identification: 129029 Pollutant: Sewage Materials Pollutant Description: Storm Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)

2.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site:

0

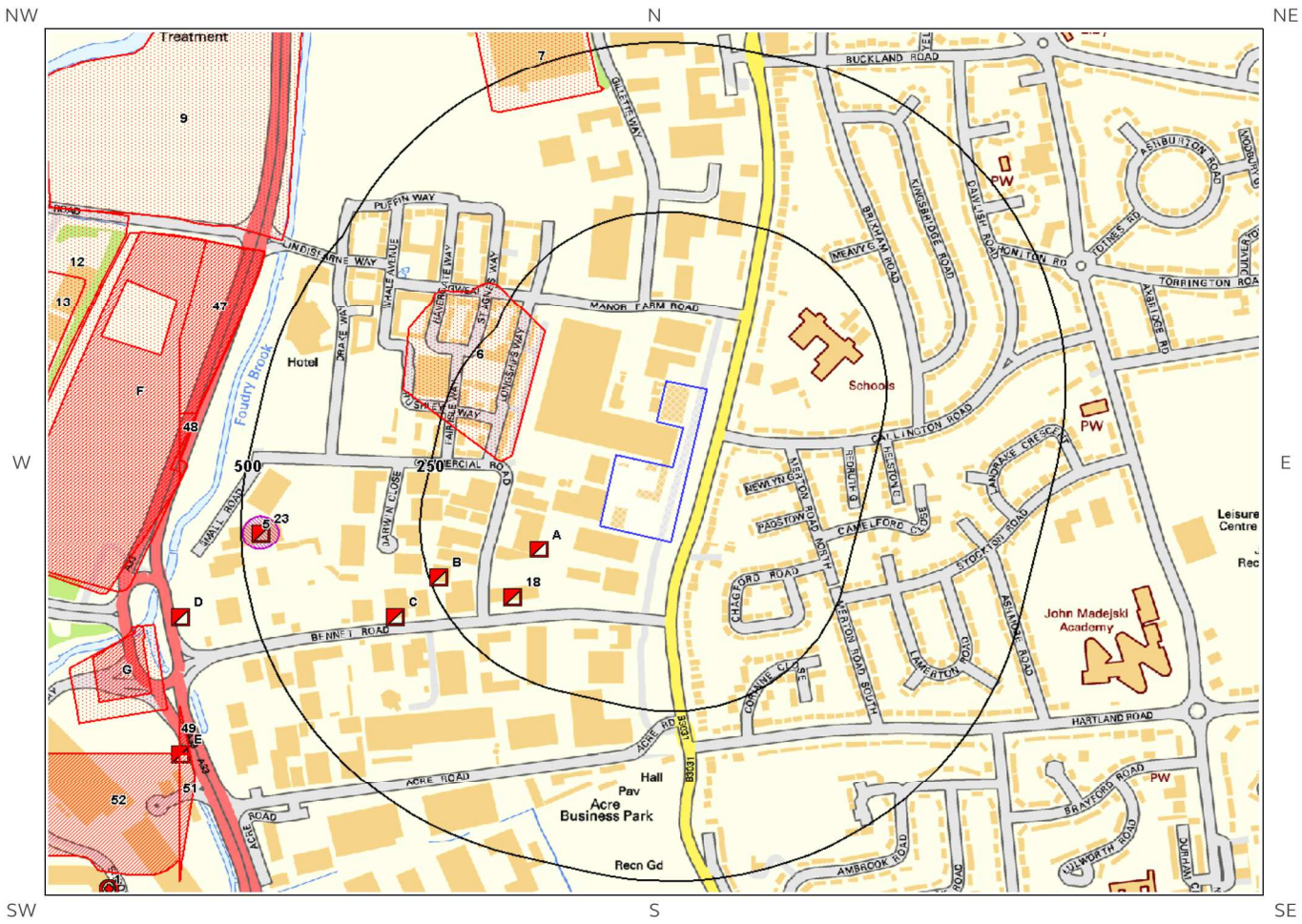
Database searched and no data found.

2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

How many records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site? 0

Database searched and no data found.

3. Landfill and Other Waste Sites Map



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Site Outline

250
500
Search Buffers (m)

E.A. Active Landfill

E.A. Historic Landfill

BGS / DoE Survey Landfill

Historic and Planned Waste Sites

E.A. Licensed Waste Site

Local Authority/Historical Mapping Landfill Records

3. Landfill and Other Waste Sites

3.1 Landfill Sites

3.1.1 Records from Environment Agency landfill data within 1000m of the study site:

2

The following Environment Agency landfill records are represented as polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details	
Not shown	875	SW	471000 170000	Address: Reading Football Club, Smallmead, Bennet road, Reading, Berkshire, RG2 0JL Landfill Reference: 86039.0 Environmental Permitting Regulations (Waste) Reference: RFC001 Landfill Type: A04 : Household, Commercial & Industrial Waste Landfill	Operator: Reading Football Club Status: Closure IPPC Reference: EPR Reference:
Not shown	964	W	470200 170600	Address: RMC Aggregates (Southern) Ltd, Smallmead Farm, Burghfield, Reading, Berkshire, RG30 3UR Landfill Reference: 86029.0 Environmental Permitting Regulations (Waste) Reference: RMC002 Landfill Type: A04 : Household, Commercial & Industrial Waste Landfill	Operator: R M C Logistics (South East) Ltd Status: Closure IPPC Reference: EPR Reference:

3.1.2 Records of Environment Agency historic landfill sites within 1500m of the study site:

10

The following landfill records are represented as either points or polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details	
6	140	W	471400 170500	Site Address: Manor Farm, Reading, Berkshire Waste Licence: - Site Reference: TP0104, RDG10 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -

ID	Distance (m)	Direction	NGR	Details	
7	436	N	471400 171000	Site Address: Gilette Warehouse, Reading, Berkshire Waste Licence: - Site Reference: TP0108, RDG7 Waste Type: Commercial, Household, Liquid sludge Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: 31-Dec-1930 Last Recorded: 31-Dec-1939
8F	562	W	470900 170500	Site Address: Smallmead Stadium, Reading, Berkshire Waste Licence: Yes Site Reference: TP0166, RDG5, 54/12/4/43 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 31-Dec-1980 Licence Surrendered: Licence Holder Address: - Operator: Hall Aggregates Limited Licence Holder: - First Recorded: - Last Recorded: -
9	564	NW	470900 170900	Site Address: Island Road, Reading, Berkshire Waste Licence: Yes Site Reference: RDG9, 54/12/4/23, TP0429, OCC/104 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 10 Jan 1978 Licence Surrendered: 05-Dec-1984 Licence Holder Address: - Operator: - Licence Holder: Mr J Bucknell First Recorded: 31-Dec-1977 Last Recorded: 31-Dec-1985
10G	638	W	470900 170100	Site Address: Smallmead Tip, Smallmead Road, Reading, Berkshire Waste Licence: Yes Site Reference: 54/12/5/5 Waste Type: Inert, Industrial, Commercial, Household, Special, Liquid sludge Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: 06-Sep-1977 Licence Surrendered: 31-Mar-1981 Licence Holder Address: - Operator: County Borough of Reading Licence Holder: Berkshire County Council WDA First Recorded: 22-Mar-1972 Last Recorded: 31-Mar-1981
Not shown	640	N	471400 171200	Site Address: Rose Kiln Lane South, Reading, Berkshire Waste Licence: - Site Reference: TP0106, RDG1 Waste Type: Commercial, Household, Liquid sludge Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: 31-Dec-1994
12	757	NW	470700 170600	Site Address: Island Road Tip, Island Road, Reading, Berkshire Waste Licence: - Site Reference: - Waste Type: Inert, Industrial, Commercial, Liquid sludge Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: County Borough of Reading Licence Holder: - First Recorded: 17-Nov-1970 Last Recorded: 22-Mar-1975
13	783	W	470700 170500	Site Address: Sludge Beds, Reading, Berkshire Waste Licence: - Site Reference: TP0519, RDG13 Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	799	N	471600 171400	Site Address: Craddock Road, Reading, Berkshire Waste Licence: - Site Reference: RDG17, TP0107 Waste Type: Inert, Industrial Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -

ID	Distance (m)	Direction	NGR	Details	
Not shown	1333	N	471400 171900	Site Address: Waterloo Meadows, Reading, Berkshire Waste Licence: - Site Reference: TP0154, RDG8 Waste Type: Inert, Industrial Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -

3.1.3 Records of BGS/DoE non-operational landfill sites within 1500m of the study site:

2

The following landfill records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details	
1	870	SW	470900.0 169800.0	Address: Smallmead Tip, Smallmead Road, Reading BGS Number: 566.0	Risk: Risk to minor aquifer Waste Type: N/A
Not shown	885	NW	470800.0 170800.0	Address: Island Road Tip, Island Road, Reading BGS Number: 567.0	Risk: Risk to major and minor aquifer Waste Type: N/A

3.1.4 Records of Landfills from Local Authority and Historical Mapping Records within 1500m of the study site:

7

The following landfill records are represented as points or polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Site Address	Source	Data Type
46F	561	W	470928 170501	Refuse Tip	1966 mapping	Polygon
47	561	W	471059 170629	Refuse Tip	1965 mapping	Polygon
48	582	W	471003 170451	Refuse Tip	1966 mapping	Polygon
49	643	SW	471007 170035	Refuse Tip	1974 mapping	Polygon
50G	654	W	470919 170132	Refuse Tip	1985 mapping	Polygon
51	662	SW	471010 169906	Refuse Tip	1974 mapping	Polygon
52	675	SW	470844 169910	Refuse Tip	1974 mapping	Polygon

3.2 Other Waste Sites

3.2.1 Records of waste treatment, transfer or disposal sites within 500m of the study site:

1

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details		
5	447	W	471112 170324	Type of Site: Waste Transfer Station Site Address: Smallmead Road, READING, Berkshire, RG2 0QS	Planning Application Reference: N/A Date: -	Further Details: Scheme to provide mineral waste transfer station. An application (ref: -) for Detailed Planning permission was submitted to Reading B.C. on 14th May 1993. Design and Build tenders are currently being invited return date not available. Data Source: Historic Planning Application Data Type: Point

3.2.2 Records of Environment Agency licensed waste sites within 1500m of the study site:

30

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details	
16A	92	SW	471500 170300	Site Address: Select Environmental, Commercial Road, Reading, Reading, Berkshire, RG2 9ST Type: Clinical Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SEL008 EPR reference: - Operator: Select Environmental Services Ltd Waste Management licence No: 86277 Annual Tonnage: 0.0	Issue Date: 10/01/2003 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Select Environmental Services Ltd Correspondence Address: -, 6, Commercial Road, Reading, Berkshire, RG2 0QZ
17A	92	SW	471500 170300	Site Address: Healthcare Waste, Commercial Road, Reading, Reading, Berkshire, RG2 9ST Type: Clinical Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SEL008 EPR reference: - Operator: Healthcare Waste Limited Waste Management licence No: 86277 Annual Tonnage: 0.0	Issue Date: 10/01/2003 Effective Date: - Modified: 12/07/2004 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Healthcare Waste Limited Correspondence Address: -, 6, Commercial Road, Reading, Berkshire, RG2 0QZ

ID	Distance (m)	Direction	NGR	Details	
18	162	SW	471463 170230	Site Address: Select Environmental Services, 5 - 7, Bennet Road, Reading, Berkshire, RG2 0QX Type: Clinical Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SEL019 EPR reference: EA/EPR/CP3099VG/A001 Operator: Select Environmental Services Ltd Waste Management licence No: 100913 Annual Tonnage: 74999.0	Issue Date: 21/05/2009 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Select Environmental Services Correspondence Address: -, -
19B	237	W	471361 170258	Site Address: 6, Commercial Road, Reading, Berkshire, RG2 0QZ Type: Clinical Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: DAN029 EPR reference: EA/EPR/CP3394SP/V003 Operator: Daniels Corporation International Ltd Waste Management licence No: 86277 Annual Tonnage: 499.0	Issue Date: 10/01/2003 Effective Date: 27/11/2008 Modified: 12/07/2011 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: The Daniels Corporation International Ltd Correspondence Address: -, -
20B	237	W	471361 170258	Site Address: White Rose Environmental, 6, Commercial Road, Reading, Reading, Berkshire, RG2 0QZ Type: Clinical Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: WHI067 EPR reference: - Operator: Sterile Technologies (Newcastle) Ltd Waste Management licence No: 86277 Annual Tonnage: 4999.0	Issue Date: 10/01/2003 Effective Date: 09/01/2008 Modified: 12/07/2004 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: White Rose Environmental Correspondence Address: -, 2nd Floor Apex House, London Road, Northfleet, Kent, DA11 9PD
21C	316	SW	471300 170200	Site Address: Reading Borough Council, Contract Services, 6, Darwin Close, Reading, Berkshire, RG2 0SG Type: Clinical Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: REA003 EPR reference: EA/EPR/DP3799EU/V003 Operator: Reading Borough Council Waste Management licence No: 86204 Annual Tonnage: 504.0	Issue Date: 19/10/1998 Effective Date: - Modified: 30/08/2005 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Darwin Close Ts2 Correspondence Address: -, -
22C	316	SW	471300 170200	Site Address: Reading Borough Council, Contract Services, 6, Darwin Close, Reading, Berkshire, RG2 0SG Type: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: REA002 EPR reference: EA/EPR/MP3499EK/V003 Operator: Reading Borough Council Waste Management licence No: 86011 Annual Tonnage: 32000.0	Issue Date: 29/06/1992 Effective Date: - Modified: 28/09/2001 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Darwin Close Transfer Station Correspondence Address: -, -

ID	Distance (m)	Direction	NGR	Details	
23	473	W	471112 170324	Site Address: Unit 1, Smallmead Road, Reading, Berkshire, RG2 0QS Type: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CLE009 EPR reference: EA/EPR/AP3394SJ/A001 Operator: Clements Austin Leslie Waste Management licence No: 86410 Annual Tonnage: 75000.0	Issue Date: 15/12/2006 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired Site Name: Clembins Skip Hire Correspondence Address: -, -
24D	601	W	471000 170200	Site Address: SITA, Smallmead Farm Landfill, Bennet Road, Reading, Berkshire, RG2 0RP Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SIT001 EPR reference: EA/EPR/MP3099EP/S003 Operator: SITA Waste Management licence No: 86005 Annual Tonnage: 25000.0	Issue Date: 28/04/1993 Effective Date: - Modified: 16/01/1997 Surrendered Date: 29/10/1999 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Smallmead CA Site Correspondence Address: -, -
25D	601	W	471000 170200	Site Address: SITA, Smallmead Farm Landfill, Bennet Road, Reading, Berks, RG2 0RP Type: Household, Commercial & Industrial Waste T Stn Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: SIT001 EPR reference: - Operator: SITA Waste Management licence No: 86005 Annual Tonnage: 0.0	Issue Date: 28/04/1993 Effective Date: - Modified: 16/01/1997 Surrendered Date: 29/10/1999 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Smallmead CA Site Correspondence Address: SITA, The Pickeridge, Stoke Common Road, Fulmer, Bucks, SL3 6HA
26E	675	SW	471000 170000	Site Address: Reading Football Club, Smallmead, Bennet road, Reading, Berks, RG2 0JL Type: Household, Commercial & Industrial Waste Landfill Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: RFC001 EPR reference: - Operator: Reading Football Club Waste Management licence No: 86039 Annual Tonnage: 75000.0	Issue Date: 03/06/1997 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Closure Site Name: Reading Football Club Correspondence Address: Reading Football Club, Madjeski Stadium, Acre Road, Reading, Berks, RG3 2EF
27E	675	SW	471000 170000	Site Address: Reading Football Club, Smallmead, Bennet road, Reading, Berkshire, RG2 0JL Type: Household, Commercial & Industrial Waste Landfill Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: RFC001 EPR reference: EA/EPR/XP3199EZ/A001 Operator: Reading Football Club Waste Management licence No: 86039 Annual Tonnage: 75000.0	Issue Date: 03/06/1997 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Closure Site Name: Reading Football Club Correspondence Address: -, -

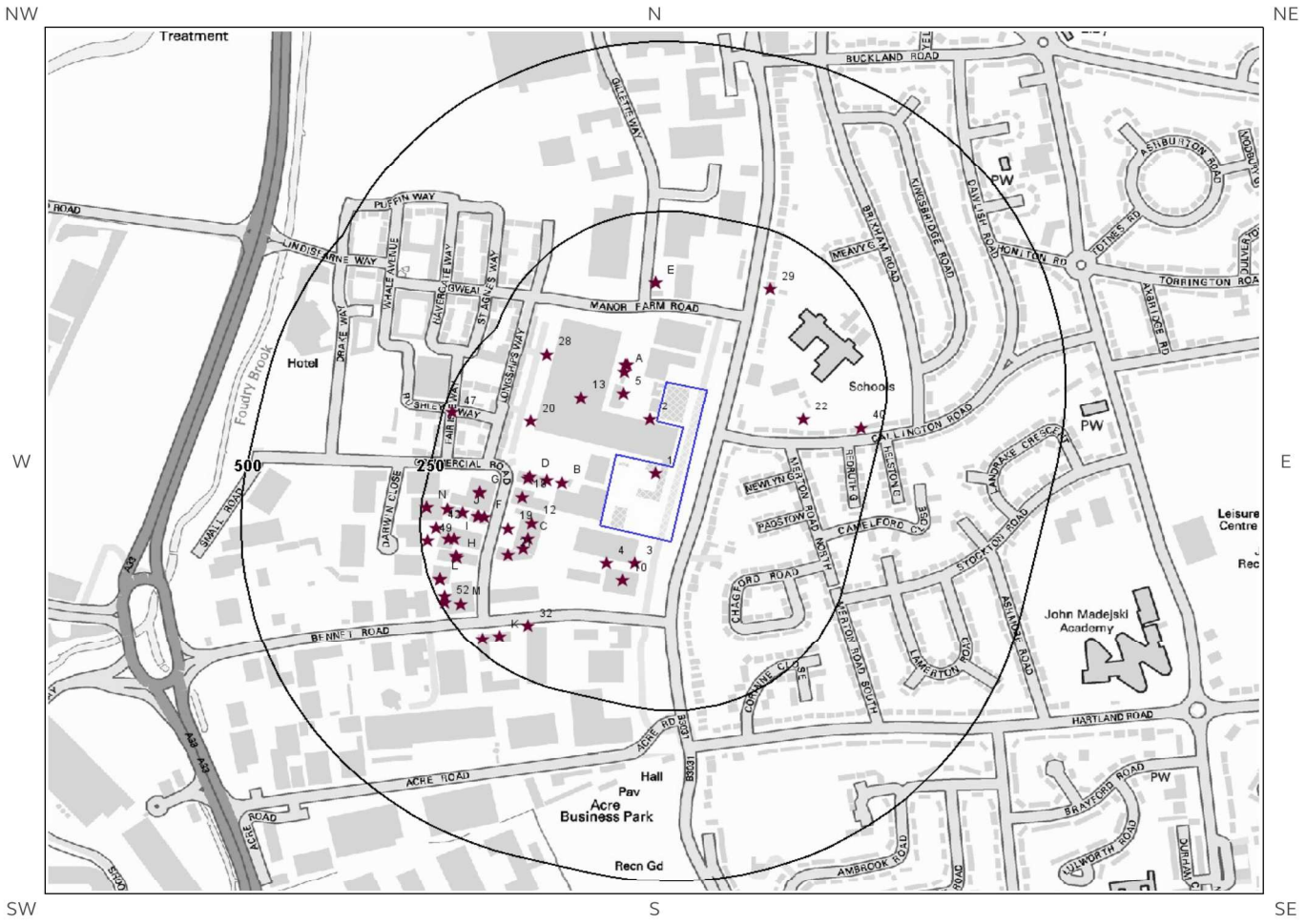
ID	Distance (m)	Direction	NGR	Details	
Not shown	802	W	470800 170500	Site Address: John Mould, Island Road, Reading, Berks, RG2 0RP Type: Material Recycling Treatment Facility Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MOU001 EPR reference: - Operator: John Mould Waste Management licence No: 86010 Annual Tonnage: 300000.0	Issue Date: 13/05/1992 Effective Date: - Modified: 13/06/1995 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Island Road Transfer Station Correspondence Address: John Mould, Hydecrete Pit, Pingewood Road North, Burghfield, Reading, Berks, RG3 3XN
Not shown	802	W	470800 170500	Site Address: John Mould, Reading Speedway Stadium, A33 Relief Road, Reading, Berkshire, RG2 0JL Type: Material Recycling Treatment Facility Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MOU001 EPR reference: EA/EPR/CP3698LG/S003 Operator: Mould J Waste Management licence No: 86010 Annual Tonnage: 0.0	Issue Date: 13/05/1992 Effective Date: - Modified: 13/06/1995 Surrendered Date: 28/11/2008 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Smallmead Transfer Station Correspondence Address: -, -
Not shown	802	W	470800 170500	Site Address: John Mould, Island Road, Reading, Berks, RG2 0RP Type: Material Recycling Treatment Facility Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MOU001 EPR reference: - Operator: Mould John Waste Management licence No: 86010 Annual Tonnage: 300000.0	Issue Date: 13/05/1992 Effective Date: - Modified: 13/06/1995 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Island Road Transfer Station Correspondence Address: John Mould, Hydecrete Pit, Pingewood Road North, Burghfield, Reading, Berks, RG3 3XN
Not shown	821	W	470800 170590	Site Address: Reading Sewage Treatment Works, Island Road, Reading, Berkshire, RG2 0RP Type: Landfill Gas Engine (<3 mW) Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: THU134 EPR reference: EA/EPR/MP3338LU/V002 Operator: Thames Water Utilities Limited Waste Management licence No: 400034 Annual Tonnage: 0.0	Issue Date: 03/04/2013 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Reading Combined Heat And Power Plant Correspondence Address: -, -
Not shown	955	N	471600 171500	Site Address: Units D & E, Reading Approach, Cradock Road, Reading, Berkshire, RG2 0JT Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: REN003 EPR reference: EA/EPR/GP3495EA/V003 Operator: Rentokil Initial Services Ltd Waste Management licence No: 86428 Annual Tonnage: 4999.0	Issue Date: 26/07/2007 Effective Date: - Modified: 09/08/2011 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Rentokill Initial Services Ltd Correspondence Address: -, -

ID	Distance (m)	Direction	NGR	Details	
Not shown	955	N	471600 171500	Site Address: Units D & E, Reading Approach, Cradock Road, Reading, Berkshire, RG2 0JT Type: Special Waste Transfer Station Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: REN003 EPR reference: EA/EPR/GP3495EA/S004 Operator: Rentokil Initial Services Ltd Waste Management licence No: 86428 Annual Tonnage: 0.0	Issue Date: 26/07/2007 Effective Date: - Modified: 09/08/2011 Surrendered Date: 01/06/2012 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Rentokill Initial Services Ltd Correspondence Address: -, -
Not shown	1055	W	470625 170823	Site Address: Smallmead Waste Management Centre, Island Road, Reading, Berkshire, RG2 0RP Type: Household, Commercial & Industrial Waste T Stn Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: WRG001 EPR reference: EA/EPR/BP3298EE/V002 Operator: F C C Environment (Berkshire) Limited Waste Management licence No: 100243 Annual Tonnage: 295000.0	Issue Date: 31/03/2008 Effective Date: - Modified: 12/11/2012 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Smallmead Waste Management Centre Correspondence Address: -, -
Not shown	1055	W	470625 170823	Site Address: Land/premises At, Island Road, Reading, Berkshire, RG2 0RP Type: HCI Waste TS + treatment + asbestos Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: WRG001 EPR reference: BP3298EE/A001 Operator: W R G Berkshire Ltd Waste Management licence No: 100243 Annual Tonnage: 0.0	Issue Date: 31/03/2008 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Smallmead Waste Management Centre Correspondence Address: -, -
Not shown	1055	W	470625 170823	Site Address: Land/premises At, Island Road, Reading, Berkshire, RG2 0RP Type: Household, Commercial & Industrial Waste T Stn Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: WRG001 EPR reference: EA/EPR/BP3298EE/A001 Operator: W R G Berkshire Ltd Waste Management licence No: 100243 Annual Tonnage: 295000.0	Issue Date: 31/03/2008 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Smallmead Waste Management Centre Correspondence Address: -, -
Not shown	1070	W	470600 170800	Site Address: Reading Borough Council, Smallmead CAS, Island road, Reading, Berks, RG2 0RP Type: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: REA004 EPR reference: - Operator: Reading Borough Council Waste Management licence No: 86007 Annual Tonnage: 0.0	Issue Date: 23/03/1993 Effective Date: 22/01/2000 Modified: 31/05/2000 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Smallmead Ca Site 2 Correspondence Address: Mr Andrew Withy c/o Reading CC, Civic Centre, Reading, Berkshire, RG1 7TD

ID	Distance (m)	Direction	NGR	Details	
Not shown	1070	W	470600 170800	Site Address: Reading Borough Council, Smallmead Ca Site, Island road, Reading, Berks, RG2 0RP Type: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: RE3001 EPR reference: - Operator: R E 3 Ltd Waste Management licence No: 86007 Annual Tonnage: 0.0	Issue Date: 23/03/1993 Effective Date: 13/01/2007 Modified: 12/12/2003 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: Smallmead C A Site 2 Correspondence Address: -, Ground Floor West, Pavilion Drive, Northampton Business Park, Northampton, Northants, NN4 7RG
Not shown	1070	W	470600 170800	Site Address: Reading Borough Council, Smallmead Civic Amenity Site, Island Road, Reading, Berkshire, RG2 0RP Type: Household Waste Amenity Site Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: RE3001 EPR reference: EA/EPR/MP3999EA/S007 Operator: R E 3 Ltd Waste Management licence No: 86007 Annual Tonnage: 0.0	Issue Date: 23/03/1993 Effective Date: 13/01/2007 Modified: 12/12/2003 Surrendered Date: 01/02/2013 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Smallmead Civic Amenity Site Correspondence Address: -, -
Not shown	1084	W	470600 170840	Site Address: RMC Aggregates (Southern) Ltd, Smallmead Farm, Island Road, Burghfield, Reading, Berkshire, RG30 3UR Type: Household, Commercial & Industrial Waste Landfill Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: RMC001 EPR reference: EA/EPR/UP3699ED/V006 Operator: Biffa Waste Services Ltd Waste Management licence No: 86028 Annual Tonnage: 250000.0	Issue Date: 10/10/1980 Effective Date: - Modified: 03/07/2003 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: To PPC Site Name: Burghfield Landfill Correspondence Address: -, -
Not shown	1410	W	470200 170600	Site Address: RMC Aggregates (Southern) Ltd, Smallmead Farm, Burghfield, Reading, Berkshire, RG30 3UR Type: Household, Commercial & Industrial Waste Landfill Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: RMC002 EPR reference: EA/EPR/UP3199EH/V002 Operator: R M C Logistics (South East) Ltd Waste Management licence No: 86029 Annual Tonnage: 90000.0	Issue Date: 23/05/1980 Effective Date: - Modified: 13/06/1995 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Closure Site Name: Smallmead Farm Correspondence Address: -, -
Not shown	1410	W	470200 170600	Site Address: RMC Aggregates (Southern) Ltd, Smallmead Farm, Burghfield, Reading, Berks, RG30 3UR Type: Household, Commercial & Industrial Waste Landfill Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: RMC002 EPR reference: - Operator: RMC Aggregates (Southern) Ltd Waste Management licence No: 86029 Annual Tonnage: 90000.0	Issue Date: 23/05/1980 Effective Date: - Modified: 13/06/1995 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Closure Site Name: Smallmead Farm Correspondence Address: RMC Aggregates (Southern) Ltd, R M C House, Coldharbour Lane, Thorpe, Egham, Surrey, TW20 8TD

ID	Distance (m)	Direction	NGR	Details	
Not shown	1410	W	470200 170600	Site Address: RMC Aggregates (Southern) Ltd, Smallmead Farm, Burghfield, Reading, Berkshire, RG30 3UR Type: Household, Commercial & Industrial Waste Landfill Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: RMC002 EPR reference: EA/EPR/UP3199EH/V002 Operator: R M C Logistics (South East) Ltd Waste Management licence No: 86029 Annual Tonnage: 90000.0	Issue Date: 23/05/1980 Effective Date: - Modified: 13/06/1995 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Closure Site Name: Smallmead Farm Correspondence Address: -, -
Not shown	1410	W	470200 170600	Site Address: RMC Aggregates (Southern) Ltd, Smallmead Farm, Burghfield, Reading, Berks, RG30 3UR Type: Household, Commercial & Industrial Waste Landfill Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: RMC002 EPR reference: - Operator: R M C Logistics (South East) Ltd Waste Management licence No: 86029 Annual Tonnage: 90000.0	Issue Date: 23/05/1980 Effective Date: - Modified: 13/06/1995 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Closure Site Name: Smallmead Farm Correspondence Address: RMC Aggregates (Southern) Ltd, R M C House, Coldharbour Lane, Thorpe, Egham, Surrey, TW20 8TD
Not shown	1425	W	470200 170000	Site Address: Mr A L Clements, Smallmead Farm Yard, Smallmead Road, Pingewood, Reading, Berkshire, RG30 3UR Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CLE001 EPR reference: EA/EPR/MP3299EM/S006 Operator: Mr A L Clements Waste Management licence No: 86012 Annual Tonnage: 25000.0	Issue Date: 16/12/1991 Effective Date: - Modified: 24/03/1997 Surrendered Date: 31/03/1999 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Smallmead Farm Yard Correspondence Address: -, -

4. Current Land Use Map



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Site Outline

Search Buffers (m)
250
500

Current Industrial Sites

Petrol & Fuel Sites

Electricity Transmission Cables

Gas Transmission Pipelines

4. Current Land Uses

4.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site: 52

The following records are represented as points on the Current Land Uses map.

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	0	On Site	Electricity Sub Station	471663 170413	RG2	Electrical Features	Infrastructure and Facilities
2	10	W	Tank	471655 170493	RG2	Tanks (Generic)	Industrial Features
3	42	S	Electricity Sub Station	471633 170281	RG2	Electrical Features	Infrastructure and Facilities
4	51	S	Tank	471594 170281	RG2	Tanks (Generic)	Industrial Features
5	55	W	Chimney	471618 170532	RG2	Chimneys	Industrial Features
6A	61	W	Tank	471619 170564	RG2	Tanks (Generic)	Industrial Features
7A	61	NW	Tank	471623 170575	RG2	Tanks (Generic)	Industrial Features
8A	64	NW	Tank	471620 170575	RG2	Tanks (Generic)	Industrial Features
9B	65	W	Tank	471532 170399	RG2	Tanks (Generic)	Industrial Features
10	70	S	Jewson Tool HIre	471616 170255	468, Basingstoke Road, Reading, RG2 0QQ	Construction and Tool Hire	Hire Services
11B	87	W	Tank	471511 170403	RG2	Tanks (Generic)	Industrial Features
12	95	W	Warehouse	471490 170340	RG2	Container and Storage	Transport, Storage and Delivery
13	99	NW	Factory	471558 170526	RG2	Unspecified Works Or Factories	Industrial Features
14C	102	W	Warehouse	471485 170317	RG2	Container and Storage	Transport, Storage and Delivery
15D	111	W	James White Engineering Ltd	471486 170408	Commercial Road, Reading, RG2 0RU	Metalworkers Including Blacksmiths	Construction Services
16C	112	W	Warehouse	471478 170303	RG2	Container and Storage	Transport, Storage and Delivery
17D	114	W	Works	471484 170406	RG2	Unspecified Works Or Factories	Industrial Features
18	115	W	Depot	471476 170378	RG2	Container and Storage	Transport, Storage and Delivery
19	128	W	Warehouse	471457 170332	RG2	Container and Storage	Transport, Storage and Delivery

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
20	129	NW	Works	471489 170490	RG2	Unspecified Works Or Factories	Industrial Features
21	135	W	Works	471457 170293	RG2	Unspecified Works Or Factories	Industrial Features
22	140	E	Electricity Sub Station	471869 170493	RG2	Electrical Features	Infrastructure and Facilities
23E	147	N	Gas Governor Station	471663 170694	RG2	Gas Features	Infrastructure and Facilities
24E	148	N	Gas Governor Station	471663 170695	RG2	Gas Features	Infrastructure and Facilities
25F	162	W	Production Test Systems Ltd	471423 170348	Unit 1 Manor Commercial Centre 12, Commercial Road, Reading, RG2 0QJ	Electronic Equipment	Industrial Products
26F	170	W	R D S	471415 170349	Unit 2 Manor Commercial Centre 12, Commercial Road, Reading, RG2 0QJ	Vehicle Repair, Testing and Servicing	Repair and Servicing
27F	171	W	G P Autos	471415 170350	12, Commercial Road, Reading, RG2 0QJ	Vehicle Breakdown and Recovery Services	Personal, Consumer and Other Services
28	172	W	Electricity Sub Station	471511 170589	RG2	Electrical Features	Infrastructure and Facilities
29	173	NE	Coach Services Reading	471821 170685	357, Basingstoke Road, Reading, RG2 0JA	Vehicle Hire and Rental	Hire Services
30G	175	W	Trade Parts Specialists	471417 170385	14, Commercial Road, Reading, RG2 0QJ	Vehicle Parts and Accessories	Motoring
31G	175	W	Kroy Europe Ltd	471416 170385	Unit 2 14, Commercial Road, Reading, RG2 0QJ	Printing Related Machinery	Industrial Products
32	178	SW	Electricity Sub Station	471485 170189	RG2	Electrical Features	Infrastructure and Facilities
33J	192	W	Geo-tech	471393 170355	Unit 4 Manor Commercial Centre 12, Commercial Road, Reading, RG2 0QJ	Vehicle Repair, Testing and Servicing	Repair and Servicing
34I	204	W	Works	471382 170317	RG2	Unspecified Works Or Factories	Industrial Features
35H	205	W	E S L Europe	471384 170291	8, Commercial Road, Reading, RG2 0QZ	Colours, Chemicals and Water Softeners and Supplies	Industrial Products
36H	205	W	Works	471385 170289	RG2	Unspecified Works Or Factories	Industrial Features
37I	213	W	Reading Accident Repairs Ltd	471373 170317	10, Commercial Road, Reading, RG2 0QZ	Vehicle Repair, Testing and Servicing	Repair and Servicing
38J	214	W	Shadow Wheel & Tyre	471372 170361	Unit 7 Manor Commercial Centre 12, Commercial Road, Reading, RG2 0QJ	Vehicle Parts and Accessories	Motoring
39K	215	SW	Reflex	471445 170173	Unit 1 Bennet Court, Bennet Road, Reading, RG2 0QX	Electronic Equipment	Industrial Products
40	220	E	Hummer Limo Hire	471948 170480	49, Callington Road, Reading, RG2 7QH	Vehicle Hire and Rental	Hire Services
41M	226	SW	HSS Hire Service Group Ltd	471391 170221	U2, 7 Bennet Road, Reading, RG2 0QX	Construction and Tool Hire	Hire Services
42	229	W	Electricity Sub Station	471356 170333	RG2	Electrical Features	Infrastructure and Facilities

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
43K	234	SW	Fenn Motor Works	471420 170169	Unit 2 Bennet Court, Bennet Road, Reading, RG2 0QX	Vehicle Repair, Testing and Servicing	Repair and Servicing
44L	236	W	Europcar	471362 170258	6-8, Commercial Road, Reading, RG2 0QZ	Vehicle Hire and Rental	Hire Services
45L	236	W	Alamo Rent A Car	471362 170258	6-8, Commercial Road, Reading, RG2 0QZ	Vehicle Hire and Rental	Hire Services
46L	237	W	Sharpsmart	471361 170258	6, Commercial Road, Reading, RG2 0QZ	Medical Waste Disposal Services	Health Support Services
47	238	W	Electricity Sub Station	471379 170503	RG2	Electrical Features	Infrastructure and Facilities
48M	240	SW	Tank	471368 170233	RG2	Tanks (Generic)	Industrial Features
49	241	W	Works	471345 170314	RG2	Unspecified Works Or Factories	Industrial Features
50N	244	W	Lamport Gilbert	471342 170363	3, Darwin Close, Reading, RG2 0TB	Plate Makers, Print Finishers and Type Setters	IT, Advertising, Marketing and Media Services
51N	244	W	M P S Colour Print Ltd	471342 170363	3, Darwin Close, Reading, RG2 0TB	Published Goods	Industrial Products
52	244	SW	Tank	471369 170223	RG2	Tanks (Generic)	Industrial Features

4.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site: 0

Database searched and no data found.

4.3 National Grid High Voltage Underground Electricity Transmission Cables

This dataset identifies the high voltage electricity transmission lines running between generating power plants and electricity substations. The dataset does not include the electricity distribution network (smaller, lower voltage cables distributing power from substations to the local user network). This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high voltage underground electricity transmission cables within 500m of the study site: 0

Database searched and no data found.

4.4 National Grid High Pressure Gas Transmission Pipelines

This dataset identifies high-pressure, large diameter pipelines which carry gas between gas terminals, power stations, compressors and storage facilities. The dataset does not include the Local Transmission System (LTS) which supplies gas directly into homes and businesses. This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high pressure gas transmission pipelines within 500m of the study site: 0

Database searched and no data found.

5. Geology

5.1 Artificial Ground and Made Ground

Database searched and no data found.

The database has been searched on site, including a 50m buffer.

5.2 Superficial Ground and Drift Geology

Database searched and no data found.

The database has been searched on site, including a 50m buffer.

5.3 Bedrock and Solid Geology

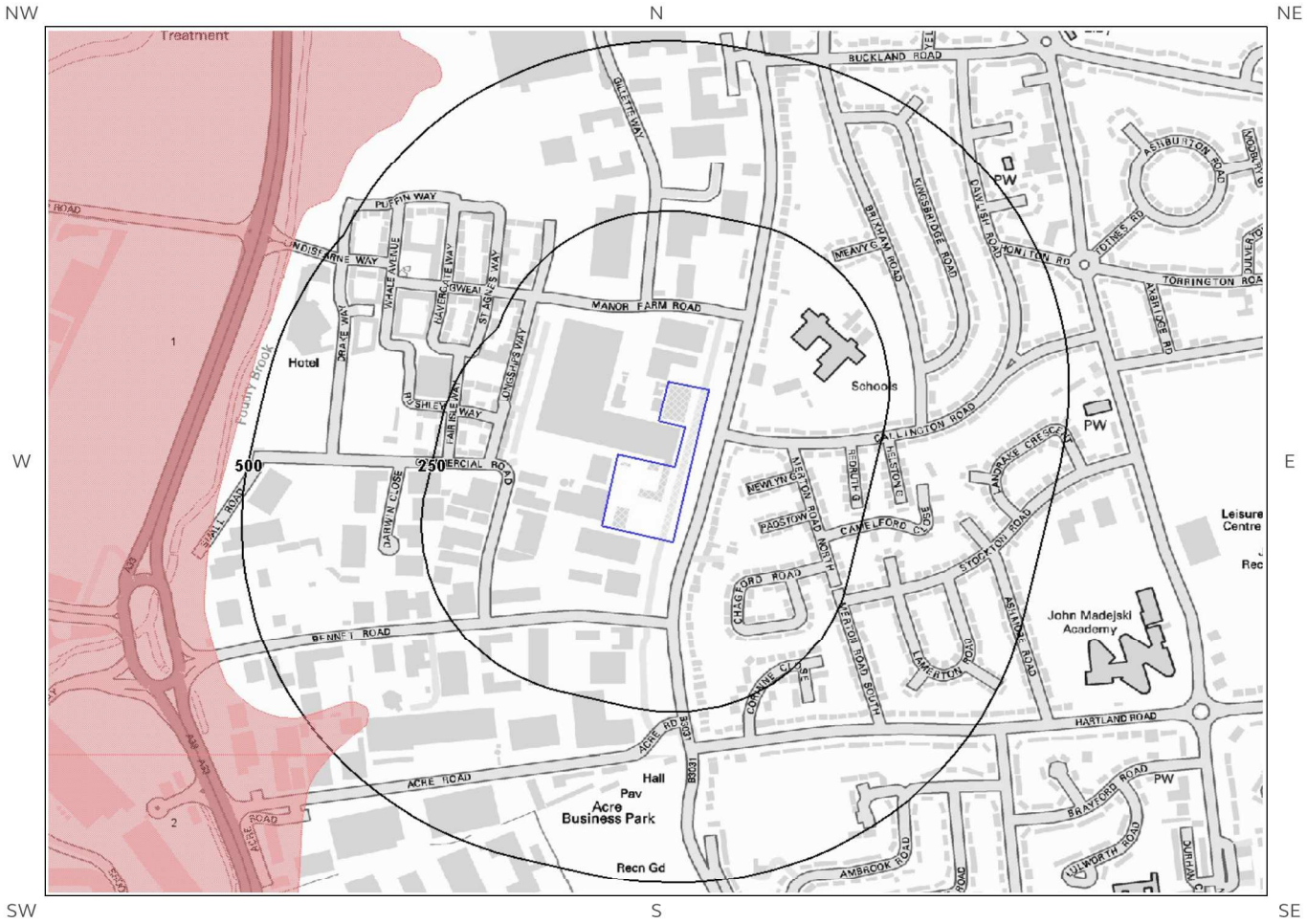
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
LC-CLSISA	LONDON CLAY FORMATION	CLAY, SILT AND SAND

(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

6 Hydrogeology and Hydrology

6a. Aquifer Within Superficial Geology



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Site Outline

250
500
Search Buffers (m)

Principal Aquifer

Secondary (A) Aquifer - Permeable Layers

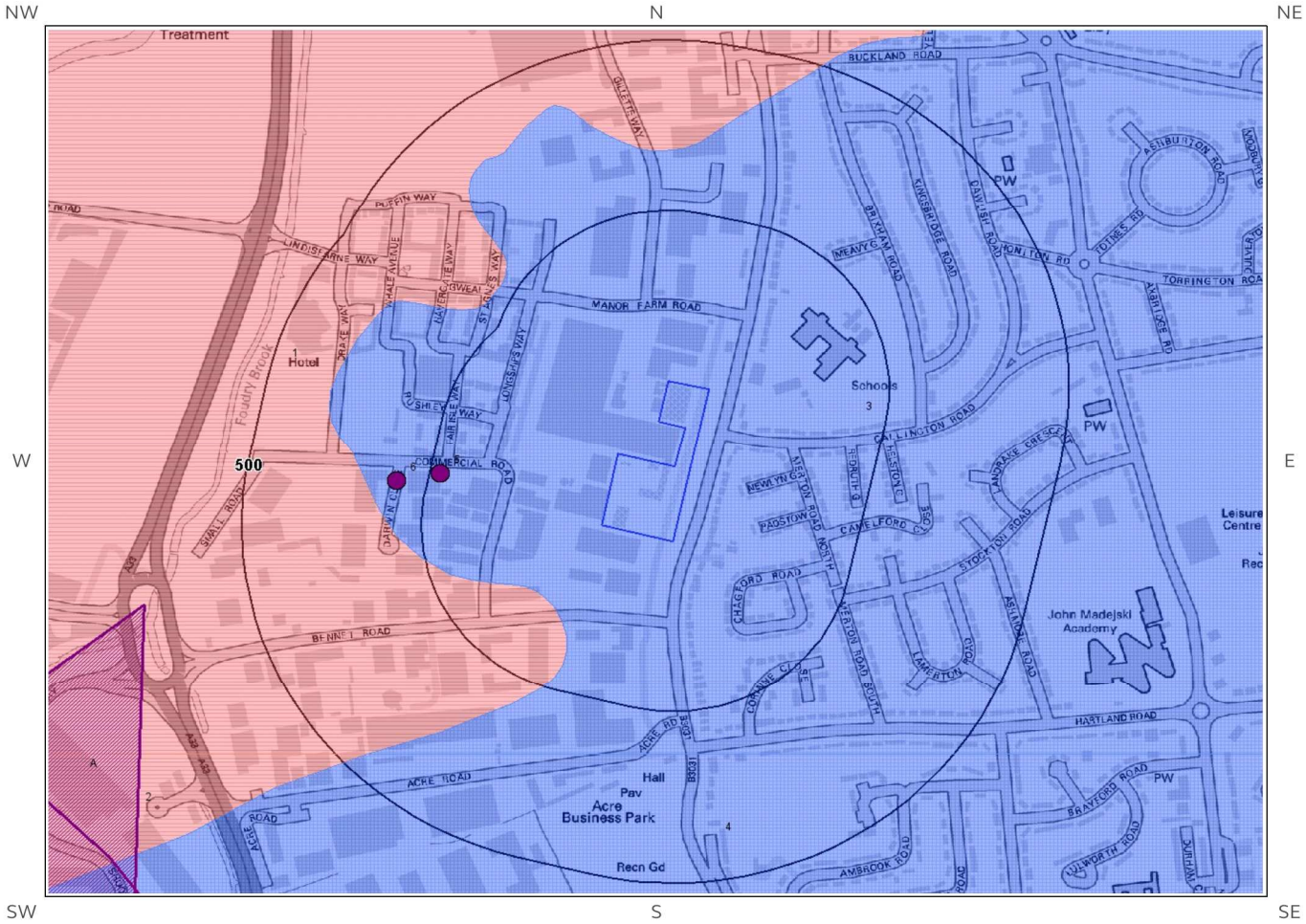
Secondary (B) Aquifer - Lower Permeability Layers

Secondary Aquifer - Undifferentiated Layers

Unproductive

Unknown (lakes and landslip)

6b. Aquifer Within Bedrock Geology and Abstraction Licenses



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Site Outline

250
500
Search Buffers (m)

Principal Aquifer

Secondary (A) Aquifer - Permeable Layers

Secondary (B) Aquifer - Lower Permeability Layers

Groundwater Abstraction Licence

Secondary Aquifer - Undifferentiated Layers

Unproductive

Unknown (lakes and landslip)

Surface Water Abstraction Licence

6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licenses



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Source Protection Zone 1 - Inner Catchment

Source Protection Zone 2 - Outer Catchment

Source Protection Zone 3 - Total Catchment

Source Protection Zone 4 - Zone of Special Interest

Potable Water Abstraction Licence

Site Outline

250
500
Search Buffers (m)

6d. Hydrogeology – Source Protection Zones within confined aquifer



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Source Protection Zone 1 - Inner Catchment

Source Protection Zone 2C - Outer Catchment within Confined Aquifer

Source Protection Zone 3C - Total Catchment within Confined Aquifer

Site Outline

250
500
Search Buffers (m)

Potable Water Abstraction Licence

6e. Hydrology – Detailed River Network and River Quality



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Site Outline

250
500
Search Buffers (m)

Primary River
Secondary River
Tertiary River
Lake/Reservoir
Underground River (inferred)
General Quality Assessment: Biology
General Quality Assessment: Chemistry

Canal
Canal Tunnel
Culvert
Multiple Channel Culvert
Underground River (Potential Sewer)
Underground River (local knowledge)

6.Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

Are there records of strata classification within the superficial geology at or in proximity to the property? Yes

From 1 April 2010, the Environment Agency's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insight User Guide.

The following aquifer records are shown on the Aquifer within Superficial Geology Map (6a):

ID	Distance (m)	Direction	Designation	Description
1	422	SW	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

6.2 Aquifer within Bedrock Deposits

Are there records of strata classification within the bedrock geology at or in proximity to the property? Yes

From 1 April 2010, the Environment Agency's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insight User Guide.

The following aquifer records are shown on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	Designation	Description
3	0	On Site	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
1	131	SW	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
4	312	S	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
2	467	SW	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

6.3 Groundwater Abstraction Licences

Are there any Groundwater Abstraction Licences within 2000m of the study site? Yes

The following Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	NGR	Details	
5	236	W	471360 170410	Status: Historical Licence No: 28/39/22/0612 Details: Laundry Use Direct Source: Thames Groundwater Point: Darwin Close, Whitley, Reading, Berkshire Data Type: Point Name: CLEAN LINEN SERVICES LTD	Annual Volume (m^3): 181840 Max Daily Volume (m^3): 655 Original Application No: WRW/A/1085 Original Start Date: 1/1/2002 Expiry Date: 31/3/2017 Issue No: 1 Version Start Date: 1/1/2002 Version End Date:
6	292	W	471300 170400	Status: Historical Licence No: 28/39/22/0525 Details: Laundry Use Direct Source: Thames Groundwater Point: Darwin Close, Whitley, Reading Data Type: Point Name: CLEAN LINEN SERVICES LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: - Expiry Date: 31/12/2001 Issue No: 101 Version Start Date: 1/4/2000 Version End Date:
7A	646	W	470520 169900	Status: Historical Licence No: 28/39/22/0578 Details: General Use Relating To Secondary Category (Low Loss) Direct Source: Thames Groundwater Point: Madejski Stadium Wellpoints Data Type: Region Name: READING FOOTBALL CLUB PLC	Annual Volume (m^3): 189734.4 Max Daily Volume (m^3): 518.4 Original Application No: WRA/6539 Original Start Date: 8/6/1998 Expiry Date: 30/6/2008 Issue No: 100 Version Start Date: 8/6/1998 Version End Date:
8A	839	SW	470720 170020	Status: Historical Licence No: 28/39/22/0644 Details: General Use Relating To Secondary Category (Low Loss) Direct Source: Thames Groundwater Point: Madejski Stadium Complex - 424 Wellpoints Data Type: Region Name: READING FOOTBALL CLUB PLC	Annual Volume (m^3): 189735 Max Daily Volume (m^3): 518.4 Original Application No: WRW/A/1220 Original Start Date: 28/7/2008 Expiry Date: 31/3/2023 Issue No: 1 Version Start Date: 28/7/2008 Version End Date:
Not shown	840	SW	471100 169650	Status: Historical Licence No: 28/39/22/0614 Details: Process Water Direct Source: Thames Groundwater Point: Berkshire Brewery - Point 'e' Data Type: Point Name: Heineken UK Ltd	Annual Volume (m^3): 3000000 Max Daily Volume (m^3): 9550 Original Application No: NPS/WR/002635 Original Start Date: 1/1/2002 Expiry Date: 31/12/2011 Issue No: 4 Version Start Date: 23/11/2009 Version End Date:
Not shown	936	NW	470970 171160	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station 'bh D' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: NPS/WR/008557 Original Start Date: 5/9/1966 Expiry Date: 31/3/2023 Issue No: 101 Version Start Date: 1/1/2013 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	936	NW	470970 171160	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station Bh 'd' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: RG952 Original Start Date: 5/9/1966 Expiry Date: - Issue No: 100 Version Start Date: 11/6/1998 Version End Date:
Not shown	1050	NW	470840 171180	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station 'bh A' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: NPS/WR/008557 Original Start Date: 5/9/1966 Expiry Date: 31/3/2023 Issue No: 101 Version Start Date: 1/1/2013 Version End Date:
Not shown	1054	NW	470850 171200	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station Bh 'a' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: RG952 Original Start Date: 5/9/1966 Expiry Date: - Issue No: 100 Version Start Date: 11/6/1998 Version End Date:
Not shown	1106	NW	470770 171180	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station 'bh B' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: NPS/WR/008557 Original Start Date: 5/9/1966 Expiry Date: 31/3/2023 Issue No: 101 Version Start Date: 1/1/2013 Version End Date:
Not shown	1118	NW	470770 171200	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station Bh 'b' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: RG952 Original Start Date: 5/9/1966 Expiry Date: - Issue No: 100 Version Start Date: 11/6/1998 Version End Date:
Not shown	1173	NW	470660 171130	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station 'bh H' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: NPS/WR/008557 Original Start Date: 5/9/1966 Expiry Date: 31/3/2023 Issue No: 101 Version Start Date: 1/1/2013 Version End Date:
Not shown	1173	NW	470660 171130	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station Bh 'h' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: RG952 Original Start Date: 5/9/1966 Expiry Date: - Issue No: 100 Version Start Date: 11/6/1998 Version End Date:
Not shown	1209	NW	470680 171230	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station 'bh C' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: NPS/WR/008557 Original Start Date: 5/9/1966 Expiry Date: 31/3/2023 Issue No: 101 Version Start Date: 1/1/2013 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1209	NW	470680 171230	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station Bh 'c' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: RG952 Original Start Date: 5/9/1966 Expiry Date: - Issue No: 100 Version Start Date: 11/6/1998 Version End Date:
Not shown	1267	NW	470610 171230	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station 'bh G' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: NPS/WR/008557 Original Start Date: 5/9/1966 Expiry Date: 31/3/2023 Issue No: 101 Version Start Date: 1/1/2013 Version End Date:
Not shown	1267	NW	470610 171230	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station Bh 'g' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: RG952 Original Start Date: 5/9/1966 Expiry Date: - Issue No: 100 Version Start Date: 11/6/1998 Version End Date:
Not shown	1400	SW	470740 169220	Status: Historical Licence No: 28/39/22/0614 Details: Process Water Direct Source: Thames Groundwater Point: Berkshire Brewery Point 'd' Data Type: Point Name: Heineken UK Ltd	Annual Volume (m^3): 3000000 Max Daily Volume (m^3): 9550 Original Application No: NPS/WR/002635 Original Start Date: 1/1/2002 Expiry Date: 31/12/2011 Issue No: 4 Version Start Date: 23/11/2009 Version End Date:
Not shown	1418	SW	470890 169100	Status: Historical Licence No: 28/39/22/0614 Details: Process Water Direct Source: Thames Groundwater Point: Berkshire Brewery - Point 'c' Data Type: Point Name: Heineken UK Ltd	Annual Volume (m^3): 3000000 Max Daily Volume (m^3): 9550 Original Application No: NPS/WR/002635 Original Start Date: 1/1/2002 Expiry Date: 31/12/2011 Issue No: 4 Version Start Date: 23/11/2009 Version End Date:
Not shown	1421	S	471130 168990	Status: Historical Licence No: 28/39/22/0614 Details: Process Water Direct Source: Thames Groundwater Point: Berkshire Brewery - Point 'a' Data Type: Point Name: Heineken UK Ltd	Annual Volume (m^3): 3000000 Max Daily Volume (m^3): 9550 Original Application No: NPS/WR/002635 Original Start Date: 1/1/2002 Expiry Date: 31/12/2011 Issue No: 4 Version Start Date: 23/11/2009 Version End Date:
Not shown	1440	SW	470700 169200	Status: Historical Licence No: 28/39/22/0556 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Thames Groundwater Point: Berkshire Brewery Point 'd' Data Type: Point Name: SCOTTISH COURAGE BREWING LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: WRA/6342 Original Start Date: - Expiry Date: 31/12/2001 Issue No: 100 Version Start Date: 9/5/2000 Version End Date:
Not shown	1444	NW	470380 171200	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station 'bh F' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: NPS/WR/008557 Original Start Date: 5/9/1966 Expiry Date: 31/3/2023 Issue No: 101 Version Start Date: 1/1/2013 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1444	NW	470380 171200	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station Bh 'f' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: RG952 Original Start Date: 5/9/1966 Expiry Date: - Issue No: 100 Version Start Date: 11/6/1998 Version End Date:
Not shown	1464	SW	470800 169100	Status: Historical Licence No: 28/39/22/0556 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Thames Groundwater Point: Berkshire Brewery Point 'c' Data Type: Point Name: SCOTTISH COURAGE BREWING LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: WRA/6342 Original Start Date: - Expiry Date: 31/12/2001 Issue No: 100 Version Start Date: 9/5/2000 Version End Date:
Not shown	1513	NW	470300 171200	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station 'bh E' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: NPS/WR/008557 Original Start Date: 5/9/1966 Expiry Date: 31/3/2023 Issue No: 101 Version Start Date: 1/1/2013 Version End Date:
Not shown	1513	NW	470300 171200	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station Bh 'e' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: RG952 Original Start Date: 5/9/1966 Expiry Date: - Issue No: 100 Version Start Date: 11/6/1998 Version End Date:
Not shown	1516	S	471100 168900	Status: Historical Licence No: 28/39/22/0556 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Thames Groundwater Point: Berkshire Brewery Point 'a' Data Type: Point Name: SCOTTISH COURAGE BREWING LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: WRA/6342 Original Start Date: - Expiry Date: 31/12/2001 Issue No: 100 Version Start Date: 9/5/2000 Version End Date:
Not shown	1516	S	471320 168840	Status: Historical Licence No: 28/39/22/0601 Details: Make-Up or Top Up Water Direct Source: Thames Groundwater Point: Reading International Business Park Data Type: Point Name: AKELER DEVELOPMENTS LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: WRW/A/1049 Original Start Date: 10/11/2000 Expiry Date: - Issue No: 1 Version Start Date: 10/11/2000 Version End Date:
Not shown	1549	W	470090 169930	Status: Historical Licence No: 28/39/22/0276 Details: Spray Irrigation - Direct Direct Source: Thames Groundwater Point: Smallmead Farm, Pingewood Data Type: Point Name: THE PRUDENTIAL ASSUR. COM. LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 9/1/1967 Expiry Date: - Issue No: 101 Version Start Date: 30/7/1999 Version End Date:
Not shown	1692	W	469900 170180	Status: Historical Licence No: 28/39/22/0463 Details: General Farming & Domestic Direct Source: Thames Groundwater Point: Pingewood Business Estate, Smallmead Road, Reading Data Type: Point Name: KENNET VALLEY PARK LTD	Annual Volume (m^3): 6819 Max Daily Volume (m^3): 22.73 Original Application No: - Original Start Date: 29/7/1980 Expiry Date: - Issue No: 101 Version Start Date: 1/4/2008 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1692	W	469900 170180	Status: Historical Licence No: 28/39/22/0463 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Thames Groundwater Point: Pingewood Business Estate, Smallmead Road, Reading Data Type: Point Name: KENNET VALLEY PARK LTD	Annual Volume (m^3): 6819 Max Daily Volume (m^3): 22.73 Original Application No: - Original Start Date: 29/7/1980 Expiry Date: - Issue No: 101 Version Start Date: 1/4/2008 Version End Date:
Not shown	1719	NE	473000 171700	Status: Historical Licence No: 28/39/22/0077 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Thames Groundwater Point: Whiteknights Park, Reading Data Type: Point Name: UNIVERSITY OF READING	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: WRA/348/1 Original Start Date: 14/3/1966 Expiry Date: - Issue No: 100 Version Start Date: 26/4/1993 Version End Date:
Not shown	1749	NE	473040 171700	Status: Historical Licence No: 28/39/22/0077 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Thames Groundwater Point: Whiteknights Park - Reading - Borehole Data Type: Point Name: UNIVERSITY OF READING	Annual Volume (m^3): 240000 Max Daily Volume (m^3): 1032 Original Application No: NPS/WR/003756 Original Start Date: 14/3/1966 Expiry Date: - Issue No: 103 Version Start Date: 1/4/2011 Version End Date:
Not shown	1927	SW	470300 168900	Status: Historical Licence No: 28/39/22/0166 Details: General Farming & Domestic Direct Source: Thames Groundwater Point: Hartley Court Farm, Three Mile Cross Data Type: Point Name: HEWISON	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: WRA/1763/1 Original Start Date: 5/9/1966 Expiry Date: - Issue No: 100 Version Start Date: 21/11/1985 Version End Date:

6.4 Surface Water Abstraction Licences

Are there any Surface Water Abstraction Licences within 2000m of the study site? Yes

The following Surface Water Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	NGR	Details	
Not shown	1227	NW	470420 171140	Status: Historical Licence No: 28/39/22/0527 Details: Fish Farm/Cress Pond Throughflow Direct Source: Thames Surface Water - Non Tidal Point: Fobney Fish Farm Intakes Data Type: Line Name: ENVIRONMENT AGENCY	Annual Volume (m^3): - Max Daily Volume (m^3): - Application No: WRA/5618 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 11/8/1993 Version End Date:
Not shown	1227	NW	470420 171140	Status: Historical Licence No: 28/39/22/0527 Details: Fish Farm/Cress Pond Throughflow Direct Source: Thames Surface Water - Non Tidal Point: Kennet And Avon Canal At Fobney Fish Farm Intakes Data Type: Line Name: ENVIRONMENT AGENCY	Annual Volume (m^3): 2382154 Max Daily Volume (m^3): 12730 Application No: WRA/5618 Original Start Date: 11/8/1993 Expiry Date: - Issue No: 100 Version Start Date: 11/8/1993 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1235	NW	470460 171130	Status: Historical Licence No: 28/39/22/0527 Details: Fish Farm/Cress Pond Throughflow Direct Source: Thames Surface Water - Non Tidal Point: Kennet And Avon Canal At Fobney Fish Farm Intakes Data Type: Line Name: ENVIRONMENT AGENCY	Annual Volume (m^3): 1800000 Max Daily Volume (m^3): 5000 Application No: - Original Start Date: 11/8/1993 Expiry Date: 31/3/2011 Issue No: 101 Version Start Date: 10/10/2006 Version End Date:
Not shown	1513	NW	470300 171200	Status: Historical Licence No: 28/39/22/0435 Details: Potable Water Supply - Direct Direct Source: Thames Surface Water - Non Tidal Point: Fobney Waterworks Intake Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Application No: S228 Original Start Date: 5/4/1977 Expiry Date: - Issue No: 100 Version Start Date: 5/4/1977 Version End Date:
Not shown	1513	NW	470300 171200	Status: Active Licence No: 28/39/22/0435 Details: Potable Water Supply - Direct Direct Source: Thames Surface Water - Non Tidal Point: Kennet And Avon Canal At Fobney Waterworks Intake Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 26621933 Max Daily Volume (m^3): 72737.52 Application No: S228 Original Start Date: 5/4/1977 Expiry Date: - Issue No: 100 Version Start Date: 5/4/1977 Version End Date:
Not shown	1618	SW	470200 168600	Status: Active Licence No: 28/39/22/0232 Details: Spray Irrigation - Direct Direct Source: Thames Surface Water - Non Tidal Point: Foudry Brook At Hartley Court Farm Data Type: Line Name: Hewison Farms limited	Annual Volume (m^3): 18184 Max Daily Volume (m^3): 681.91 Application No: - Original Start Date: 14/11/1966 Expiry Date: - Issue No: 101 Version Start Date: 16/2/2016 Version End Date:
Not shown	1950	SW	469500 168800	Status: Active Licence No: 28/39/22/0232 Details: Spray Irrigation - Direct Direct Source: Thames Surface Water - Non Tidal Point: Burghfield Brook At Hartley Court Farm Data Type: Line Name: Hewison Farms limited	Annual Volume (m^3): 18184 Max Daily Volume (m^3): 681.91 Application No: - Original Start Date: 14/11/1966 Expiry Date: - Issue No: 101 Version Start Date: 16/2/2016 Version End Date:

6.5 Potable Water Abstraction Licences

Are there any Potable Water Abstraction Licences within 2000m of the study site? Yes

The following Potable Water Abstraction Licences records are represented as points, lines and regions on the SPZ and Potable Water Abstraction Licences Map (6c):

ID	Distance (m)	Direction	NGR	Details	
Not shown	936	NW	470970 171160	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station Bh 'd' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: RG952 Original Start Date: 5/9/1966 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	936	NW	470970 171160	Status: Active Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station 'bh D' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: NPS/WR/008557 Original Start Date: 5/9/1966 Expiry Date: 31/3/2023 Issue No: 101 Version Start Date: Version End Date:
Not shown	1050	NW	470840 171180	Status: Active Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station 'bh A' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: NPS/WR/008557 Original Start Date: 5/9/1966 Expiry Date: 31/3/2023 Issue No: 101 Version Start Date: Version End Date:
Not shown	1054	NW	470850 171200	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station Bh 'a' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: RG952 Original Start Date: 5/9/1966 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:
Not shown	1106	NW	470770 171180	Status: Active Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station 'bh B' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: NPS/WR/008557 Original Start Date: 5/9/1966 Expiry Date: 31/3/2023 Issue No: 101 Version Start Date: Version End Date:
Not shown	1118	NW	470770 171200	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station Bh 'b' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: RG952 Original Start Date: 5/9/1966 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:
Not shown	1173	NW	470660 171130	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station Bh 'h' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: RG952 Original Start Date: 5/9/1966 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:
Not shown	1173	NW	470660 171130	Status: Active Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station 'bh H' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: NPS/WR/008557 Original Start Date: 5/9/1966 Expiry Date: 31/3/2023 Issue No: 101 Version Start Date: Version End Date:
Not shown	1209	NW	470680 171230	Status: Active Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station 'bh C' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: NPS/WR/008557 Original Start Date: 5/9/1966 Expiry Date: 31/3/2023 Issue No: 101 Version Start Date: Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1209	NW	470680 171230	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station Bh 'c' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: RG952 Original Start Date: 5/9/1966 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:
Not shown	1267	NW	470610 171230	Status: Active Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station 'bh G' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: NPS/WR/008557 Original Start Date: 5/9/1966 Expiry Date: 31/3/2023 Issue No: 101 Version Start Date: Version End Date:
Not shown	1267	NW	470610 171230	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station Bh 'g' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: RG952 Original Start Date: 5/9/1966 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:
Not shown	1444	NW	470380 171200	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station Bh 'f' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: RG952 Original Start Date: 5/9/1966 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:
Not shown	1444	NW	470380 171200	Status: Active Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station 'bh F' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: NPS/WR/008557 Original Start Date: 5/9/1966 Expiry Date: 31/3/2023 Issue No: 101 Version Start Date: Version End Date:
Not shown	1513	NW	470300 171200	Status: Active Licence No: 28/39/22/0435 Details: Potable Water Supply - Direct Direct Source: Thames Surface Water - Non Tidal Point: Kennet And Avon Canal At Fobney Waterworks Intake Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 26621933 Max Daily Volume (m^3): 72737.52 Original Application No: S228 Original Start Date: 5/4/1977 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:
Not shown	1513	NW	470300 171200	Status: Active Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station 'bh E' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: NPS/WR/008557 Original Start Date: 5/9/1966 Expiry Date: 31/3/2023 Issue No: 101 Version Start Date: Version End Date:
Not shown	1513	NW	470300 171200	Status: Historical Licence No: 28/39/22/0435 Details: Potable Water Supply - Direct Direct Source: Thames Surface Water - Non Tidal Point: Fobney Waterworks Intake Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: S228 Original Start Date: 5/4/1977 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1513	NW	470300 171200	Status: Historical Licence No: 28/39/22/0132 Details: Potable Water Supply - Direct Direct Source: Thames Groundwater Point: Fobney Pumping Station Bh 'e' Data Type: Point Name: THAMES WATER UTILITIES LTD	Annual Volume (m^3): 1500000 Max Daily Volume (m^3): 30000 Original Application No: RG952 Original Start Date: 5/9/1966 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:
Not shown	1692	W	469900 170180	Status: Active Licence No: 28/39/22/0463 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Thames Groundwater Point: Pingewood Business Estate, Smallmead Road, Reading Data Type: Point Name: KENNET VALLEY PARK LTD	Annual Volume (m^3): 6819 Max Daily Volume (m^3): 22.73 Original Application No: - Original Start Date: 29/7/1980 Expiry Date: - Issue No: 101 Version Start Date: Version End Date:
Not shown	1749	NE	473040 171700	Status: Active Licence No: 28/39/22/0077 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Thames Groundwater Point: Whiteknights Park - Reading - Borehole Data Type: Point Name: UNIVERSITY OF READING	Annual Volume (m^3): 240000 Max Daily Volume (m^3): 1032 Original Application No: NPS/WR/003756 Original Start Date: 14/3/1966 Expiry Date: - Issue No: 103 Version Start Date: Version End Date:

6.6 Source Protection Zones

Are there any Source Protection Zones within 500m of the study site? No

Database searched and no data found.

6.7 Source Protection Zones within Confined Aquifer

Are there any Source Protection Zones within the Confined Aquifer within 500m of the study site? No

Historically, Source Protection Zone maps have been focused on regulation of activities which occur at or near the ground surface, such as prevention of point source pollution and bacterial contamination of water supplies. Sources in confined aquifers were often considered to be protected from these surface pressures due to the presence of a low permeability confining layer (e.g. glacial till, clay). The increased interest in subsurface activities such as onshore oil and gas exploration, ground source heating and cooling requires protection zones for confined sources to be marked on SPZ maps where this has not already been done.

Database searched and no data found.

6.8 Groundwater Vulnerability and Soil Leaching Potential

Is there any Environment Agency information on groundwater vulnerability and soil leaching potential within 500m of the study site? Yes

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
282	NW	Minor Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.

6.9 River Quality

Is there any Environment Agency information on river quality within 1500m of the study site? Yes

6.9.1 Biological Quality:

Biological Quality data describes water quality in terms of 83 groups of macroinvertebrates, some of which are pollution sensitive. The results are graded from A ('Very Good') to F ('Bad').

The following Biological Quality records are shown on the Hydrology Map (6e):

ID	Distance (m)	Direction	NGR	River Quality Grade	Biological Quality Grade				
					2005	2006	2007	2008	2009
Not shown	805	NW	471180 171180	River Name: Foudry Brook Reach: Stratfield Mortimer Stw - Kennet End/Start of Stretch: End of Stretch NGR	B	A	A	A	B
Not shown	805	NW	471180 171180	River Name: Kennet Reach: Sulhamstead Stream - Foudry Brook End/Start of Stretch: End of Stretch NGR	A	A	A	A	A

6.9.2 Chemical Quality:

Chemical quality data is based on the General Quality Assessment Headline Indicators scheme (GQAHI). In England, each chemical sample is measured for ammonia and dissolved oxygen. In Wales, the samples are measured for biological oxygen demand (BOD), ammonia and dissolved oxygen. The results are graded from A ('Very Good') to F ('Bad').

The following Chemical Quality records are shown on the Hydrology Map (6e):

					Chemical Quality Grade				
ID	Distance (m)	Direction	NGR	River Quality Grade	2005	2006	2007	2008	2009
Not shown	805	NW	471180 171180	River Name: Kennet Reach: Foudry Brook - Holy Brook End/Start of Stretch: Start of Stretch NGR	B	A	A	A	A
Not shown	805	NW	471180 171180	River Name: Kennet Reach: Sulhamstead Stream - Foudry Brook End/Start of Stretch: End of Stretch NGR	A	A	A	A	A
Not shown	1472	NW	470333 171175	River Name: Kennet Reach: Sulhamstead Stream - Foudry Brook End/Start of Stretch: Sample Point NGR	A	A	A	A	A

6.10 Detailed River Network

Are there any Detailed River Network entries within 500m of the study site? Yes

The following Detailed River Network records are represented on the Hydrology Map (6e):

ID	Distance (m)	Direction	Details	
1	427	S	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
2	427	S	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined

6.11 Surface Water Features

Are there any surface water features within 250m of the study site? No

Database searched and no data found.

7a. Environment Agency Flood Map for Planning (from rivers and the sea)



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Site Outline

100
250
Search Buffers (m)

Zone 2 Floodplain

Zone 3 Floodplain

Flood Defences

Area used for Flood Storage

Area Benefiting from Flood Defences

7b. Environment Agency Risk of Flooding from Rivers and the Sea (RoFRaS) Map



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Site Outline

100 250 Search Buffers (m)

RoFRaS Rating

- Very Low
- Low
- Medium
- High

7 Flooding

7.1 River and Coastal Zone 2 Flooding

Is the site within 250m of an Environment Agency Zone 2 floodplain? No

Environment Agency Zone 2 floodplains estimate the annual probability of flooding as between 1 in 1000 (0.1%) and 1 in 100 (1%) from rivers and between 1 in 1000 (0.1%) and 1 in 200 (0.5%) from the sea. Any relevant data is represented on Map 7a – Flood Map for Planning:

Database searched and no data found.

7.2 River and Coastal Zone 3 Flooding

Is the site within 250m of an Environment Agency Zone 3 floodplain? No

Zone 3 shows the extent of a river flood with a 1 in 100 (1%) or greater chance of occurring in any year or a sea flood with a 1 in 200 (0.5%) or greater chance of occurring in any year. Any relevant data is represented on Map 7a – Flood Map for Planning.

Database searched and no data found.

7.3 Risk of Flooding from Rivers and the Sea (RoFRaS) Flood Rating

What is the highest risk of flooding onsite? Very Low

The Environment Agency RoFRaS database provides an indication of river and coastal flood risk at a national level on a 50m grid with the flood rating at the centre of the grid calculated and given above. The data considers the probability that the flood defences will overtop or breach by considering their location, type, condition and standard of protection.

RoFRaS data for the study site indicates the property is in an area with a Very Low (less than 1 in 1000) chance of flooding in any given year.

7.4 Flood Defences

Are there any Flood Defences within 250m of the study site? No

Database searched and no data found.

7.5 Areas benefiting from Flood Defences

Are there any areas benefiting from Flood Defences within 250m of the study site? No

7.6 Areas benefiting from Flood Storage

Are there any areas used for Flood Storage within 250m of the study site? No

7.7 Groundwater Flooding Susceptibility Areas

7.7.1 Are there any British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site? No

Notes: Groundwater flooding may either be associated with shallow unconsolidated sedimentary aquifers which overlie unproductive aquifers (Superficial Deposits Flooding), or with unconfined aquifers (Clearwater Flooding).

7.7.2 What is the highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions?

Not Prone

The area is not considered to be prone to groundwater flooding based on rock type.

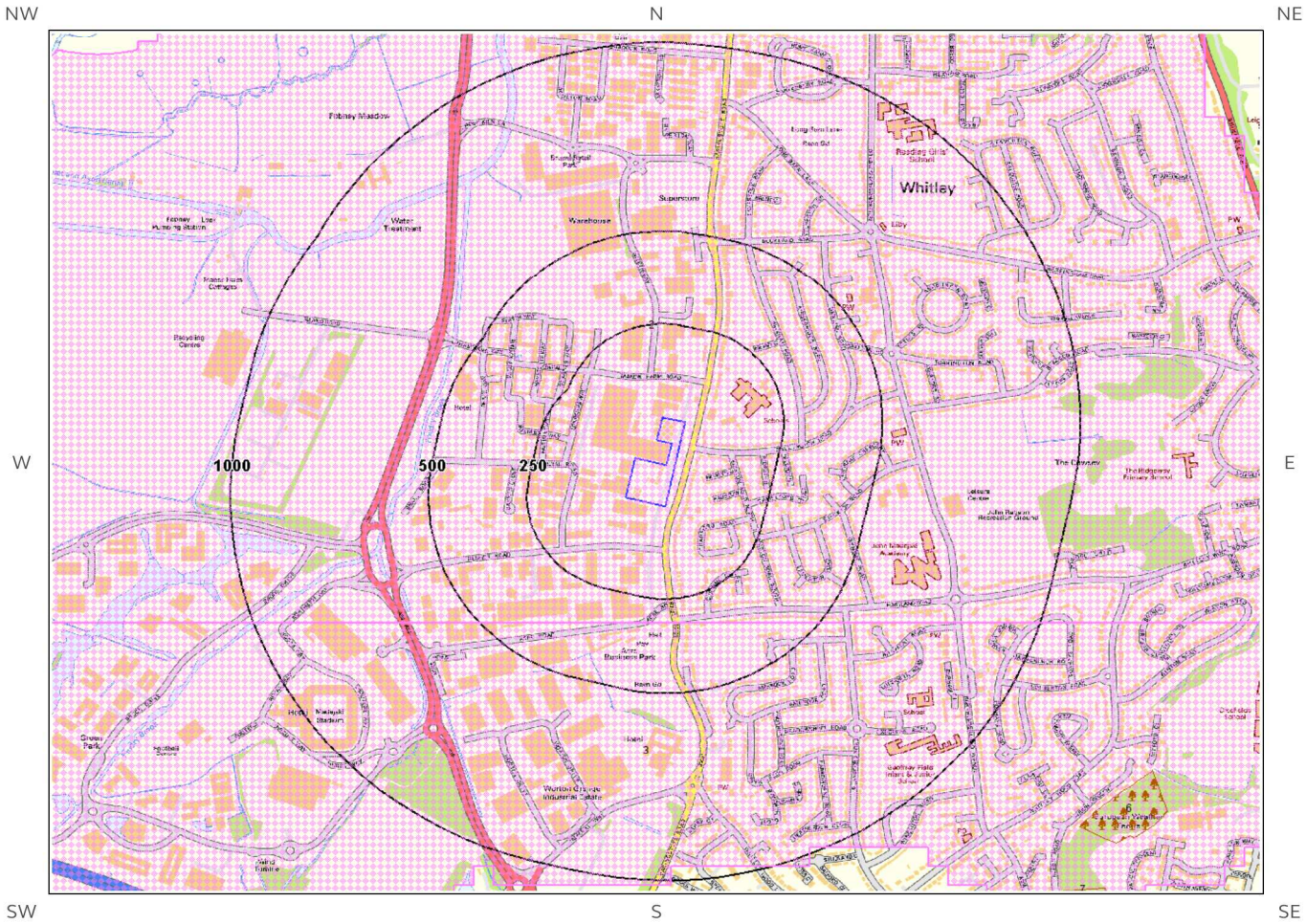
7.8 Groundwater Flooding Confidence Areas

What is the British Geological Survey confidence rating in this result? Not Applicable

Notes: Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

The confidence rating is on a threefold scale - Low, Moderate and High. This provides a relative indication of the BGS confidence in the accuracy of the susceptibility result for groundwater flooding. This is based on the amount and precision of the information used in the assessment. In areas with a relatively lower level of confidence the susceptibility result should be treated with more caution. In other areas with higher levels of confidence the susceptibility result can be used with more confidence.

8. Designated Environmentally Sensitive Sites Map



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Site Outline

100
250
Search Buffers (m)

AONB
National Park
SSSI
Special Protection Areas
Nitrate Vulnerable Zones

Green Belt
Environmentally Sensitive Areas
Special Areas of Conservation
World Heritage Sites
Nitrate Sensitive Areas

Ancient Woodland
National Nature Reserve
Local Nature Reserves
Ramsar Sites

8. Designated Environmentally Sensitive Sites

Presence of Designated Environmentally Sensitive Sites within 2000m of the study site?	Yes

8.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site:

0

Database searched and no data found.

8.2 Records of National Nature Reserves (NNR) within 2000m of the study site:

0

Database searched and no data found.

8.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site:

0

Database searched and no data found.

8.4 Records of Special Protection Areas (SPA) within 2000m of the study site:

0

Database searched and no data found.

8.5 Records of Ramsar sites within 2000m of the study site:

0

Database searched and no data found.

8.6 Records of Ancient Woodland within 2000m of the study site:

2

The following records of Designated Ancient Woodland provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
6	1353	SE	UNKNOWN	Ancient and Semi-Natural Woodland
7	1427	SE	UNKNOWN	Ancient and Semi-Natural Woodland

8.7 Records of Local Nature Reserves (LNR) within 2000m of the study site:

1

The following Local Nature Reserve (LNR) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	LNR Name	Data Source
Not shown	1951	SE	Pearman's Copse	Natural England

8.8 Records of World Heritage Sites within 2000m of the study site:

0

Database searched and no data found.

8.9 Records of Environmentally Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

8.10 Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site:

0

Database searched and no data found.

8.11 Records of National Parks (NP) within 2000m of the study site:

0

Database searched and no data found.

8.12 Records of Nitrate Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

8.13 Records of Nitrate Vulnerable Zones within 2000m of the study site:

4

The following Nitrate Vulnerable Zone records produced by DEFRA are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	NVZ Name	Data Source
2	0	On Site	Existing	DEFRA
3	312	S	Existing	DEFRA
Not shown	1585	W	Existing	DEFRA
Not shown	1620	W	Existing	DEFRA

8.14 Records of Green Belt land within 2000m of the study site:

0

Database searched and no data found.

9. Natural Hazards Findings

9.1 Detailed BGS GeoSure Data

BGS GeoSure Data has been searched to 50m. The data is included in tabular format. If you require further information on geology and ground stability, please obtain a Groundsure Geo Insight, available from our website. The following information has been found:

9.1.1 Shrink Swell

What is the maximum Shrink-Swell*[*] hazard rating identified on the study site? Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Ground conditions predominantly medium plasticity. Do not plant trees with high soil moisture demands near to buildings. For new build, consideration should be given to advice published by the National House Building Council (NHBC) and the Building Research Establishment (BRE). There is a possible increase in construction cost to reduce potential shrink-swell problems. For existing property, there is a possible increase in insurance risk, especially during droughts or where vegetation with high moisture demands is present.

9.1.2 Landslides

What is the maximum Landslide* hazard rating identified on the study site? Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

9.1.3 Soluble Rocks

What is the maximum Soluble Rocks* hazard rating identified on the study site? Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

* This indicates an automatically generated 50m buffer and site.

9.1.4 Compressible Ground

What is the maximum Compressible Ground* hazard rating identified on the study site? Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

9.1.5 Collapsible Rocks

What is the maximum Collapsible Rocks* hazard rating identified on the study site? Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

9.1.6 Running Sand

What is the maximum Running Sand** hazard rating identified on the study site? Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
No indicators for running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

9.2 Radon

9.2.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

* This indicates an automatically generated 50m buffer and site.

9.2.2 Radon Protection

Is the property in an area where Radon Protection are required for new properties or extensions to existing
ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.

10. Mining

10.1 Coal Mining

Are there any coal mining areas within 75m of the study site? No

Database searched and no data found.

10.2 Non-Coal Mining

Are there any Non-Coal Mining areas within 50m of the study site boundary? Yes

The following non-coal mining information is provided by the BGS:

Distance (m)	Direction	Name	Commodity	Assessment of likelihood
0.0	On Site	Not available	Chalk	Small scale underground mining may have occurred; mine adits, shafts and tunnels may be present. Potential for localised difficult ground conditions are at a level where they should be considered

Past underground mine workings are unlikely. The rock types present in these areas are such that mineral veins may be present on which it is possible that mining has been undertaken and/or it is possible that small scale underground extraction of other materials may have occurred. All such occurrences are likely to be of localised extent and infrequent. It should be noted, however, that there is always the possibility of the existence of other sub-surface excavations, such as wells, cess pits, follies, air raid shelters/bunkers and other military structures etc. that could affect surface ground stability but which are outside the scope of this dataset. However, if in a coalfield area you should still consider a Coal Authority mining search for the area of interest.

10.3 Brine Affected Areas

Are there any brine affected areas within 75m of the study site? No
Guidance: No Guidance Required.

Contact Details

Groundsure Helpline
Telephone: 08444 159 000
info@groundsure.com

British Geological Survey Enquiries
Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email:
Web:**www.bgs.ac.uk**
BGS Geological Hazards Reports and general geological enquiries:
enquiries@bgs.ac.uk

Environment Agency
National Customer Contact Centre, PO Box 544
Rotherham, S60 1BY
Tel: 08708 506 506
Web:**www.environment-agency.gov.uk**
Email:**enquiries@environment-agency.gov.uk**

Public Health England
Public information access office
Public Health England, Wellington House
133-155 Waterloo Road, London, SE1 8UG
www.gov.uk/phe
Email:**enquiries@phe.gov.uk**
Main switchboard**: 020 7654 8000**

The Coal Authority
200 Lichfield Lane
Mansfield
Notts NG18 4RG
Tel: 0345 7626 848
DX 716176 Mansfield 5
www.coal.gov.uk

Ordnance Survey
Adanac Drive, Southampton
SO16 0AS
Tel: 08456 050505

Local Authority
Authority: Reading Borough Council
Phone: 0118 937 3787
Web: http://beta.reading.gov.uk/
Address: Civic Offices, Bridge Street, Reading, RG1 2LU

Gemapping PLC
Virginia Villas, High Street, Hartley Witney,
Hampshire RG27 8NW
Tel: 01252 845444

Acknowledgements: Site of Special Scientific Interest, National Nature Reserve, Ramsar Site, Special Protection Area, Special Area of Conservation data is provided by, and used with the permission of, Natural England who retain the Copyright and Intellectual Property Rights for the data.
PointX © Database Right/Copyright, Thomson Directories Limited © Copyright Link Interchange Network Limited © Database Right/Copyright and Ordnance Survey © Crown Copyright and/or Database Right. All Rights Reserved. Licence Number [03421028].
This report has been prepared in accordance with the Groundsure Ltd standard Terms and Conditions of business for work of this nature.

Standard Terms and Conditions

1 Definitions

In these terms and conditions unless the context otherwise requires:

"Beneficiary" means the person or entity for whose benefit the Client has obtained the Services.

"Client" means the party or parties entering into a Contract with Groundsure.

"Commercial" means any building or property which is not Residential.

"Confidential Information" means the contents of this Contract and all information received from the Client as a result of, or in connection with, this Contract other than

(i) information which the Client can prove was rightfully in its possession prior to disclosure by Groundsure and

(ii) any information which is in the public domain (other than by virtue of a breach of this Contract).

"Support Services" means Support Services provided by Groundsure including, without limitation, interpreting third party and in-house environmental data, providing environmental support advice, undertaking environmental audits and assessments, Site investigation, Site monitoring and related items.

"Contract" means the contract between Groundsure and the Client for the provision of the Services, and which shall incorporate these terms and conditions, the Order, and the relevant User Guide.

"Third Party Data Provider" means any third party providing Third Party Content to Groundsure.

"Data Reports" means reports comprising factual data with no accompanying interpretation.

"Fees" has the meaning set out in clause 5.1.

"Groundsure" means Groundsure Limited, a company registered in England and Wales under number 03421028.

"Groundsure Materials" means all materials prepared by Groundsure and provided as part of the Services, including but not limited to Third Party Content, Data Reports, Mapping, and Risk Screening Reports.

"Intellectual Property" means any patent, copyright, design rights, trade or service mark, moral rights, data protection rights, know-how or trade mark in each case whether registered or not and including applications for the same or any other rights of a similar nature anywhere in the world.

"Mapping" means a map, map data or a combination of historical maps of various ages, time periods and scales.

"Order" means an electronic, written or other order form submitted by the Client requesting Services from Groundsure in respect of a specified Site.

"Ordnance Survey" means the Secretary of State for Business, Innovation and Skills, acting through Ordnance Survey, Adanac Drive, Southampton, SO16 0AS, UK.

"Order Website" means the online platform through which Orders may be placed by the Client and accepted by Groundsure.

"Report" means a Risk Screening Report or Data Report for Commercial or Residential property.

"Residential" means any building or property used as or intended to be used as a single dwelling.

"Risk Screening Report" means a risk screening report comprising factual data with an accompanying interpretation by Groundsure.

"Services" means any Report, Mapping and/or Support Services which Groundsure has agreed to provide by accepting an Order pursuant to clause 2.6.

"Site" means the area of land in respect of which the Client has requested Groundsure to provide the Services.

"Third Party Content" means data, database information or other information which is provided to Groundsure by a Third Party Data Provider.

"User Guide" means the user guide, as amended from time to time, available upon request from Groundsure and on the website (www.Groundsure.com) and forming part of this Contract.

2 Scope of Services, terms and conditions, requests for insurance and quotations

2.1 Groundsure agrees to provide the Services in accordance with the Contract.

2.2 Groundsure shall exercise reasonable skill and care in the provision of the Services.

2.3 Subject to clause 7.3 the Client acknowledges that it has not relied on any statement or representation made by or on behalf of Groundsure which is not set out and expressly agreed in writing in the Contract and all such statements and representations are hereby excluded to the fullest extent permitted by law.

2.4 The Client acknowledges that terms and conditions appearing on a Client's order form, printed stationery or other communication, or any terms or conditions implied by custom, practice or course of dealing shall be of no effect, and that this Contract shall prevail over all others in relation to the Order.

2.5 If the Client or Beneficiary requests insurance in conjunction with or as a result of the Services, Groundsure shall use reasonable endeavours to recommend such insurance, but makes no warranty that such insurance shall be available from insurers or that it will be offered on reasonable terms. Any insurance purchased by the Client or Beneficiary shall be subject solely to the terms of the policy issued by insurers and Groundsure will have no liability therefor. In addition you acknowledge and agree that Groundsure does not act as an agent or broker for any insurance providers. The Client should take (and ensure that the Beneficiary takes) independent advice to ensure that the insurance policy requested or offered is suitable for its requirements.

2.6 Groundsure's quotations or proposals are valid for a period of 30 days only unless an alternative period of time is explicitly stipulated by Groundsure. Groundsure reserves the right to withdraw any quotation or proposal at any time before an Order is accepted by Groundsure. Groundsure's acceptance of an Order shall be binding only when made in writing and signed by Groundsure's authorised representative or when accepted through the Order Website.

3 The Client's obligations

3.1The Client shall comply with the terms of this Contract and

(i) procure that the Beneficiary or any third party relying on the Services complies with and acts as if it is bound by the Contract and

(ii) be liable to Groundsure for the acts and omissions of the Beneficiary or any third party relying on the Services as if such acts and omissions were those of the Client.

3.2 The Client shall be solely responsible for ensuring that the Services are appropriate and suitable for its and/or the Beneficiary's needs.

3.3 The Client shall supply to Groundsure as soon as practicable and without charge all requisite information (and the Client warrants that such information is accurate, complete and appropriate), including without limitation any environmental information relating to the Site and shall give such assistance as Groundsure shall reasonably require in the provision of the Services including, without limitation, access to the Site, facilities and equipment.

3.4 Where the Client's approval or decision is required to enable Groundsure to carry out work in order to provide the Services, such approval or decision shall be given or procured in reasonable time and so as not to delay or disrupt the performance of the Services.

3.5 Save as expressly permitted by this Contract the Client shall not, and shall procure that the Beneficiary shall not, re-sell, alter, add to, or amend the Groundsure Materials, or use the Groundsure Materials in a manner for which they were not intended. The Client may make the Groundsure Materials available to a third party who is considering acquiring some or all of, or providing funding in relation to, the Site, but such third party cannot rely on the same unless expressly permitted under clause 4.

3.6 The Client is responsible for maintaining the confidentiality of its user name and password if using the Order Website and the Client acknowledges that Groundsure accepts no liability of any kind for any loss or damage suffered by the Client as a consequence of using the Order Website.

4 Reliance

4.1The Client acknowledges that the Services provided by Groundsure consist of the presentation and analysis of Third Party Content and other content and that information obtained from a Third Party Data Provider cannot be guaranteed or warranted by Groundsure to be reliable.

4.2 In respect of Data Reports, Mapping and Risk Screening Reports, the following classes of person and no other are entitled to rely on their contents;

(i) the Beneficiary,

(ii) the Beneficiary's professional advisers, (iii) any person providing funding to the Beneficiary in relation to the Site (whether directly or as part of a lending syndicate),

(iv) the first purchaser or first tenant of the Site, and

(v) the professional advisers and lenders of the first purchaser or tenant of the Site.

4.3 In respect of Support Services, only the Client, Beneficiary and parties expressly named in a Report and no other parties are entitled to rely on its contents.

4.4 Save as set out in clauses 4.2 and 4.3 and unless otherwise expressly agreed in writing, no other person or entity of any kind is entitled to rely on any Services or Report issued or provided by Groundsure. Any party considering such Reports and Services does so at their own risk.

5 Fees and Disbursements

5.1Groundsure shall charge and the Client shall pay fees at the rate and

frequency specified in the written proposal, Order Website or Order acknowledgement form, plus (in the case of Support Services) all proper disbursements incurred by Groundsure. The Client shall in addition pay all value added tax or other tax payable on such fees and disbursements in relation to the provision of the Services (together "Fees").

5.2 The Client shall pay all outstanding Fees to Groundsure in full without deduction, counterclaim or set off within 30 days of the date of Groundsure's invoice or such other period as may be agreed in writing between Groundsure and the Client ("Payment Date"). Interest on late payments will accrue on a daily basis from the Payment Date until the date of payment (whether before or after judgment) at the rate of 8% per annum.

5.3 The Client shall be deemed to have agreed the amount of any invoice unless an objection is made in writing within 28 days of the date of the invoice. As soon as reasonably practicable after being notified of an objection, without prejudice to clause 5.2 a member of Groundsure's management team will contact the Client and the parties shall then use all reasonable endeavours to resolve the dispute within 15 days.

6 Intellectual Property and Confidentiality

6.1 Subject to

(i) full payment of all relevant Fees and

(ii) compliance with this Contract, the Client is granted (and is permitted to sub-licence to the Beneficiary) a royalty-free, worldwide, non-assignable and (save to the extent set out in this Contract) non-transferable licence to make use of the Groundsure Materials.

6.2 All Intellectual Property in the Groundsure Materials are and shall remain owned by Groundsure or Groundsure's licensors (including without limitation the Third Party Data Providers) the Client acknowledges, and shall procure acknowledgement by the Beneficiary of, such ownership. Nothing in this Contract purports to transfer or assign any rights to the Client or the Beneficiary in respect of such Intellectual Property.

6.3 Third Party Data Providers may enforce any breach of clauses 6.1 and 6.2 against the Client or Beneficiary.

6.4 The Client shall, and shall procure that any recipients of the Groundsure Materials shall:

(i) not remove, suppress or modify any trade mark, copyright or other proprietary marking belonging to Groundsure or any third party from the Services;

(ii) use the information obtained as part of the Services in respect of the subject Site only, and shall not store or reuse any information obtained as part of the Services provided in respect of adjacent or nearby sites;

(iii) not create any product or report which is derived directly or indirectly from the Services (save that those acting in a professional capacity to the Beneficiary may provide advice based upon the Services);

(iv) not combine the Services with or incorporate such Services into any other information data or service;

(v) not reformat or otherwise change (whether by modification, addition or enhancement), the Services (save that those acting for the Beneficiary in a professional capacity shall not be in breach of this clause 6.4(v) where such reformatting is in the normal course of providing advice based upon the Services);

(vi) where a Report and/or Mapping contains material belonging to Ordnance Survey, acknowledge and agree that such content is protected by Crown Copyright and shall not use such content for any purpose outside of receiving the Services; and

(vii) not copy in whole or in part by any means any map prints or run-on copies containing content belonging to Ordnance Survey (other than that contained within Ordnance Survey's OS Street Map) without first being in possession of a valid Paper Map Copying Licence from Ordnance Survey,

6.5 Notwithstanding clause 6.4, the Client may make reasonable use of the Groundsure Materials in order to advise the Beneficiary in a professional capacity. However, Groundsure shall have no liability in respect of any advice, opinion or report given or provided to Beneficiaries by the Client.

6.6 The Client shall procure that any person to whom the Services are made available shall notify Groundsure of any request or requirement to disclose, publish or disseminate any information contained in the Services in accordance with the Freedom of Information Act 2000, the Environmental Information Regulations 2004 or any associated legislation or regulations in force from time to time.

7.Liability: Particular Attention Should Be Paid To This Clause

7.1 This Clause 7 sets out the entire liability of Groundsure, including any liability for the acts or omissions of its employees, agents, consultants, subcontractors and Third Party Content, in respect of:

(i) any breach of contract, including any deliberate breach of the Contract by Groundsure or its employees, agents or subcontractors;

(ii) any use made of the Reports, Services, Materials or any part of them; and

(iii) any representation, statement or tortious act or omission (including negligence) arising under or in connection with the Contract.

7.2 All warranties, conditions and other terms implied by statute or common law are, to the fullest extent permitted by law, excluded from the Contract.

7.3 Nothing in the Contract limits or excludes the liability of the Supplier for death or personal injury resulting from negligence, or for any damage or liability incurred by the Client or Beneficiary as a result of fraud or fraudulent misrepresentation.

7.4 Groundsure shall not be liable for

(i) loss of profits;

(ii) loss of business;

(iii) depletion of goodwill and/or similar losses;

(iv) loss of anticipated savings;

(v) loss of goods;

(vi) loss of contract;

(vii) loss of use;

(viii) loss or corruption of data or information;

(ix) business interruption;

(x) any kind of special, indirect, consequential or pure economic loss, costs, damages, charges or expenses;

(xi) loss or damage that arise as a result of the use of all or part of the Groundsure Materials in breach of the Contract;

(xii) loss or damage arising as a result of any error, omission or inaccuracy in any part of the Groundsure Materials where such error, omission or inaccuracy is caused by any Third Party Content or any reasonable interpretation of Third Party Content;

(xiii) loss or damage to a computer, software, modem, telephone or other property; and

(xiv) loss or damage caused by a delay or loss of use of Groundsure's internet ordering service.

7.5 Groundsure's total liability in relation to or under the Contract shall be limited to £10 million for any claim or claims.

7.6 Groundsure shall procure that the Beneficiary shall be bound by limitations and exclusions of liability in favour of Groundsure which accord with those detailed in clauses 7.4 and 7.5 (subject to clause 7.3) in respect of all claims which the Beneficiary may bring against Groundsure in relation to the Services or other matters arising pursuant to the Contract.

8 Groundsure's right to suspend or terminate

8.1 If Groundsure reasonably believes that the Client or Beneficiary has not provided the information or assistance required to enable the proper provision of the Services, Groundsure shall be entitled to suspend all further performance of the Services until such time as any such deficiency has been made good.

8.2 Groundsure shall be entitled to terminate the Contract immediately on written notice in the event that:

(i) the Client fails to pay any sum due to Groundsure within 30 days of the Payment Date; or

(ii) the Client (being an individual) has a bankruptcy order made against him or (being a company) shall enter into liquidation whether compulsory or voluntary or have an administration order made against it or if a receiver shall be appointed over the whole or any part of its property assets or undertaking or if the Client is struck off the Register of Companies or dissolved; or

(iii) the Client being a company is unable to pay its debts within the meaning of Section 123 of the Insolvency Act 1986 or being an individual appears unable to pay his debts within the meaning of Section 268 of the Insolvency Act 1986 or if the Client shall enter into a composition or arrangement with the Client's creditors or shall suffer distress or execution to be levied on his goods; or

(iv) the Client or the Beneficiary breaches any term of the Contract (including, but not limited to, the obligations in clause 4) which is incapable of remedy or if remediable, is not remedied within five days of notice of the breach.

9. Client's Right to Terminate and Suspend

9.1 Subject to clause 10.1, the Client may at any time upon written notice terminate or suspend the provision of all or any of the Services.

9.2 In any event, where the Client is a consumer (and not a business) he/she hereby expressly acknowledges and agrees that:

(i) the supply of Services under this Contract (and therefore the performance of this Contract) commences immediately upon Groundsure's acceptance of the Order; and

(ii) the Reports and/or Mapping provided under this Contract are

(a) supplied to the Client's specification(s) and in any event

(b) by their nature cannot be returned.

10 Consequences of Withdrawal, Termination or Suspension

10.1 Upon termination of the Contract:

(i) Groundsure shall take steps to bring to an end the Services in an orderly manner, vacate any Site with all reasonable speed and shall deliver to the Client and/or Beneficiary any property of the Client and/or Beneficiary in Groundsure's possession or control; and

(ii) the Client shall pay to Groundsure all and any Fees payable in respect of the performance of the Services up to the date of termination or suspension. In respect of any Support Services provided, the Client shall also pay Groundsure any additional costs incurred in relation to the termination or suspension of the Contract.

11 Anti-Bribery

11.1 The Client warrants that it shall:

(i) comply with all applicable laws, statutes and regulations relating to anti-bribery and anti-corruption including but not limited to the Bribery Act 2010;

(ii) comply with such of Groundsure's anti-bribery and anti-corruption policies as are notified to the Client from time to time; and

(iii) promptly report to Groundsure any request or demand for any undue financial or other advantage of any kind received by or on behalf of the Client in connection with the performance of this Contract.

11.2 Breach of this Clause 11 shall be deemed a material breach of this Contract.

12 General

12.1 The Mapping contained in the Services is protected by Crown copyright and must not be used for any purpose other than as part of the Services or as specifically provided in the Contract.

12.2 The Client shall be permitted to make one copy only of each Report or Mapping Order. Thereafter the Client shall be entitled to make unlimited copies of the Report or Mapping Order only in accordance with an Ordnance Survey paper map copy license available through Groundsure.

12.3 Groundsure reserves the right to amend or vary this Contract. No amendment or variation to this Contract shall be valid unless signed by an authorised representative of Groundsure.

12.4 No failure on the part of Groundsure to exercise, and no delay in exercising, any right, power or provision under this Contract shall operate as a waiver thereof.

12.5 Save as expressly provided in this Contract, no person other than the persons set out therein shall have any right under the Contract (Rights of Third Parties) Act 1999 to enforce any terms of the Contract.

12.6 The Secretary of State for Business, Innovation and Skills ("BIS") or BIS' successor body, as the case may be, acting through Ordnance Survey may enforce a breach of clause 6.4(vi) and clause 6.4(vii) of these terms and conditions against the Client in accordance with the provisions of the Contracts (Rights of Third Parties) Act 1999.

12.7 Groundsure shall not be liable to the Client if the provision of the Services is delayed or prevented by one or more of the following circumstances:

(i) the Client or Beneficiary's failure to provide facilities, access or information;

(ii) fire, storm, flood, tempest or epidemic;

(iii) Acts of God or the public enemy;

(iv) riot, civil commotion or war;

(v) strikes, labour disputes or industrial action;

(vi) acts or regulations of any governmental or other agency;

(vii) suspension or delay of services at public registries by Third Party Data Providers;

(viii) changes in law; or

(ix) any other reason beyond Groundsure's reasonable control.

In the event that Groundsure is prevented from performing the Services (or any part thereof) in accordance with this clause 12.6 for a period of not less than 30 days then Groundsure shall be entitled to terminate this Contract immediately on written notice to the Client.

12.8 Any notice provided shall be in writing and shall be deemed to be properly given if delivered by hand or sent by first class post, facsimile or by email to the address, facsimile number or email address of the relevant party as may have been notified by each party to the other for such purpose or in the absence of such notification the last known address.

12.9 Such notice shall be deemed to have been received on the day of delivery if delivered by hand, facsimile or email (save to the extent such day is not a working day where it shall be deemed to have been delivered on the next working day) and on the second working day after the day of posting if sent by first class post.

12.10 The Contract constitutes the entire agreement between the parties and shall supersede all previous arrangements between the parties relating to the subject matter hereof.

12.11 Each of the provisions of the Contract is severable and distinct from the others and if one or more provisions is or should become invalid, illegal or unenforceable, the validity and enforceability of the remaining provisions shall not in any way be tainted or impaired.

12.12 This Contract shall be governed by and construed in accordance with English law and any proceedings arising out of or connected with this Contract shall be subject to the exclusive jurisdiction of the English courts.

12.13 Groundsure is an executive member of the Council of Property Search Organisation (CoPSO) and has signed up to the Search Code administered by the Property Codes Compliance Board (PCCB). All Risk Screening Reports shall be supplied in accordance with the provisions of the Search Code.

12.14 If the Client or Beneficiary has a complaint about the Services, written notice should be given to the Compliance Officer at Groundsure who will respond in a timely manner. In the event you are not satisfied with Groundsure's complaints handling process or you are unable to resolve the complaint, at your discretion you may refer the complaint to The Property Ombudsman Scheme at the following URL/email: website www.tpos.co.uk or email: admin@tpos.co.uk

12.15 The Client agrees that it shall, and shall procure that each Beneficiary shall, treat in confidence all Confidential Information and shall not, and shall procure that each Beneficiary shall not (i) disclose any Confidential Information to any third party other than in accordance with the terms of this Contract; and (ii) use Confidential Information for a purpose other than the exercise of its rights and obligations under this Contract. Subject to clause 6.6, nothing shall prevent the Client or any Beneficiary from disclosing Confidential Information to the extent required by law. **© Groundsure Limited June 2013**

A2 GeoInsight

Groundsure
LOCATION INTELLIGENCE

Ove Arup & Partners International Ltd

OVE ARUP & PARTNERS,13, FITZROY STREET,
LONDON, W1T 4BQ

Groundsure Reference:	GS-3078904
Your Reference:	249765-00
Report Date	20 Jun 2016
Report Delivery Method:	Email - pdf

Groundsure Geo Insight Plus

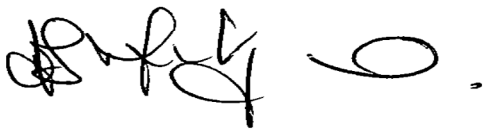
Address: Procter & Gamble, 452, BASINGSTOKE ROAD, READING, RG2 0QE

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Geo Insight Plus** as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above Groundsure reference number.

Yours faithfully,



Managing Director
Groundsure Limited

Enc.
Groundsure Geoinsight Plus

Groundsure Geo Insight Plus

Address:	**Procter & Gamble, 452, BASINGSTOKE ROAD, READING, RG2 0QE**
Date:	**20 Jun 2016**
Reference:	**GS-3078904**
Client:	**Ove Arup & Partners International Ltd**

NW N NE



W E

SW S SE

Aerial Photograph Capture date:	11-Jul-2013
Grid Reference:	471647,170386
Site Size:	1.59ha

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Overview of Findings

The Groundsure Geo Insight Plus provides high quality geo-environmental information that allows geo-environmental professionals and their clients to make informed decisions and be forewarned of potential ground instability problems that may affect the ground investigation, foundation design and possibly remediation options that could lead to possible additional costs.

The report is based on the BGS 1:50,000 and 1:10,000 Digital Geological Map of Great Britain, BGS Geosure data; BRITPITS database; Non-coal mining data and Borehole Records, Coal Authority data including brine extraction areas, PBA non-coal mining and natural cavities database, Johnson Poole and Bloomer mining data and Groundsure's unique database including historical surface ground and underground workings.

For further details on each dataset, please refer to each individual section in the report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Section 1: Geology 1:10,000 Scale		
1.1 Artificial Ground	1.1 Is there any Artificial Ground/ Made Ground present beneath the study site at 1:10,000 scale?	No
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site at 1:10,000 scale?*	No
	1.2.2 Are there any records of landslip within 500m of the study site boundary at 1:10,000 scale?	No
1.3 Bedrock, Solid Geology and Faults	1.3.1 For records of Bedrock and Solid Geology beneath the study site^ see the detailed findings section.	
	1.3.2 Are there any records of faults within 500m of the study site boundary at 1:10,000 scale?	No

Section 2: Geology 1:50,000 Scale		
2.1 Artificial Ground	2.1.1 Is there any Artificial Ground/ Made Ground present beneath the study site?	No
	2.1.2 Are there any records relating to permeability of artificial ground within the study site*boundary?	No
2.2 Superficial Geology and Landslips	2.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?*	No
	2.2.2 Are there any records of permeability of superficial ground within 500m of the study site?	No
	2.2.3 Are there any records of landslip within 500m of the study site boundary?	No
	2.2.4 Are there any records relating to permeability of landslips within the study site* boundary?	No

Section 2: Geology 1:50,000 Scale

2.3 Bedrock, Solid Geology and Faults	2.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
	2.3.2 Are there any records of faults within 500m of the study site boundary?	Yes
	2.3.3 Are there any records of faults within 500m of the study site boundary?	No

Section 3: Radon

3. Radon	3.1Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.
	3.2Radon Protection	No radon protective measures are necessary.

Section 4: Ground Workings	On-site	0-50m	51-250	251-500	501-1000
4.1 Historical Surface Ground Working Features from Small Scale Mapping	0	0	5	Not Searched	Not Searched
4.2 Historical Underground Workings from Small Scale Mapping	0	0	0	0	0
4.3 Current Ground Workings	0	0	0	0	3

Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.1 Historical Mining	0	0	0	0	0
5.2 Coal Mining	0	0	0	0	0
5.3 Johnson Poole and Bloomer Mining Area	1	0	0	2	3
5.4 Non-Coal Mining*	1	0	0	1	0
5.5 Non–Coal Mining Cavities	0	0	0	0	3
5.5 Natural Cavities	0	0	0	0	0

Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.6 Brine Extraction	0	0	0	0	0
5.7 Gypsum Extraction	0	0	0	0	0
5.8 Tin Mining	0	0	0	0	0
5.9 Clay Mining	0	0	0	0	0

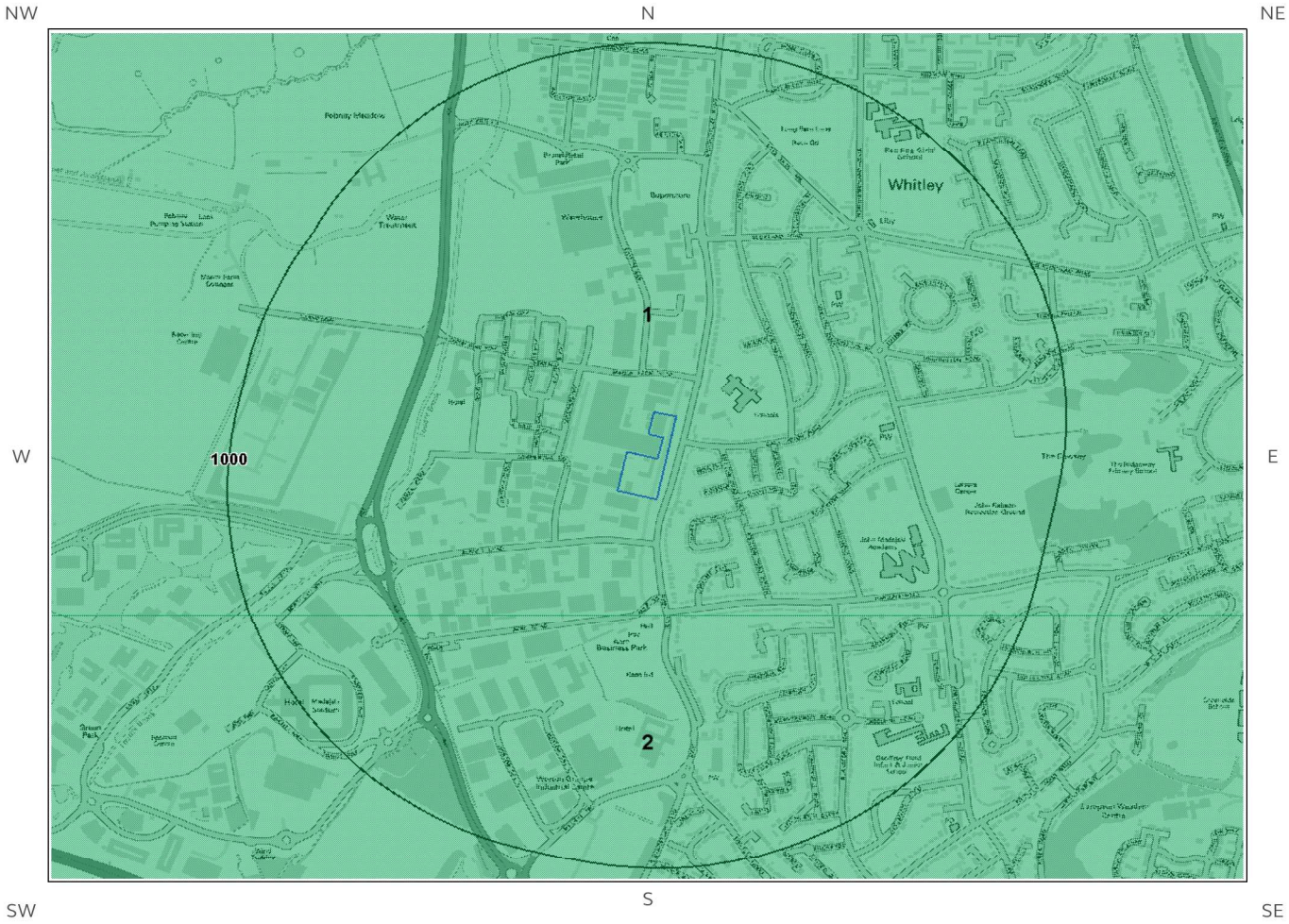
Section 6: Natural Ground Subsidence	On-site
6.1 Shrink-Swell Clay	Low
6.2 Landslides	Very Low
6.3 Ground Dissolution of Soluble Rocks	Negligible
6.4 Compressible Deposits	Negligible
6.5 Collapsible Deposits	Very Low
6.5 Running Sand	Negligible

Section 7: Borehole Records	On-site	0-50m	51-250
7 BGS Recorded Boreholes	0	1	6

Section 8: Estimated Background Soil Chemistry	On-site	0-50m	51-250
8 Records of Background Soil Chemistry	2	0	0

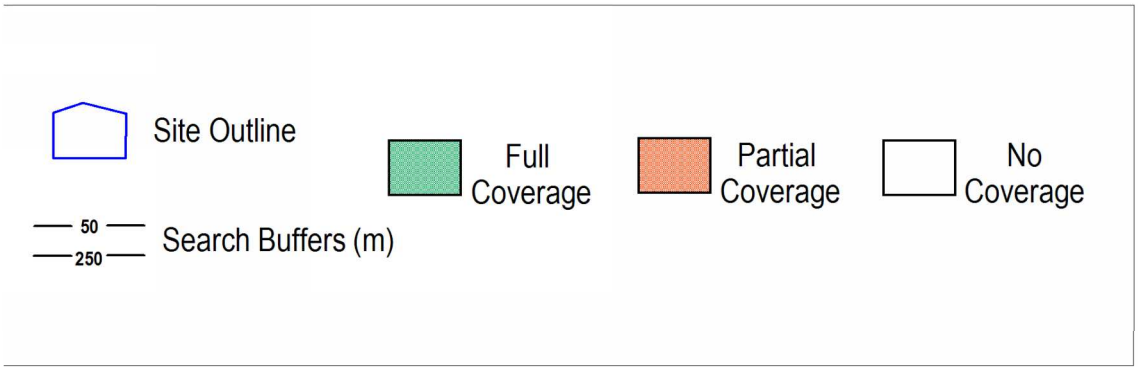
Section 9: Railways and Tunnels	On-site	0-50m	51-250	250-500
9.1 Tunnels	0	0	0	Not Searched
9.2 Historical Railway and Tunnel Features	0	0	0	Not Searched
9.3 Historical Railways	0	0	0	Not Searched
9.4 Active Railways	0	0	0	Not Searched
9.5 Railway Projects	0	0	0	0

1:10,000 Scale Availability



1_10,000 Availability Legend

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Availability of 1:10,000 Scale Geology Mapping

The following information represents the availability of the key components of the 1:10,000 scale geological data.

ID	Distance	Artificial Coverage	Superficial Coverage	Bedrock Coverage	Mass Movement Coverage
1	0.0	Some deposits are mapped	Full	Full	No coverage
2	312.0	Some deposits are mapped	Full	Full	No coverage
N3	1585.0	Some deposits are mapped	Full	Full	No coverage
N4	1620.0	Some deposits are mapped	Full	Full	No coverage

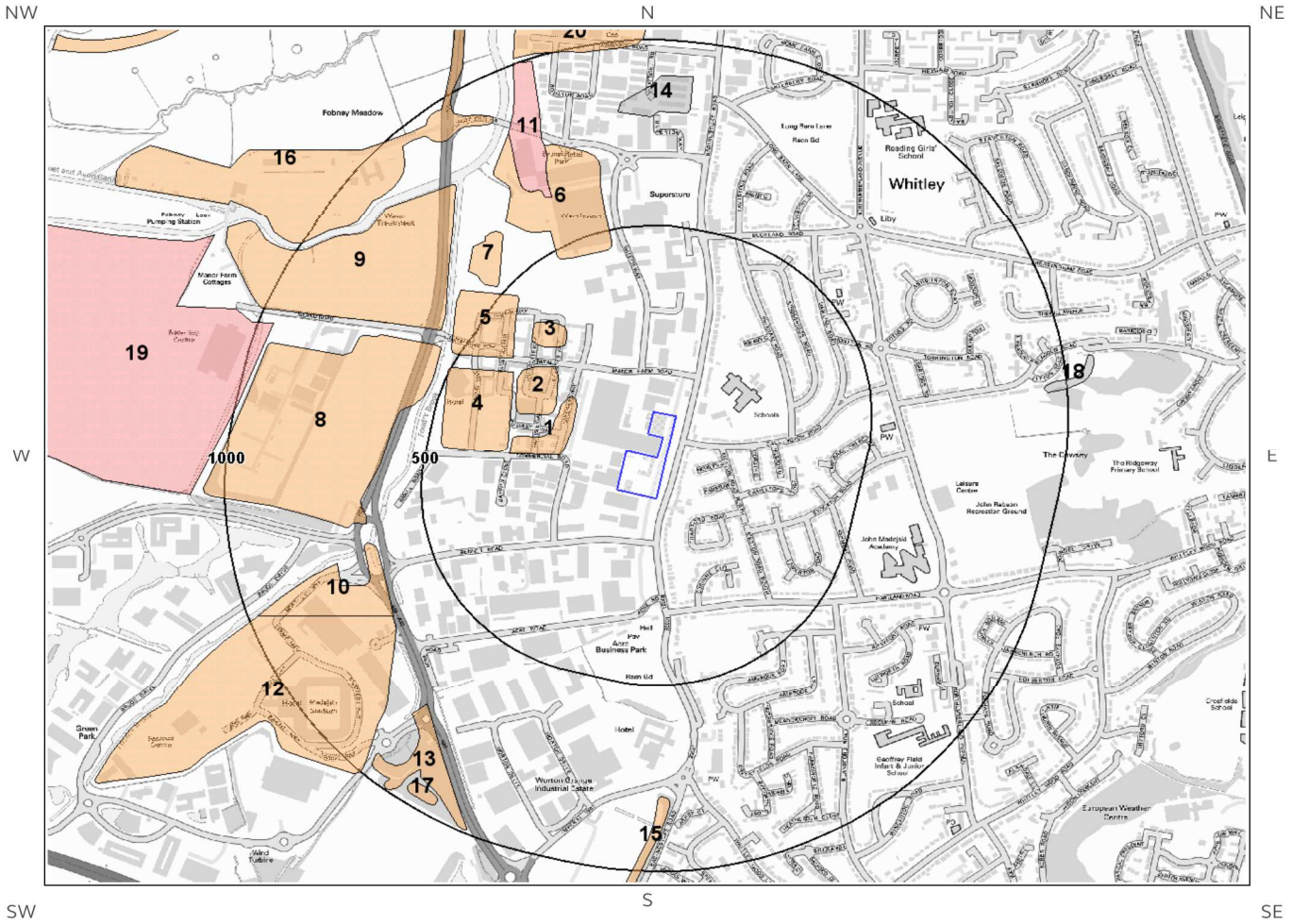
Guidance: The 1:10,000 scale geological interpretation is the most detailed generally available from BGS and is the scale at which most geological surveying is carried out in the field. The database is presented as four types of geology (artificial, mass movement, superficial and bedrock), although not all themes are mapped or available on every map sheet. Therefore a coverage layer showing the availability of the four themes is presented above.

The definitions of coverage are as follows:

Geology	Full Coverage	Partial Coverage	No Coverage
Bedrock	The whole tile has been mapped	Some but not all the tile has been mapped	No coverage
Superficial	The whole tile has been mapped	Some but not all of the tile has been mapped	No coverage
Artificial	Some deposits are mapped on this tile	-	No deposits are mapped
Mass Movement	Some deposits are mapped on this tile	-	No coverage

1 Geology (1:10,000 scale).

1.1 Artificial Ground Map (1:10,000 scale)



Artificial Ground Legend

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Site Outline

500
1000
Search Buffers (m)

Made Ground (undivided)

Disturbed Ground (undivided)

Worked Ground (undivided)

Landscaped Ground (undivided)

Infilled Ground

Reclaimed Ground

1. Geology 1:10,000 scale

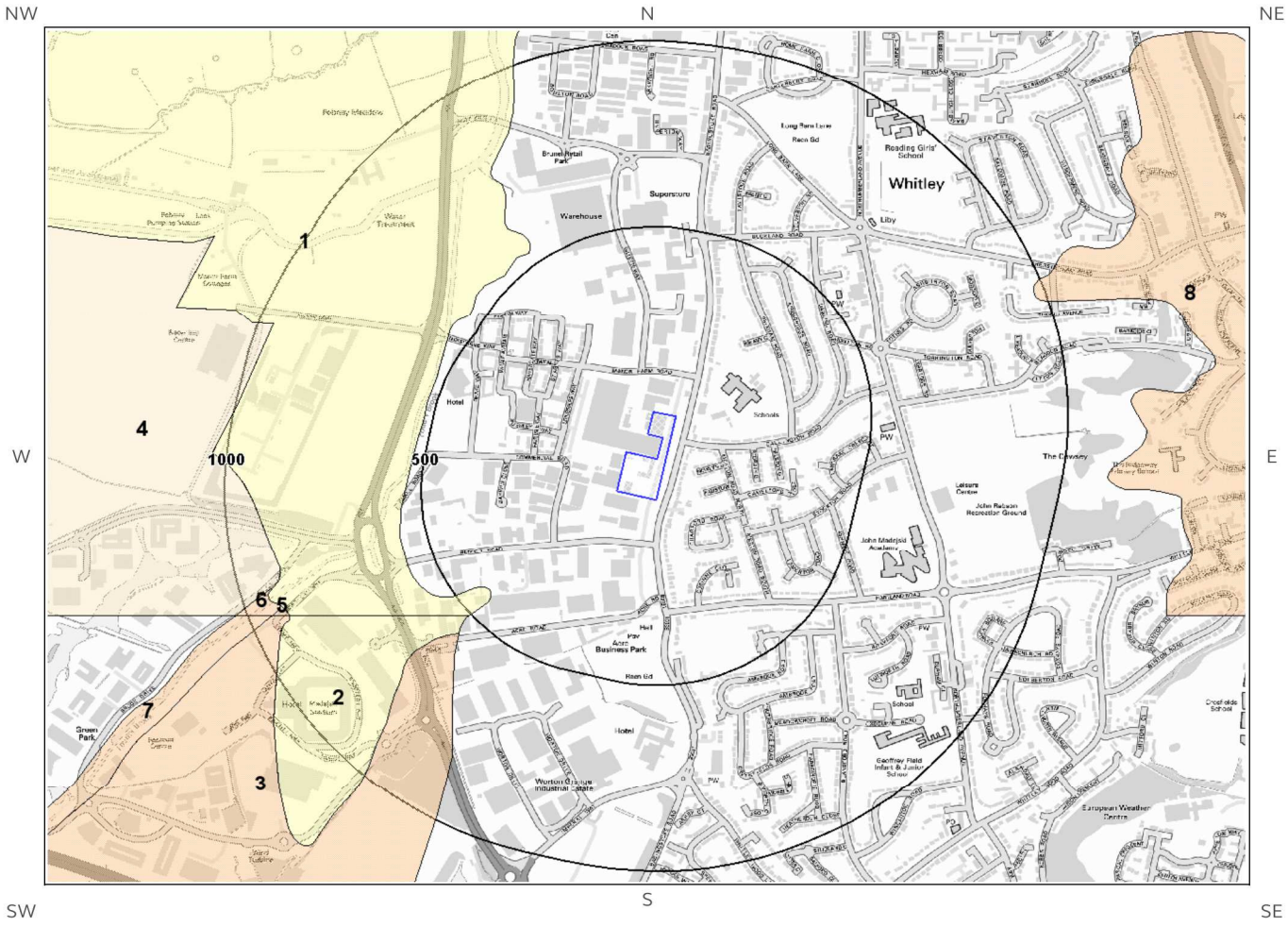
1.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping.

Are there any records of Artificial/ Made Ground within 500m of the study site boundary at 1:10,000 scale? Yes

ID	Distance	Direction	LEX Code	Description	Rock Description
1	151.0	W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2	215.0	NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
3	290.0	NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
4	299.0	W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
5	385.0	NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
6	451.0	N	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

1.2 Superficial Deposits and Landslips Map (1:10,000 scale)



Artificial Ground Legend

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Site Outline

500
1000
Search Buffers (m)

1.2 Superficial Deposits and Landslips

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping

1.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary at 1:10,000 scale? Yes

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	422.0	SW	ALV-Z	Alluvium - Silt (unlithified Deposits Coding Scheme)	Silt

1.2.2 Landslip

Are there any records of Landslip within 500m of the study site boundary at 1:10,000 scale?

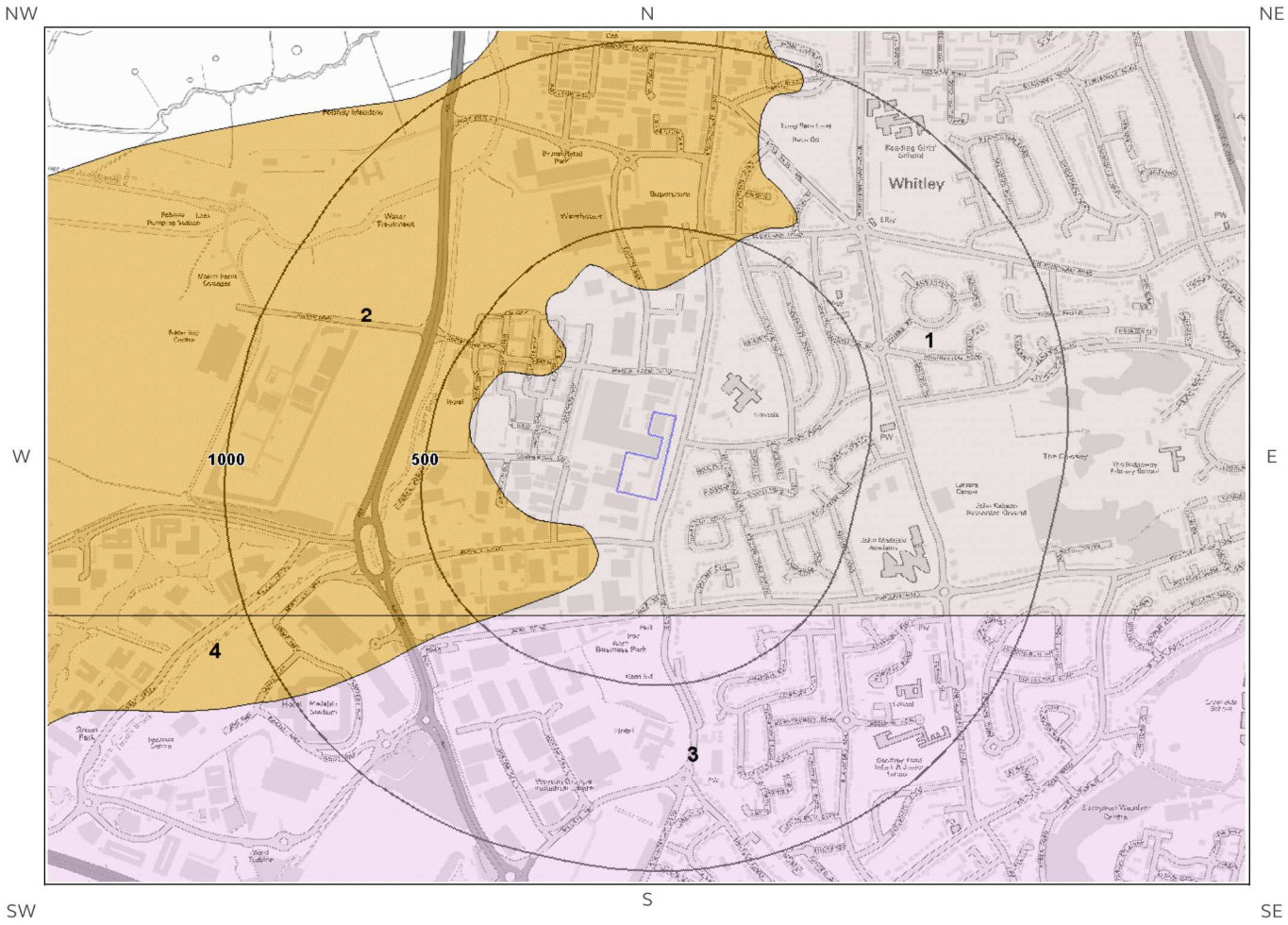
No

Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:10,000 scale

This Geology shows the main components as discrete layers, these are: Artificial / Made Ground, Superficial / Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

1.3 Bedrock and Faults Map (1:10,000 scale)



Bedrock and Faults Legend

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Site Outline

500
1000
Search Buffers (m)

1.3 Bedrock and Faults

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping.

1.3.1 Bedrock/ Solid Geology

Records of Bedrock/Solid Geology within 500m of the study site boundary at 1:10,000 scale.

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
1	0.0	On Site	LC-CLSISA	London Clay Formation - Clay, Silt And Sand	Eocene Epoch
2	132.0	SW	LMBE-CLSISA	Lambeth Group - Clay, Silt And Sand	Paleocene Epoch
3	312.0	S	LC-CLSISA	London Clay Formation - Clay, Silt And Sand	Eocene Epoch
4	455.0	SW	LMBE-CLSISA	Lambeth Group - Clay, Silt And Sand	Paleocene Epoch

1.3.2 Faults

Are there any records of Faults within 500m of the study site boundary at 1:10,000 scale? No

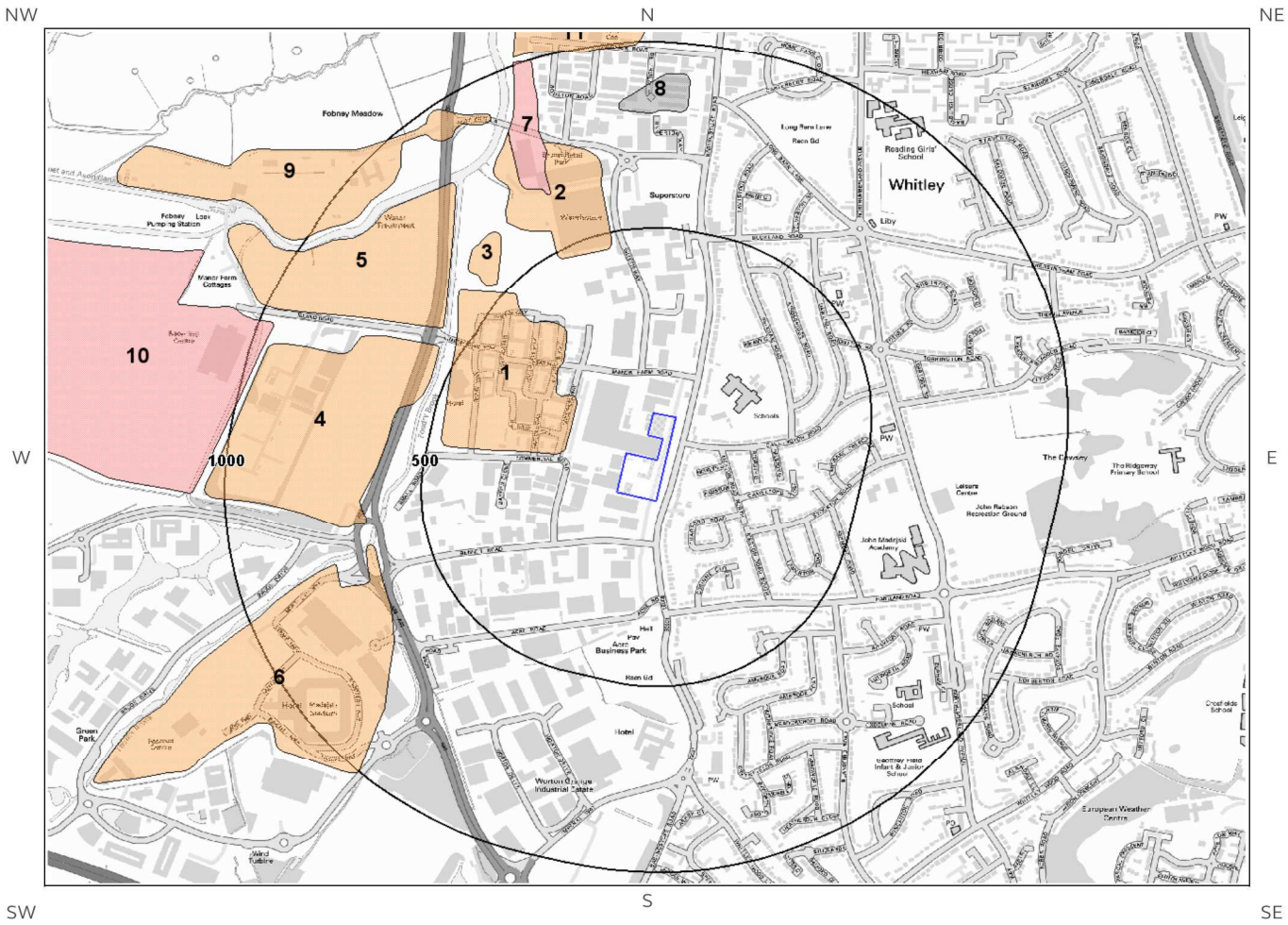
Database searched and no data found at this scale.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of great Britain at 1:10,000 scale.

This Geology shows the main components as discrete layers, these are: Bedrock/ Solid Geology and linear features such as Faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

2 Geology 1:50,000 Scale

2.1 Artificial Ground Map



Ground Workings Legend

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Site Outline

500
1000
Search Buffers (m)

Made Ground (undivided)

Worked Ground (undivided)

Infilled Ground

Disturbed Ground (undivided)

Landscaped Ground (undivided)

Reclaimed Ground

2. Geology 1:50,000 scale

2.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 268

2.1.1 Artificial/ Made Ground

Are there any records of Artificial/ Made Ground within 500m of the study site boundary? Yes

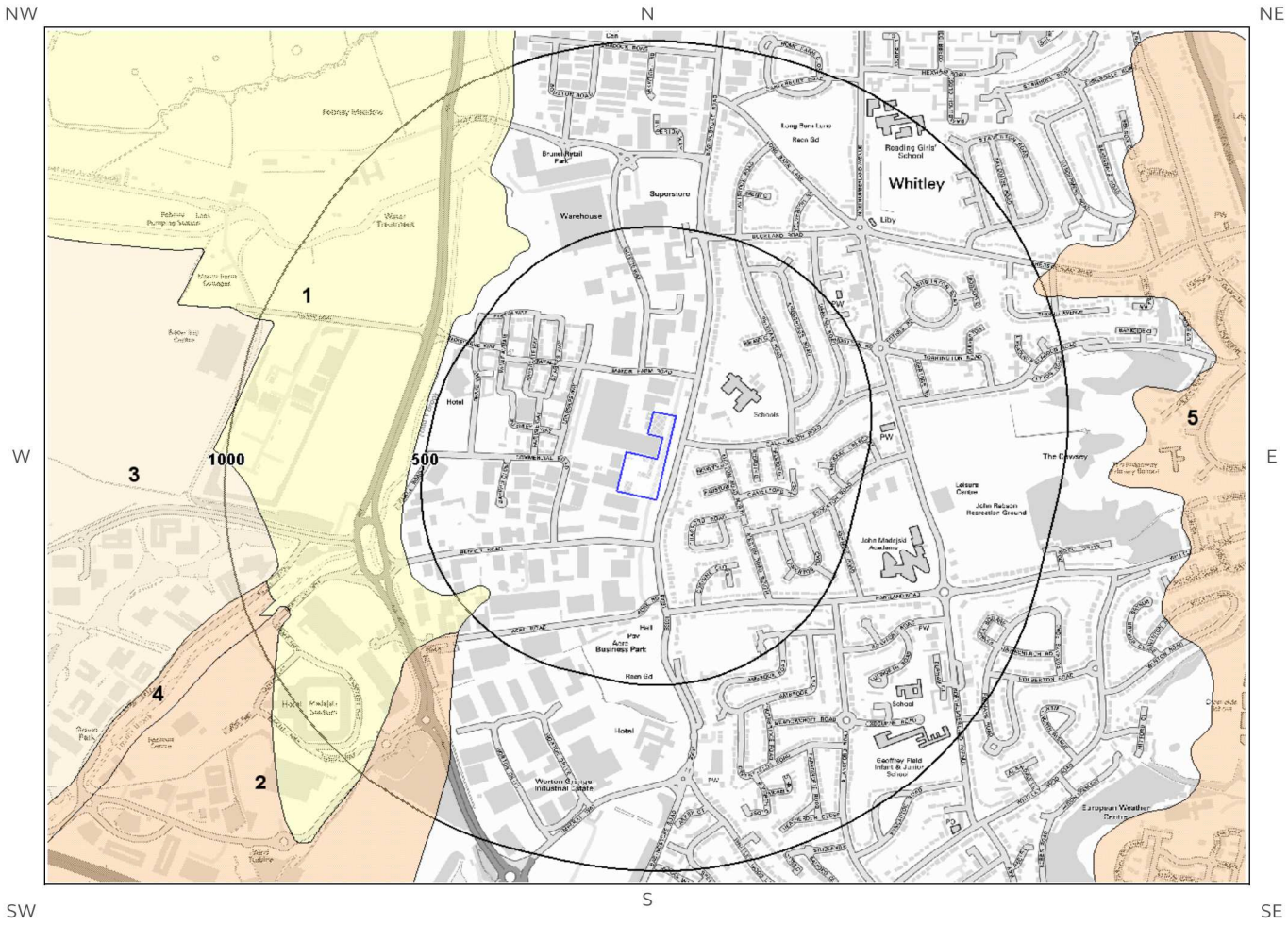
ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	153.0	W	MGR-MGRD	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
2	458.0	N	MGR-MGRD	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

2.1.2 Permeability of Artificial Ground

Are there any records relating to permeability of artificial ground within the study site boundary? No

Database searched and no data found.

2.2 Superficial Deposits and Landslips Map (1:50,000 scale)



Ground Workings Legend

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Site Outline

500
1000
Search Buffers (m)

2.2 Superficial Deposits and Landslips

2.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary? Yes

ID	Distance	Direction	LEX Code	Description	Rock Description
1	422.0	SW	ALV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL [UNLITHIFIED DEPOSITS CODING SCHEME]

2.2.2 Permeability of Superficial Ground

Are there any records relating to permeability of superficial ground within the study site boundary? No

Database searched and no data found.

2.2.3 Landslip

Are there any records of Landslip within 500m of the study site boundary? No

Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

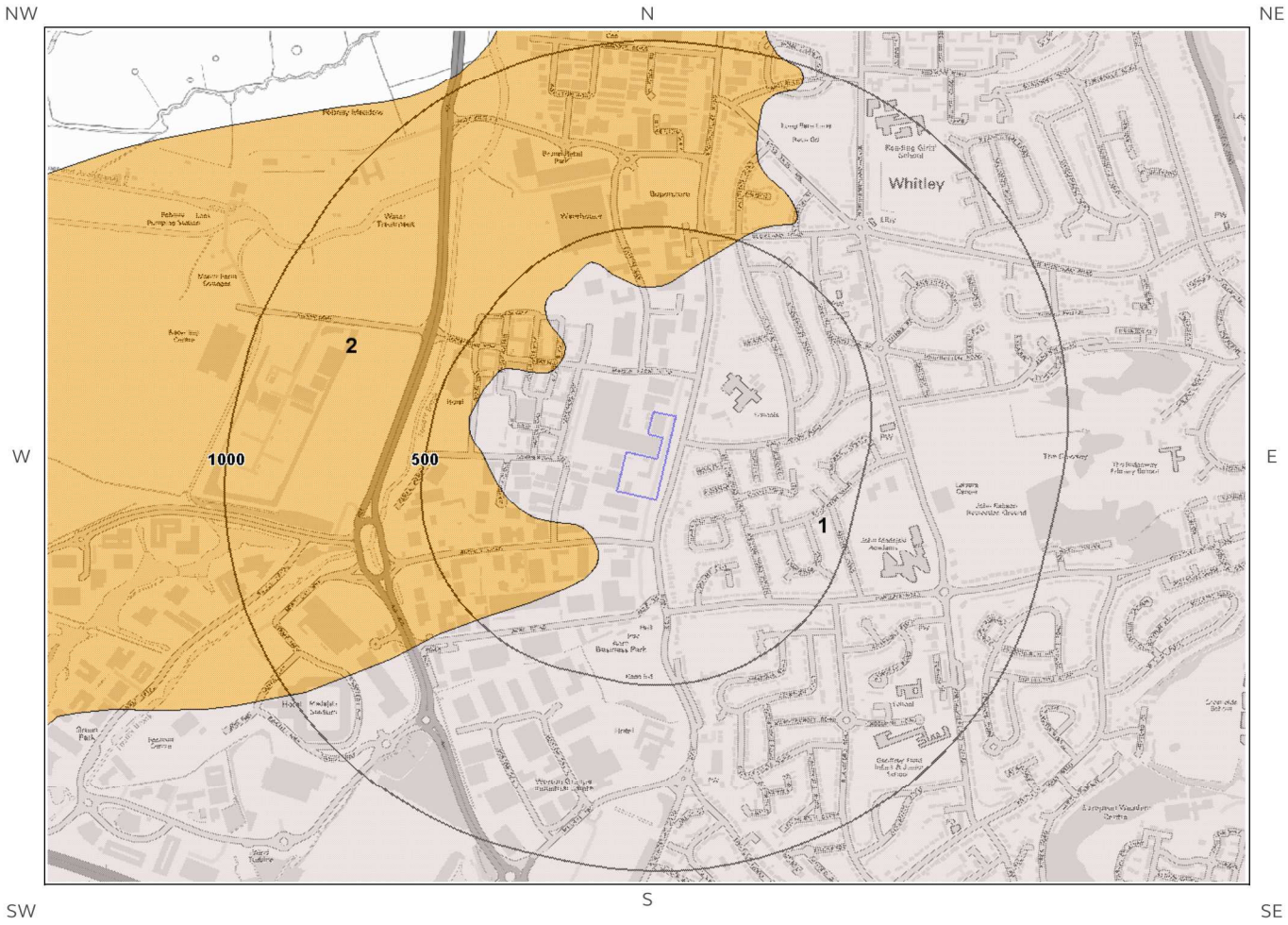
This Geology shows the main components as discrete layers, there are: Artificial/ Made Ground, Superficial/ Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

2.2.4 Landslip Permeability

Are there any records relating to permeability of landslips within the study site boundary? No

Database searched and no data found.

2.3 Bedrock and Faults Map (1:50,000 scale)



Ground Workings Legend

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Site Outline

500
1000
Search Buffers (m)

2.3 Bedrock, Solid Geology & Faults

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 268

2.3.1 Bedrock/Solid Geology

Records of Bedrock/Solid Geology within 500m of the study site boundary:

ID	Distance	Direction	LEX Code	Rock Description	Rock Age
1	0.0	On Site	LC-CLSISA	London Clay Formation - Clay, Silt And Sand	No Details
2	131.0	SW	LMBE-CLSISA	Lambeth Group - Clay, Silt And Sand	No Details

2.3.2 Permeability of Bedrock Ground

Are there any records relating to permeability of bedrock ground within the study site boundary? Yes

Distance	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Mixed	Moderate	Very Low

2.3.3 Faults

Are there any records of Faults within 500m of the study site boundary? No

Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

This Geology shows the main components as discrete layers, these are: Bedrock/Solid Geology and linear features such as Faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nation wide coverage.

3 Radon Data

3.1 Radon Affected Areas

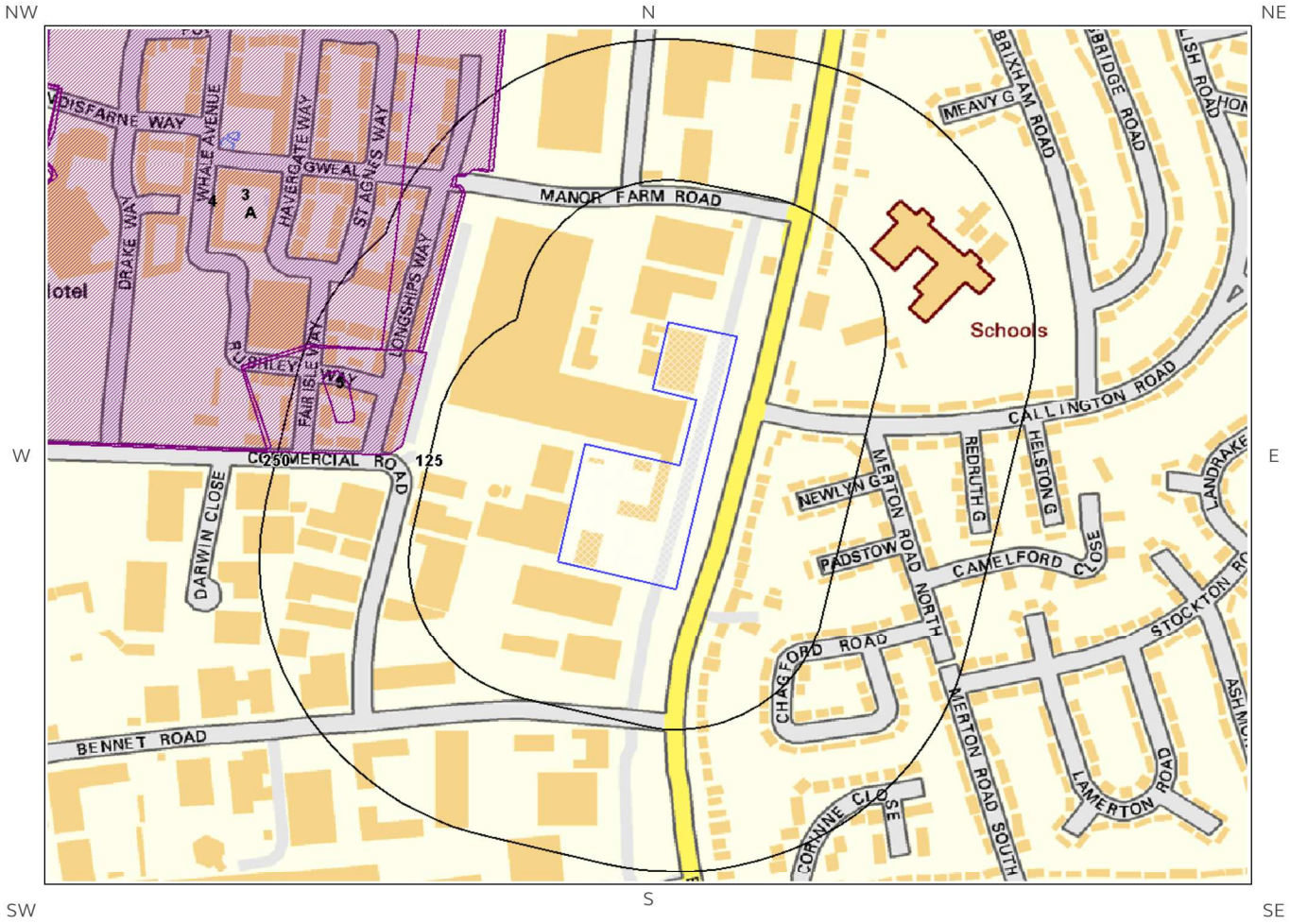
Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

3.2 Radon Protection

Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.

---

4 Ground Workings Map



Ground Workings Legend

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Site Outline

125
250
Search Buffers (m)

Historic Surface Ground Workings

Historic Underground Workings

Current Ground Workings

4 Ground Workings

4.1 Historical Surface Ground Working Features derived from Historical Mapping

This dataset is based on Groundsure's unique Historical Land Use Database derived from 1:10,560 and 1:10,000 scale historical mapping

Are there any Historical Surface Ground Working Features within 250m of the study site boundary? Yes

ID	Distance (m)	Direction	NGR	Use	Date
1A	148.0	W	471325 170746	Sewage Works	1994
2A	148.0	W	471325 170746	Sewage Works	1989
3	159.0	NW	471326 170821	Sewage Purification Works	1977
4	190.0	NW	471306 170821	Sewage Purification Works	1971
5	194.0	W	471401 170482	Unspecified Heap	1956

4.2 Historical Underground Working Features derived from Historical Mapping

This data is derived from the Groundsure unique Historical Land Use Database. It contains data derived from 1:10,000 and 1:10,560 historical Ordnance Survey Mapping and includes some natural topographical features (Shake Holes for example) as well as manmade features that may have implications for ground stability. Underground and mining features have been identified from surface features such as shafts. The distance that these extend underground is not shown.

Are there any Historical Underground Working Features within 1000m of the study site boundary? No

Database searched and no data found.

4.3 Current Ground Workings

This dataset is derived from the BGS BRITPITS database covering active; inactive mines; quarries; oil wells; gas wells and mineral wharves; and rail deposits throughout the British Isles.

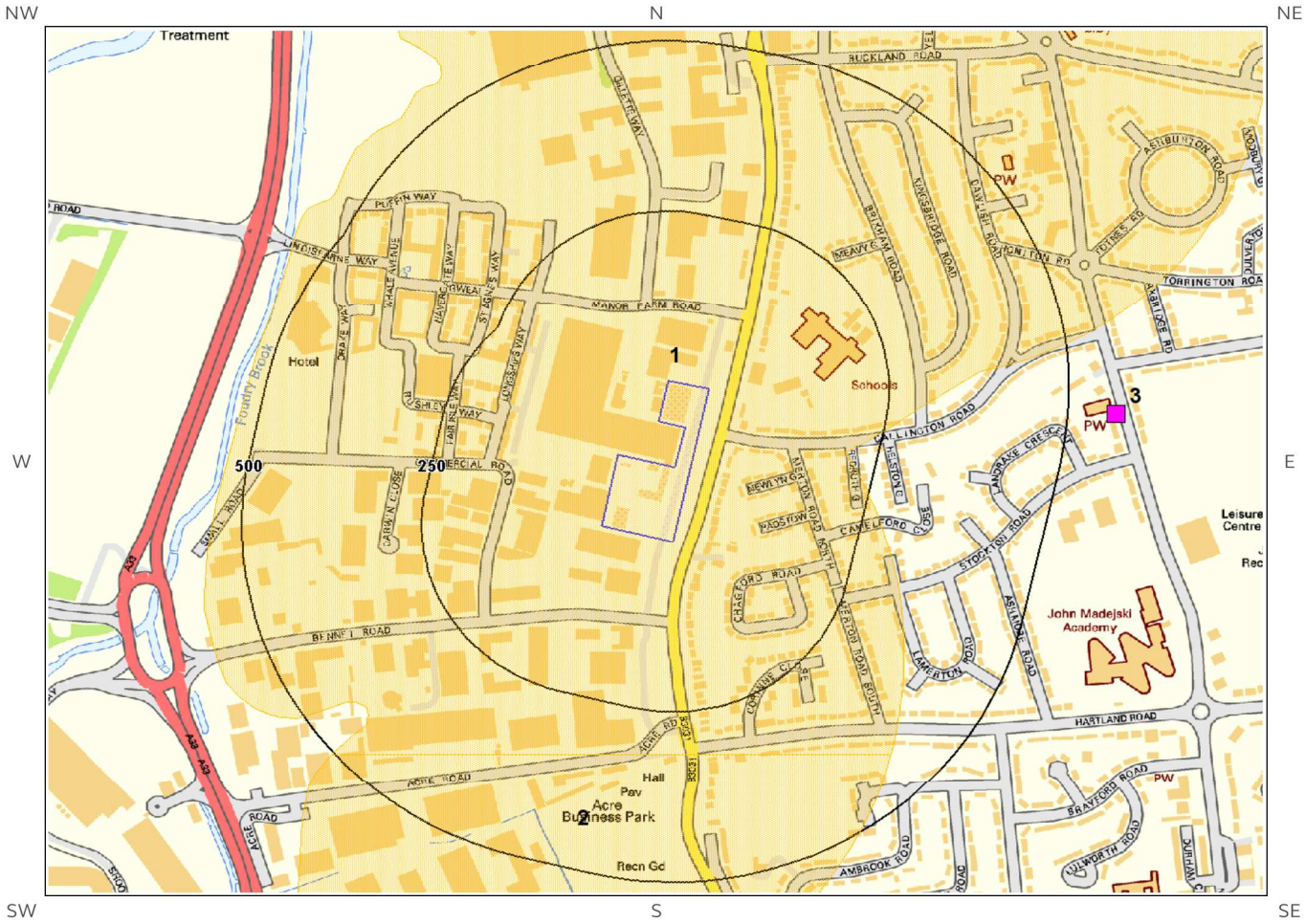
Are there any BGS Current Ground Workings within 1000m of the study site boundary? Yes

The following Current Ground Workings information is provided by British Geological Survey:

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	749.0	NW	471355 171224	Clay & Shale	Rose Kilns	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	840.0	N	471710 171387	Sand	Whitley Sand Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	911.0	N	471550 171450	Clay & Shale	Whitley Kiln	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

5 Mining, Extraction & Natural Cavities Map



Mining, Extraction and Natural Cavities Legend

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5 Mining, Extraction & Natural Cavities

5.1 Historical Mining

This dataset is derived from Groundsure unique Historical Land-use Database that are indicative of mining or extraction activities.

Are there any Historical Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

5.2 Coal Mining

This dataset provides information as to whether the study site lies within a known coal mining affected area as defined by the coal authority.

Are there any Coal Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

5.3 Johnson Poole and Bloomer

This dataset provides information as to whether the study site lies within an area where JPB hold information relating to mining.

Are there any JPB Mining areas within 1000m of the study site boundary? Yes

The following information provided by JPB is not represented on mapping: Whilst outside of an area where The Coal Authority have information on coal mining activities, Johnson Poole & Bloomer (JPB) have information such as mining plans and maps held within their archive of mining activities that have occurred within 1km of this property. Further details and a quote for services can be obtained by emailing this report to enquiries.gs@jpb.co.uk.

5.4 Non-Coal Mining

This dataset provides information as to whether the study site lies within an area which may have been subject to non-coal historic mining.

Are there any Non-Coal Mining areas within 1000m of the study site boundary? Yes

The following non-coal mining information is provided by the BGS:

ID	Distance (m)	Direction	Name	Commodity	Assessment of likelihood
1	0.0	On Site	Not available	Chalk	Small scale underground mining may have occurred; mine adits, shafts and tunnels may be present. Potential for localised difficult ground conditions are at a level where they should be considered

ID	Distance (m)	Direction	Name	Commodity	Assessment of likelihood
2	312.0	S	Not available	Chalk	Small scale underground mining may have occurred; mine adits, shafts and tunnels may be present. Potential for localised difficult ground conditions are at a level where they should be considered

5.5 Non-Coal Mining Cavities

This dataset provides information from the Peter Brett Associates (PBA) mining cavities database (compiled for the national study entitled "Review of mining instability in Great Britain, 1990" PBA has also continued adding to this database) on mineral extraction by mining.

Are there any Non-Coal Mining cavities within 1000m of the study site boundary? Yes

The following Non-Coal Mining Cavities information provided by Peter Brett Associates:

ID	Distance (m)	Direction	NGR	Address	Superficial Deposits	Bedrock Deposits	Extracted Mineral
3	566.0	E	472300 170500	Emmer Green, Berkshire	Infilled Ground	Lambeth Group, Upper Chalk Formation	Chalk
Not shown	896.0	N	471400 171400	'Rose Kiln', Reading, Berkshire	Worked Ground	Lambeth Group, Upper Chalk Formation	Chalk
Not shown	955.0	N	471600 171500	'Whitley Kiln', Reading, Berkshire	Worked Ground	Lambeth Group, Upper Chalk Formation	Chalk

5.6 Natural Cavities

This dataset provides information based on Peter Brett Associates natural cavities database.

Are there any Natural Cavities within 1000m of the study site boundary? No

Database searched and no data found.

5.7 Brine Extraction

This data provides information from the Coal Authority issued on behalf of the Cheshire Brine Subsidence Compensation Board.

Are there any Brine Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

5.8 Gypsum Extraction

This dataset provides information on Gypsum extraction from British Gypsum records.

Are there any Gypsum Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

5.9 Tin Mining

This dataset provides information on tin mining areas and is derived from tin mining records. This search is based upon postcode information to a sector level..

Are there any Tin Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

5.10 Clay Mining

This dataset provides information on Kaolin and Ball Clay mining from relevant mining records.

Are there any Clay Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

---

6 Natural Ground Subsidence

6.1 Shrink-Swell Clay Map



Shrink Swell Clay Legend

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6.2 Landslides Map



Landslides Legend

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Site Outline

125
250
Search Buffers (m)

No Data / Null
Negligible
Very Low

Low
Moderate
High

6.3 Ground Dissolution of Soluble Rocks Map

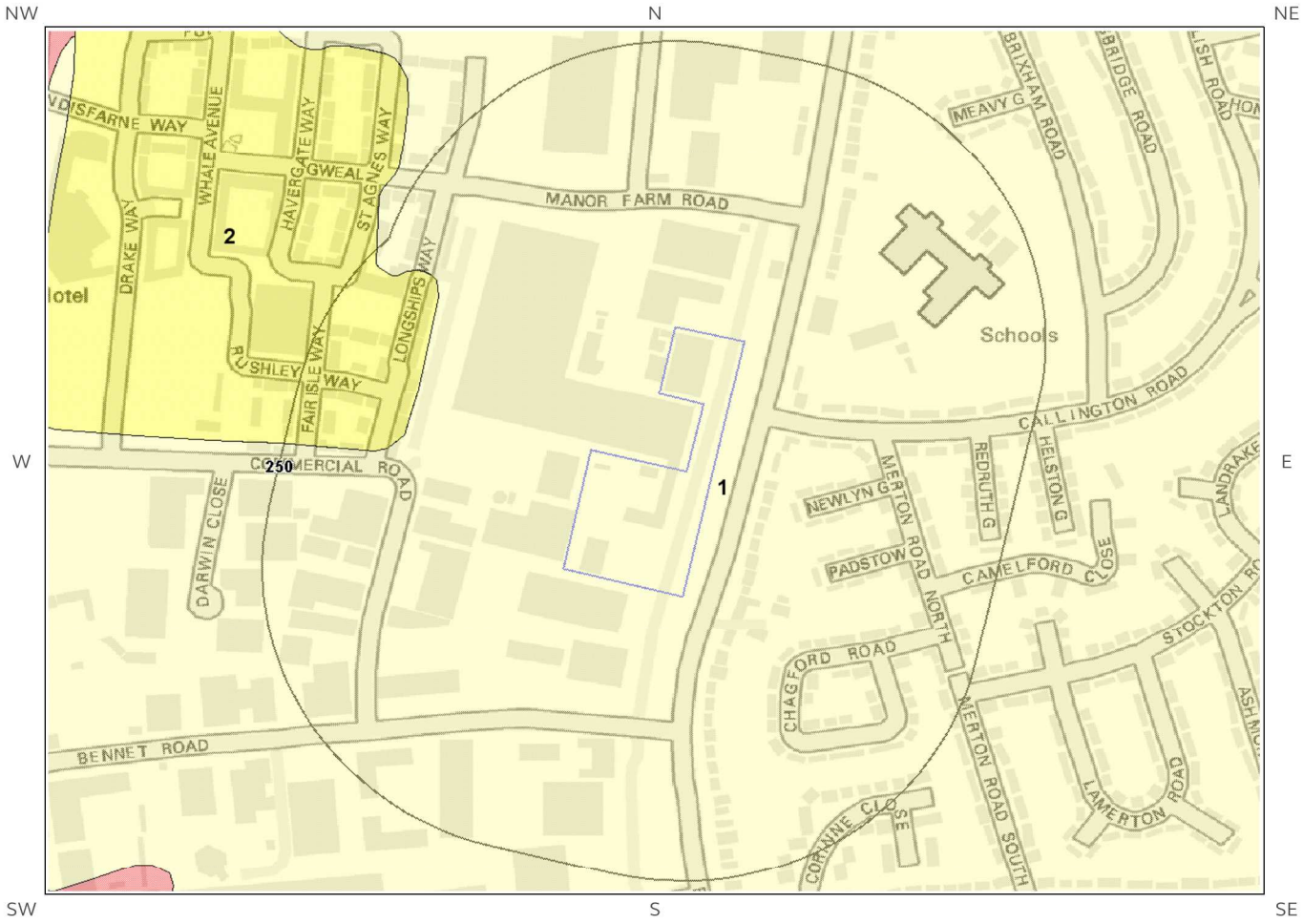


Ground Dissolution Soluble Rocks Legend

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6.4 Compressible Deposits Map



Compressible Deposits Legend

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6.5 Collapsible Deposits Map



Collapsible Deposits Legend

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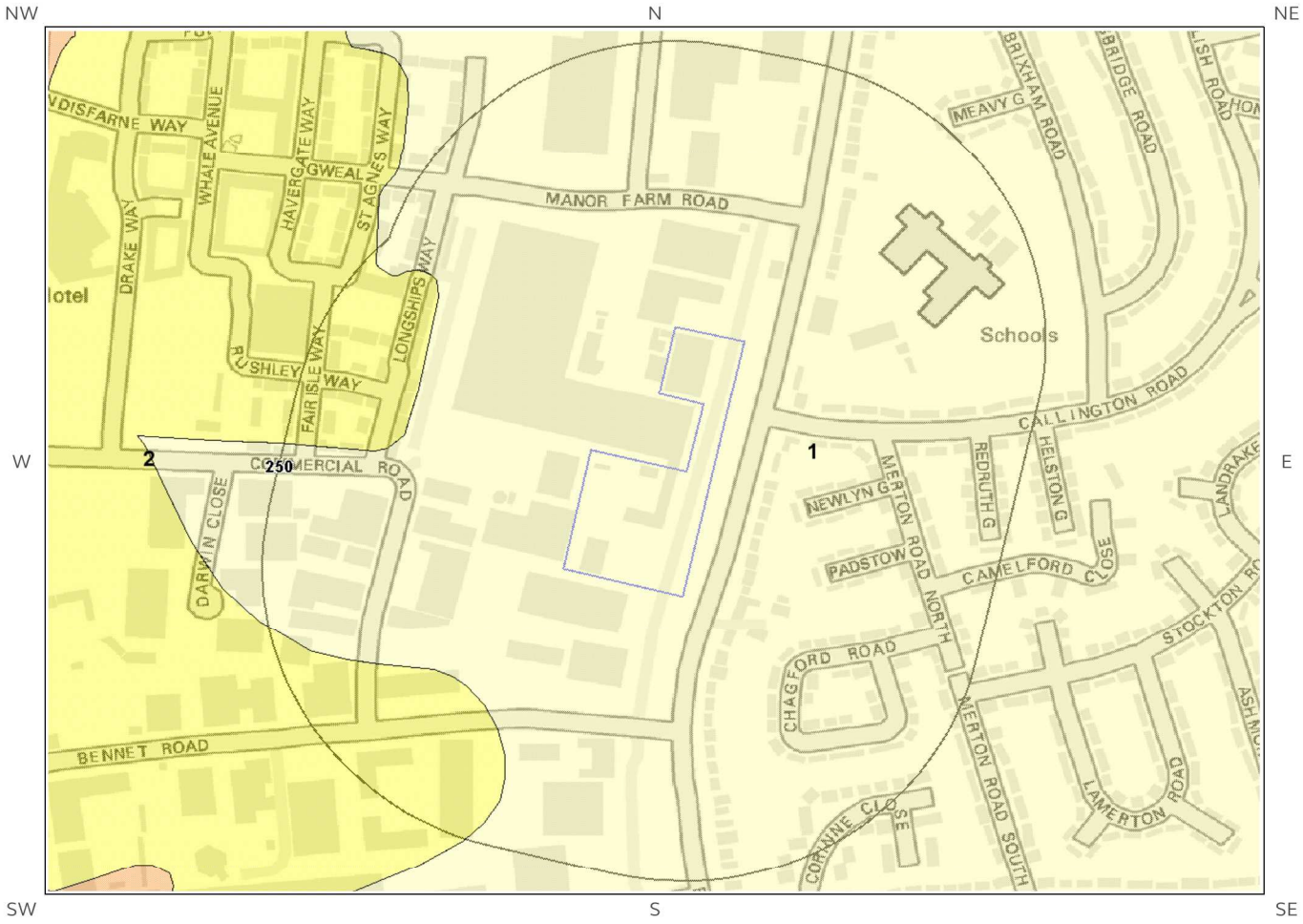
Site Outline

125
250
Search Buffers (m)

No Data / Null
Negligible
Very Low

Low
Moderate
High

6.6 Running Sand Map



Running Sand Legend

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Site Outline

125
250
Search Buffers (m)

No Data / Null
Negligible
Very Low

Low
Moderate
High

6 Natural Ground Subsidence

The National Ground Subsidence rating is obtained through the 6 natural ground stability hazard datasets, which are supplied by the British Geological Survey (BGS).

The following GeoSure data represented on the mapping is derived from the BGS Digital Geological map of Great Britain at 1:50,000 scale.

What is the maximum hazard rating of natural subsidence within the study site*[*] boundary? Low

6.1 Shrink-Swell Clays

The following Shrink Swell information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Low	Ground conditions predominantly medium plasticity. Do not plant trees with high soil moisture demands near to buildings. For new build, consideration should be given to advice published by the National House Building Council (NHBC) and the Building Research Establishment (BRE). There is a possible increase in construction cost to reduce potential shrink-swell problems. For existing property, there is a possible increase in insurance risk, especially during droughts or where vegetation with high moisture demands is present.

6.2 Landslides

The following Landslides information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

* This includes an automatically generated 50m buffer zone around the site

6.3 Ground Dissolution of Soluble Rocks

The following Ground Dissolution information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

6.4 Compressible Deposits

The following Compressible Deposits information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

6.5 Collapsible Deposits

The following Collapsible Rocks information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

6.6 Running Sands

The following Running Sands information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

7 Borehole Records Map



Borehole Records Legend

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Site Outline

Borehole Locations

125
250
Search Buffers (m)

7 Borehole Records

The systematic analysis of data extracted from the BGS Borehole Records database provides the following information.

Records of boreholes within 250m of the study site boundary: 7

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1	20.0	N	471720 170560	SU77SW137	10.0	448 BASINGSTOKE RD 3
2	65.0	N	471660 170610	SU77SW135	10.0	448 BASINGSTOKE RD 1
3	95.0	N	471700 170640	SU77SW136	10.0	448 BASINGSTOKE RD 2
4	98.0	NW	471530 170500	SU77SW39	76.2	452 BASINGSTOKE ROAD READING
5	167.0	S	471560 170170	SU77SW900	8.69	BASINGSTOKE ROAD READING 1
6	173.0	N	471660 170720	SU77SW209	-1.0	MANOR FARM IND SITE 4
7	195.0	SW	471500 170160	SU77SW901	18.75	BASINGSTOKE ROAD READING 2

The borehole records are available using the hyperlinks below: Please note that if the donor of the borehole record has requested the information be held as commercial-in-confidence, the additional data will be held separately by the BGS and a formal request must be made for its release.

#1: scans.bgs.ac.uk/sobi_scans/boreholes/428289
#2: scans.bgs.ac.uk/sobi_scans/boreholes/428287
#3: scans.bgs.ac.uk/sobi_scans/boreholes/428288
#4: scans.bgs.ac.uk/sobi_scans/boreholes/428188
#5: scans.bgs.ac.uk/sobi_scans/boreholes/15991511
#7: scans.bgs.ac.uk/sobi_scans/boreholes/15991512

8 Estimated Background Soil Chemistry

Records of background estimated soil chemistry within 250m of the study site boundary: 2

For further information on how this data is calculated and limitations upon its use, please see the Groundsure Geo Insight Plus User Guide, available on request.

Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg

*As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.

9 Railways and Tunnels Map



Railways and Tunnels Legend

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- Site Outline
- 250 / 500 — Search Buffers (m)
- Underground or Partially Underground Railway / Subway System
- Railway Tunnel (OS Mapping)
- Abandoned or Dismantled Railway (OpenStreetMap)
- Railway Track (OS Mapping)
- Railway Track (OpenStreetMap)
- High Speed 2
- Crossrail 1
- Railway and/or Tunnel Feature from Historical Mapping

9 Railways and Tunnels

9.1 Tunnels

This data is derived from OpenStreetMap and provides information on the possible locations of underground railway systems in the UK - the London Underground, the Tyne & Wear Metro and the Glasgow Subway.

Have any underground railway lines been identified within the study site boundary?	No
Have any underground railway lines been identified within 250m of the study site boundary?	No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels Map.

This data is derived from Ordnance Survey mapping and provides information on the possible locations of railway tunnels forming part of the UK overground railway network.

Have any other railway tunnels been identified within the site boundary?	No
Have any other railway tunnels been identified within 250m of the site boundary?	No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels Map.

9.2 Historical Railway and Tunnel Features

This data is derived from Groundsure's unique Historical Land-use Database and contains features relating to tunnels, railway tracks or associated works that have been identified from historical Ordnance Survey mapping.

Have any historical railway or tunnel features been identified within the study site boundary?	No
Have any historical railway or tunnel features been identified within 250m of the study site boundary?	No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels Map.

9.3 Historical Railways

This data is derived from OpenStreetMap and provides information on the possible alignments of abandoned or dismantled railway lines in proximity to the study site.

Have any historical railway lines been identified within the study site boundary?	No
Have any historical railway lines been identified within 250m of the study site boundary?	No

Database searched and no data found.

Multiple sections of the same track may be listed in the detail above
Any records that have been identified are represented on the Railways and Tunnels Map.

9.4 Active Railways

These datasets are derived from Ordnance Survey mapping and OpenStreetMap and provide information on the possible locations of active railway lines in proximity to the study site.

Have any active railway lines been identified within the study site boundary?	No
Have any active railway lines been identified within 250m of the study site boundary?	No

Database searched and no data found.

Multiple sections of the same track may be listed in the detail above
Any records that have been identified are represented on the Railways and Tunnels Map.

9.5 Railway Projects

These datasets provide information on the location of large scale railway projects High Speed 2 and Crossrail 1 .

Is the study site within 5km of the route of the High Speed 2 rail project?	No
Is the study site within 500m of the route of the Crossrail 1 rail project?	No

Further information on proximity to these routes, the project construction status and associated works can be obtained through the purchase of a Groundsure HS2 and Crossrail 1 Report.

The route data has been digitised from publicly available maps by Groundsure. The route as provided relates to the Crossrail 1 project only, and does not include any details of the Crossrail 2 project, as final details of the route for Crossrail 2 are still under consultation.

Contact Details

Groundsure Helpline

Telephone: 08444 159 000
info@groundsure.com

British Geological Survey Enquiries

Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email:**enquiries@bgs.ac.uk**
Web:**www.bgs.ac.uk**
BGS Geological Hazards Reports and general geological enquiries

British Gypsum

British Gypsum Ltd
East Leake
Loughborough
Leicestershire
LE12 6HX

The Coal Authority

200 Lichfield Lane
Mansfield
Notts NG18 4RG
Tel: 0345 7626 848
DX 716176 Mansfield 5
www.coal.gov.uk

Public Health England

Public information access office
Public Health England, Wellington House
133-155 Waterloo Road, London, SE1 8UG
https://www.gov.uk/government/organisations/public-health-england
Email: **enquiries@phe.gov.uk**
Main switchboard: 020 7654 8000

Johnson Poole & Bloomer Limited

Harris and Pearson Building, Brettel Lane
Brierley Hill, West Midlands
DY5 3LH
Tel: +44 (0) 1384 262 000
Email:**enquiries.gs@jpb.co.uk**
Website: **www.jpb.co.uk**

Ordnance Survey

Adanac Drive, Southampton
SO16 0AS

Tel: 08456 050505
Website: http://www.ordnancesurvey.co.uk/

Getmapping PLC

Virginia Villas, High Street, Hartley Witney,
Hampshire RG27 8NW
Tel: 01252 845444
Website:**http://www1.getmapping.com/**

Peter Brett Associates
Caversham Bridge House
Waterman Place
Reading
Berkshire RG1 8DN
Tel: +44 (0)118 950 0761 E-mail:**reading@pba.co.uk**
Website:**http://www.peterbrett.com/home**

Acknowledgements: Ordnance Survey © Crown Copyright and/or Database Right. All Rights Reserved. Licence Number [03421028]. This report has been prepared in accordance with the Groundsure Ltd standard Terms and Conditions of business for work of this nature.

Standard Terms and Conditions

1 Definitions

In these terms and conditions unless the context otherwise requires:

"Beneficiary" means the person or entity for whose benefit the Client has obtained the Services.

"Client" means the party or parties entering into a Contract with Groundsure.

"Commercial" means any building or property which is not Residential.

"Confidential Information" means the contents of this Contract and all information received from the Client as a result of, or in connection with, this Contract other than

(i) information which the Client can prove was rightfully in its possession prior to disclosure by Groundsure and

(ii) any information which is in the public domain (other than by virtue of a breach of this Contract).

"Support Services" means Support Services provided by Groundsure including, without limitation, interpreting third party and in-house environmental data, providing environmental support advice, undertaking environmental audits and assessments, Site investigation, Site monitoring and related items.

"Contract" means the contract between Groundsure and the Client for the provision of the Services, and which shall incorporate these terms and conditions, the Order, and the relevant User Guide.

"Third Party Data Provider" means any third party providing Third Party Content to Groundsure.

"Data Reports" means reports comprising factual data with no accompanying interpretation.

"Fees" has the meaning set out in clause 5.1.

"Groundsure" means Groundsure Limited, a company registered in England and Wales under number 03421028.

"Groundsure Materials" means all materials prepared by Groundsure and provided as part of the Services, including but not limited to Third Party Content, Data Reports, Mapping, and Risk Screening Reports.

"Intellectual Property" means any patent, copyright, design rights, trade or service mark, moral rights, data protection rights, know-how or trade mark in each case whether registered or not and including applications for the same or any other rights of a similar nature anywhere in the world.

"Mapping" means a map, map data or a combination of historical maps of various ages, time periods and scales.

"Order" means an electronic, written or other order form submitted by the Client requesting Services from Groundsure in respect of a specified Site.

"Ordnance Survey" means the Secretary of State for Business, Innovation and Skills, acting through Ordnance Survey, Adanac Drive, Southampton, SO16 0AS, UK.

"Order Website" means the online platform through which Orders may be placed by the Client and accepted by Groundsure.

"Report" means a Risk Screening Report or Data Report for Commercial or Residential property.

"Residential" means any building or property used as or intended to be used as a single dwelling.

"Risk Screening Report" means a risk screening report comprising factual data with an accompanying interpretation by Groundsure.

"Services" means any Report, Mapping and/or Support Services which Groundsure has agreed to provide by accepting an Order pursuant to clause 2.6.

"Site" means the area of land in respect of which the Client has requested Groundsure to provide the Services.

"Third Party Content" means data, database information or other information which is provided to Groundsure by a Third Party Data Provider.

"User Guide" means the user guide, as amended from time to time, available upon request from Groundsure and on the website (www.Groundsure.com) and forming part of this Contract.

2 Scope of Services, terms and conditions, requests for insurance and quotations

2.1 Groundsure agrees to provide the Services in accordance with the Contract.

2.2 Groundsure shall exercise reasonable skill and care in the provision of the Services.

2.3 Subject to clause 7.3 the Client acknowledges that it has not relied on any statement or representation made by or on behalf of Groundsure which is not set out and expressly agreed in writing in the Contract and all such statements and representations are hereby excluded to the fullest extent permitted by law.

2.4 The Client acknowledges that terms and conditions appearing on a Client's order form, printed stationery or other communication, or any terms or conditions implied by custom, practice or course of dealing shall be of no effect, and that this Contract shall prevail over all others in relation to the Order.

2.5 If the Client or Beneficiary requests insurance in conjunction with or as a result of the Services, Groundsure shall use reasonable endeavours to recommend such insurance, but makes no warranty that such insurance shall be available from insurers or that it will be offered on reasonable terms. Any insurance purchased by the Client or Beneficiary shall be subject solely to the terms of the policy issued by insurers and Groundsure will have no liability therefor. In addition you acknowledge and agree that Groundsure does not act as an agent or broker for any insurance providers. The Client should take (and ensure that the Beneficiary takes) independent advice to ensure that the insurance policy requested or offered is suitable for its requirements.

2.6 Groundsure's quotations or proposals are valid for a period of 30 days only unless an alternative period of time is explicitly stipulated by Groundsure. Groundsure reserves the right to withdraw any quotation or proposal at any time before an Order is accepted by Groundsure. Groundsure's acceptance of an Order shall be binding only when made in writing and signed by Groundsure's authorised representative or when accepted through the Order Website.

3 The Client's obligations

3.1 The Client shall comply with the terms of this Contract and

(i) procure that the Beneficiary or any third party relying on the Services complies with and acts as if it is bound by the Contract and

(ii) be liable to Groundsure for the acts and omissions of the Beneficiary or any third party relying on the Services as if such acts and omissions were those of the Client.

3.2 The Client shall be solely responsible for ensuring that the Services are appropriate and suitable for its and/or the Beneficiary's needs.

3.3 The Client shall supply to Groundsure as soon as practicable and without charge all requisite information (and the Client warrants that such information is accurate, complete and appropriate), including without limitation any environmental information relating to the Site and shall give such assistance as Groundsure shall reasonably require in the provision of the Services including, without limitation, access to the Site, facilities and equipment.

3.4 Where the Client's approval or decision is required to enable Groundsure to carry out work in order to provide the Services, such approval or decision shall be given or procured in reasonable time and so as not to delay or disrupt the performance of the Services.

3.5 Save as expressly permitted by this Contract the Client shall not, and shall procure that the Beneficiary shall not, re-sell, alter, add to, or amend the Groundsure Materials, or use the Groundsure Materials in a manner for which they were not intended. The Client may make the Groundsure Materials available to a third party who is considering acquiring some or all of, or providing funding in relation to, the Site, but such third party cannot rely on the same unless expressly permitted under clause 4.

3.6 The Client is responsible for maintaining the confidentiality of its user name and password if using the Order Website and the Client acknowledges that Groundsure accepts no liability of any kind for any loss or damage suffered by the Client as a consequence of using the Order Website.

4 Reliance

4.1 The Client acknowledges that the Services provided by Groundsure consist of the presentation and analysis of Third Party Content and other content and that information obtained from a Third Party Data Provider cannot be guaranteed or warranted by Groundsure to be reliable.

4.2 In respect of Data Reports, Mapping and Risk Screening Reports, the following classes of person and no other are entitled to rely on their contents;

(i) the Beneficiary,

(ii) the Beneficiary's professional advisers, (iii) any person providing funding to the Beneficiary in relation to the Site (whether directly or as part of a lending syndicate),

(iv) the first purchaser or first tenant of the Site, and

(v) the professional advisers and lenders of the first purchaser or tenant of the Site.

4.3 In respect of Support Services, only the Client, Beneficiary and parties expressly named in a Report and no other parties are entitled to rely on its contents.

4.4 Save as set out in clauses 4.2 and 4.3 and unless otherwise expressly agreed in writing, no other person or entity of any kind is entitled to rely on any Services or Report issued or provided by Groundsure. Any party considering such Reports and Services does so at their own risk.

5 Fees and Disbursements

5.1Groundsure shall charge and the Client shall pay fees at the rate and frequency specified in the written proposal, Order Website or Order acknowledgement form, plus (in the case of Support Services) all proper disbursements incurred by Groundsure. The Client shall in addition pay all value added tax or other tax payable on such fees and disbursements in relation to the provision of the Services (together "Fees").

5.2 The Client shall pay all outstanding Fees to Groundsure in full without deduction, counterclaim or set off within 30 days of the date of Groundsure's invoice or such other period as may be agreed in writing between Groundsure and the Client ("Payment Date"). Interest on late payments will accrue on a daily basis from the Payment Date until the date of payment (whether before or after judgment) at the rate of 8% per annum.

5.3 The Client shall be deemed to have agreed the amount of any invoice unless an objection is made in writing within 28 days of the date of the invoice. As soon as reasonably practicable after being notified of an objection, without prejudice to clause 5.2 a member of Groundsure's management team will contact the Client and the parties shall then use all reasonable endeavours to resolve the dispute within 15 days.

6 Intellectual Property and Confidentiality

6.1 Subject to

(i) full payment of all relevant Fees and

(ii) compliance with this Contract, the Client is granted (and is permitted to sub-licence to the Beneficiary) a royalty-free, worldwide, non-assignable and (save to the extent set out in this Contract) non-transferable licence to make use of the Groundsure Materials.

6.2 All Intellectual Property in the Groundsure Materials are and shall remain owned by Groundsure or Groundsure's licensors (including without limitation the Third Party Data Providers) the Client acknowledges, and shall procure acknowledgement by the Beneficiary of, such ownership. Nothing in this Contract purports to transfer or assign any rights to the Client or the Beneficiary in respect of such Intellectual Property.

6.3 Third Party Data Providers may enforce any breach of clauses 6.1 and 6.2 against the Client or Beneficiary.

6.4 The Client shall, and shall procure that any recipients of the Groundsure Materials shall:

(i) not remove, suppress or modify any trade mark, copyright or other proprietary marking belonging to Groundsure or any third party from the Services;

(ii) use the information obtained as part of the Services in respect of the subject Site only, and shall not store or reuse any information obtained as part of the Services provided in respect of adjacent or nearby sites;

(iii) not create any product or report which is derived directly or indirectly from the Services (save that those acting in a professional capacity to the Beneficiary may provide advice based upon the Services);

(iv) not combine the Services with or incorporate such Services into any other information data or service;

(v) not reformat or otherwise change (whether by modification, addition or enhancement), the Services (save that those acting for the Beneficiary in a professional capacity shall not be in breach of this clause 6.4(v) where such reformatting is in the normal course of providing advice based upon the Services);

(vi) where a Report and/or Mapping contains material belonging to Ordnance Survey, acknowledge and agree that such content is protected by Crown Copyright and shall not use such content for any purpose outside of receiving the Services; and

(vii) not copy in whole or in part by any means any map prints or run-on copies containing content belonging to Ordnance Survey (other than that contained within Ordnance Survey's OS Street Map) without first being in possession of a valid Paper Map Copying Licence from Ordnance Survey,

6.5 Notwithstanding clause 6.4, the Client may make reasonable use of the Groundsure Materials in order to advise the Beneficiary in a professional capacity. However, Groundsure shall have no liability in respect of any advice, opinion or report given or provided to Beneficiaries by the Client.

6.6 The Client shall procure that any person to whom the Services are made available shall notify Groundsure of any request or requirement to disclose, publish or disseminate any information contained in the Services in accordance with the Freedom of Information Act 2000, the Environmental Information Regulations 2004 or any associated legislation or regulations in force from time to time.

7.Liability: Particular Attention Should Be Paid To This Clause

7.1 This Clause 7 sets out the entire liability of Groundsure, including any liability for the acts or omissions of its employees, agents, consultants, subcontractors and Third Party Content, in respect of:

(i) any breach of contract, including any deliberate breach of the Contract by Groundsure or its employees, agents or subcontractors;

(ii) any use made of the Reports, Services, Materials or any part of them; and

(iii) any representation, statement or tortious act or omission (including negligence) arising under or in connection with the Contract.

7.2 All warranties, conditions and other terms implied by statute or common law are, to the fullest extent permitted by law, excluded from the Contract.

7.3 Nothing in the Contract limits or excludes the liability of the Supplier for death or personal injury resulting from negligence, or for any damage or liability incurred by the Client or Beneficiary as a result of fraud or fraudulent misrepresentation.

7.4 Groundsure shall not be liable for

(i) loss of profits;

(ii) loss of business;

(iii) depletion of goodwill and/or similar losses;

(iv) loss of anticipated savings;

(v) loss of goods;

(vi) loss of contract;

(vii) loss of use;

(viii) loss or corruption of data or information;

(ix) business interruption;

(x) any kind of special, indirect, consequential or pure economic loss, costs, damages, charges or expenses;

(xi) loss or damage that arise as a result of the use of all or part of the Groundsure Materials in breach of the Contract;

(xii) loss or damage arising as a result of any error, omission or inaccuracy in any part of the Groundsure Materials where such error, omission or inaccuracy is caused by any Third Party Content or any reasonable interpretation of Third Party Content;

(xiii) loss or damage to a computer, software, modem, telephone or other property; and

(xiv) loss or damage caused by a delay or loss of use of Groundsure's internet ordering service.

7.5 Groundsure's total liability in relation to or under the Contract shall be limited to £10 million for any claim or claims.

7.6 Groundsure shall procure that the Beneficiary shall be bound by limitations and exclusions of liability in favour of Groundsure which accord with those detailed in clauses 7.4 and 7.5 (subject to clause 7.3) in respect of all claims which the Beneficiary may bring against Groundsure in relation to the Services or other matters arising pursuant to the Contract.

8 Groundsure's right to suspend or terminate

8.1 If Groundsure reasonably believes that the Client or Beneficiary has not provided the information or assistance required to enable the proper provision of the Services, Groundsure shall be entitled to suspend all further performance of the Services until such time as any such deficiency has been made good.
8.2 Groundsure shall be entitled to terminate the Contract immediately on written notice in the event that:

(i) the Client fails to pay any sum due to Groundsure within 30 days of the Payment Date; or

(ii) the Client (being an individual) has a bankruptcy order made against him or (being a company) shall enter into liquidation whether compulsory or voluntary or have an administration order made against it or if a receiver shall be appointed over the whole or any part of its property assets or undertaking or if the Client is struck off the Register of Companies or dissolved; or

(iii) the Client being a company is unable to pay its debts within the meaning of Section 123 of the Insolvency Act 1986 or being an individual appears unable to pay his debts within the meaning of Section 268 of the Insolvency Act 1986 or if the Client shall enter into a composition or arrangement with the Client's creditors or shall suffer distress or execution to be levied on his goods; or

(iv) the Client or the Beneficiary breaches any term of the Contract (including, but not limited to, the obligations in clause 4) which is incapable of remedy or if remediable, is not remedied within five days of notice of the breach.

9. Client's Right to Terminate and Suspend

9.1 Subject to clause 10.1, the Client may at any time upon written notice terminate or suspend the provision of all or any of the Services.
9.2 In any event, where the Client is a consumer (and not a business) he/she hereby expressly acknowledges and agrees that:

(i) the supply of Services under this Contract (and therefore the performance of this Contract) commences immediately upon Groundsure's acceptance of the Order; and

(ii) the Reports and/or Mapping provided under this Contract are

(a) supplied to the Client's specification(s) and in any event

(b) by their nature cannot be returned.

10 Consequences of Withdrawal, Termination or Suspension

10.1 Upon termination of the Contract:

(i) Groundsure shall take steps to bring to an end the Services in an orderly manner, vacate any Site with all reasonable speed and shall deliver to the Client and/or Beneficiary any property of the Client and/or Beneficiary in Groundsure's possession or control; and

(ii) the Client shall pay to Groundsure all and any Fees payable in respect of the performance of the Services up to the date of termination or suspension. In respect of any Support Services provided, the Client shall also pay Groundsure any additional costs incurred in relation to the termination or suspension of the Contract.

11 Anti-Bribery

11.1 The Client warrants that it shall:

(i) comply with all applicable laws, statutes and regulations relating to anti-bribery and anti-corruption including but not limited to the Bribery Act 2010;

(ii) comply with such of Groundsure's anti-bribery and anti-corruption policies as are notified to the Client from time to time; and

(iii) promptly report to Groundsure any request or demand for any undue financial or other advantage of any kind received by or on behalf of the Client in connection with the performance of this Contract.

11.2 Breach of this Clause 11 shall be deemed a material breach of this Contract.

12 General

12.1 The Mapping contained in the Services is protected by Crown copyright and must not be used for any purpose other than as part of the Services or as specifically provided in the Contract.
12.2 The Client shall be permitted to make one copy only of each Report or Mapping Order. Thereafter the Client shall be entitled to make unlimited copies of the Report or Mapping Order only in accordance with an Ordnance Survey paper map copy license available through Groundsure.
12.3 Groundsure reserves the right to amend or vary this Contract. No amendment or variation to this Contract shall be valid unless signed by an authorised representative of Groundsure.
12.4 No failure on the part of Groundsure to exercise, and no delay in exercising, any right, power or provision under this Contract shall operate as a waiver thereof.
12.5 Save as expressly provided in this Contract, no person other than the persons set out therein shall have any right under the Contract (Rights of Third Parties) Act 1999 to enforce any terms of the Contract.
12.6 The Secretary of State for Business, Innovation and Skills ("BIS") or BIS' successor body, as the case may be, acting through Ordnance Survey may enforce a breach of clause 6.4(vi) and clause 6.4(vii) of these terms and conditions against the Client in accordance with the provisions of the Contracts (Rights of Third Parties) Act 1999.
12.7 Groundsure shall not be liable to the Client if the provision of the Services is delayed or prevented by one or more of the following circumstances:

(i) the Client or Beneficiary's failure to provide facilities, access or information;

(ii) fire, storm, flood, tempest or epidemic;

(iii) Acts of God or the public enemy;

(iv) riot, civil commotion or war;

(v) strikes, labour disputes or industrial action;

(vi) acts or regulations of any governmental or other agency;

(vii) suspension or delay of services at public registries by Third Party Data Providers;

(viii) changes in law; or

(ix) any other reason beyond Groundsure's reasonable control.

In the event that Groundsure is prevented from performing the Services (or any part thereof) in accordance with this clause 12.6 for a period of not less than 30 days then Groundsure shall be entitled to terminate this Contract immediately on written notice to the Client.
12.8 Any notice provided shall be in writing and shall be deemed to be properly given if delivered by hand or sent by first class post, facsimile or by email to the address, facsimile number or email address of the relevant party as may have been notified by each party to the other for such purpose or in the absence of such notification the last known address.
12.9 Such notice shall be deemed to have been received on the day of delivery if delivered by hand, facsimile or email (save to the extent such day is not a working day where it shall be deemed to have been delivered on the next working day) and on the second working day after the day of posting if sent by first class post.
12.10 The Contract constitutes the entire agreement between the parties and shall supersede all previous arrangements between the parties relating to the subject matter hereof.
12.11 Each of the provisions of the Contract is severable and distinct from the others and if one or more provisions is or should become invalid, illegal or unenforceable, the validity and enforceability of the remaining provisions shall not in any way be tainted or impaired.
12.12 This Contract shall be governed by and construed in accordance with English law and any proceedings arising out of or connected with this Contract shall be subject to the exclusive jurisdiction of the English courts.
12.13 Groundsure is an executive member of the Council of Property Search Organisation (CoPSO) and has signed up to the Search Code administered by the Property Codes Compliance Board (PCCB). All Risk Screening Reports shall be supplied in accordance with the provisions of the Search Code.
12.14 If the Client or Beneficiary has a complaint about the Services, written notice should be given to the Compliance Officer at Groundsure who will respond in a timely manner. In the event you are not satisfied with Groundsure's complaints handling process or you are unable to resolve the complaint, at your discretion you may refer the complaint to The Property Ombudsman Scheme at the following URL/email: website www.tpos.co.uk or email: admin@tpos.co.uk

12.15 The Client agrees that it shall, and shall procure that each Beneficiary shall, treat in confidence all Confidential Information and shall not, and shall procure that each Beneficiary shall not (i) disclose any Confidential Information to any third party other than in accordance with the terms of this Contract; and (ii) use Confidential Information for a purpose other than the exercise of its rights and obligations under this Contract. Subject to clause 6.6, nothing shall prevent the Client or any Beneficiary from disclosing Confidential Information to the extent
required by law

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A3 MapInsight



Groundsure INSIGHTS

Site Details:

Procter & Gamble, 452,
BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: County Series
Map date: **1877**
Scale: 1:2,500
Printed at: 1:2,500

N
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Surveyed 1877
Revised 1877
Edition N/A
Copyright N/A
Levelled N/A

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Production date: 20 June 2016

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Groundsure INSIGHTS

Site Details:

Procter & Gamble, 452,
BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: County Series
Map date: **1899**
Scale: 1:2,500
Printed at: 1:2,500

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Surveyed 1899
Revised 1899
Edition N/A
Copyright N/A
Levelled N/A

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Groundsure INSIGHTS

Site Details:

Procter & Gamble, 452,
BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: County Series
Map date: 1911
Scale: 1:2,500
Printed at: 1:2,500

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Surveyed 1911
Revised 1911
Edition N/A
Copyright N/A
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Groundsure INSIGHTS

Site Details:

Procter & Gamble, 452,
BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: County Series
Map date: 1936
Scale: 1:2,500
Printed at: 1:2,500

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Surveyed 1936
Revised 1936
Edition N/A
Copyright N/A
Levelled N/A

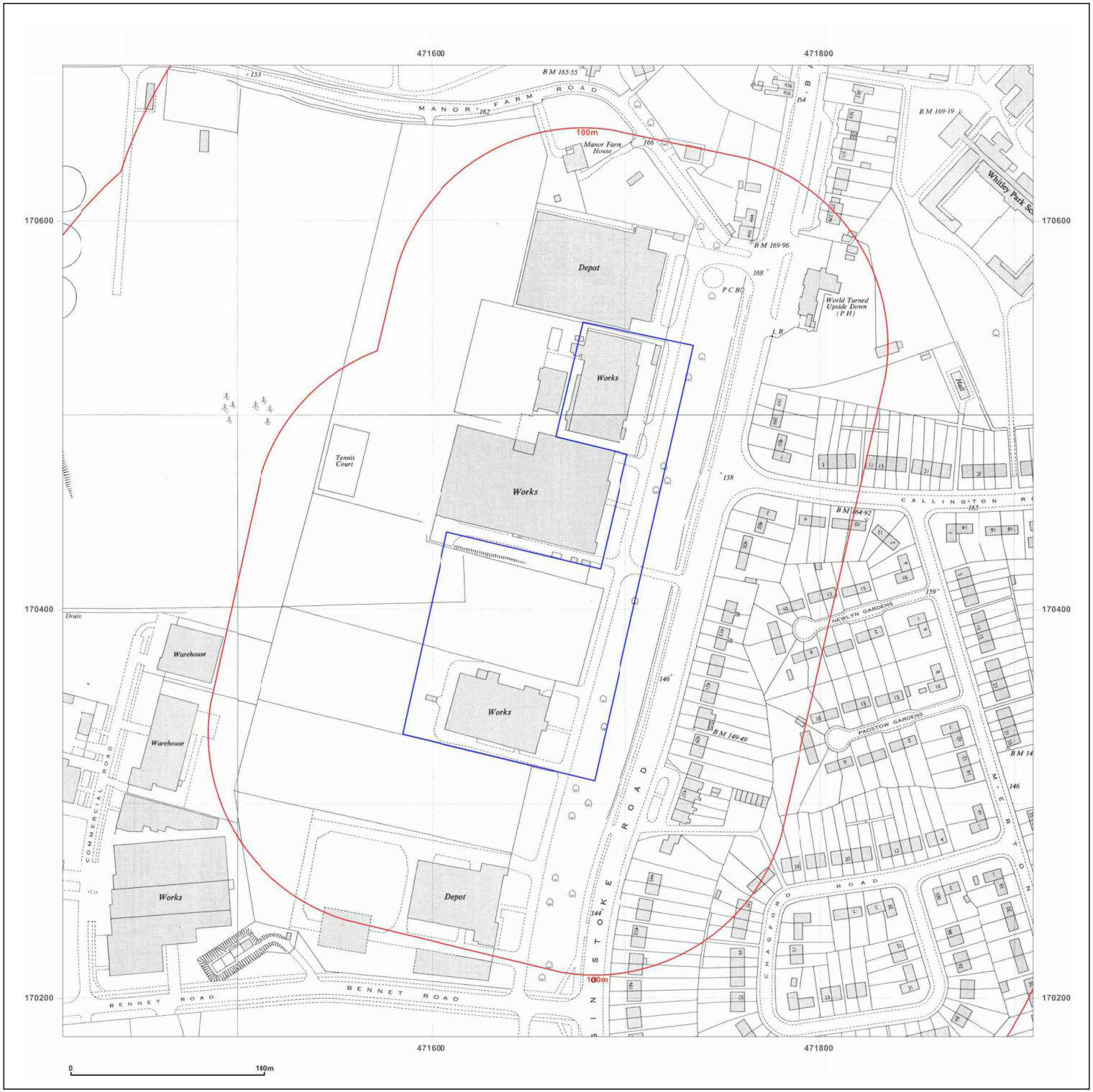
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Groundsure INSIGHTS

Site Details:

Procter & Gamble, 452,
BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid
Map date: **1957-1958**
Scale: 1:1,250
Printed at: 1:2,000

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Surveyed 1957
Revised 1957
Edition N/A
Copyright N/A
Levelled 1951

Surveyed 1957
Revised 1957
Edition N/A
Copyright N/A
Levelled 1951

Surveyed 1958
Revised 1958
Edition N/A
Copyright N/A
Levelled 1951

Surveyed 1957
Revised 1957
Edition N/A
Copyright N/A
Levelled 1951

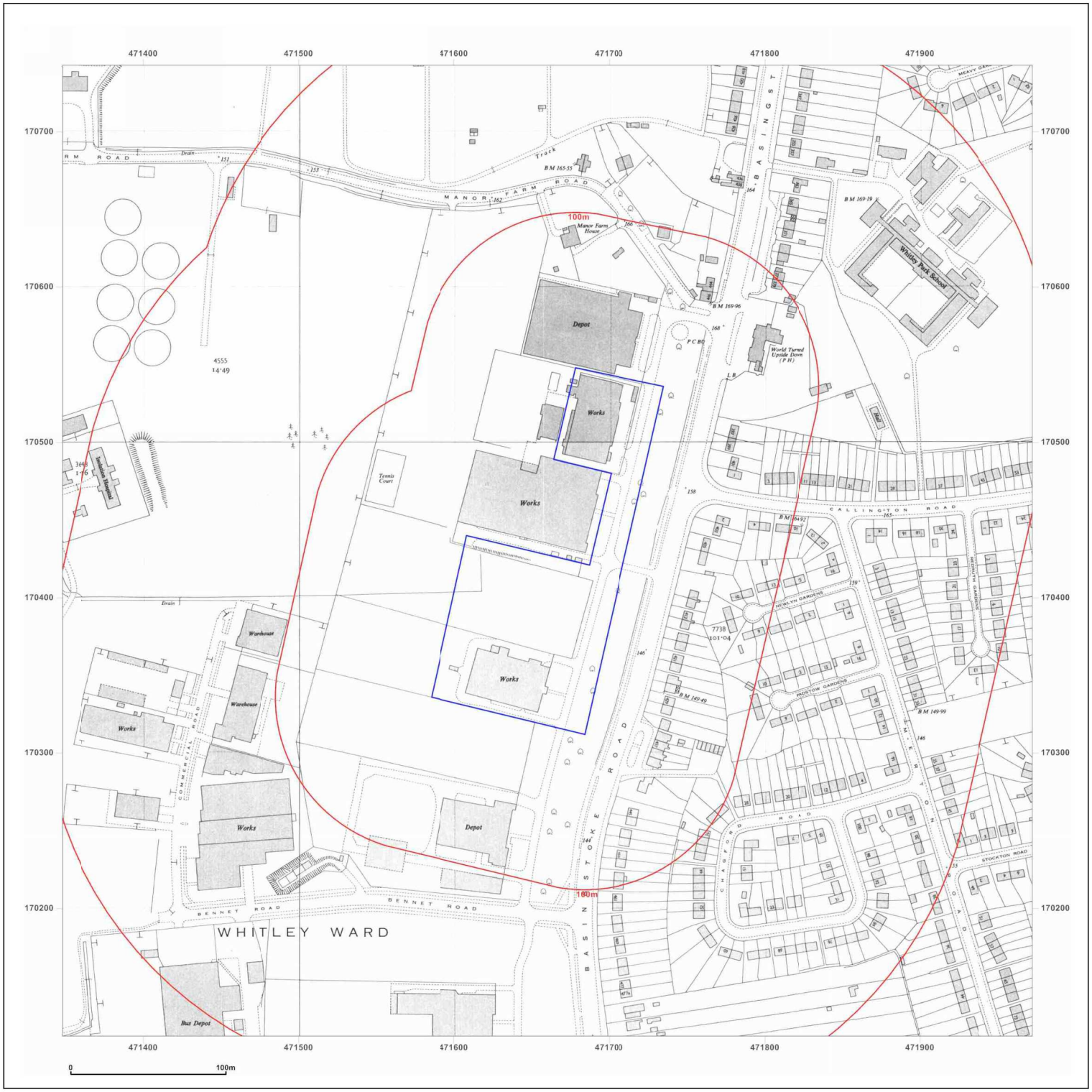
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Groundsure INSIGHTS

Site Details:

Procter & Gamble, 452,
BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid
Map date: **1958**
Scale: 1:2,500
Printed at: 1:2,500

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Surveyed 1958
Revised 1958
Edition 1959
Copyright 1959
Levelled 1951

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Groundsure INSIGHTS

Site Details:

Procter & Gamble, 452,
BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid
Map date: 1966
Scale: 1:2,500
Printed at: 1:2,500

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Surveyed 1966
Revised 1966
Edition N/A
Copyright 1969
Levelled 1951

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Groundsure INSIGHTS

Site Details:

Procter & Gamble, 452,
BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid
Map date: 1966
Scale: 1:2,500
Printed at: 1:2,500

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Surveyed 1966
Revised 1966
Edition N/A
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Groundsure INSIGHTS

Site Details:

Procter & Gamble, 452,
BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid
Map date: **1965-1968**
Scale: 1:1,250
Printed at: 1:2,000

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Surveyed 1957 Revised 1965 Edition N/A Copyright 1965 Levelled 1951	Surveyed 1957 Revised 1965 Edition N/A Copyright 1965 Levelled 1951
Surveyed 1958 Revised 1966 Edition N/A Copyright 1967 Levelled 1951	Surveyed 1957 Revised 1967 Edition N/A Copyright 1968 Levelled 1951

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Groundsure INSIGHTS

Site Details:

Procter & Gamble, 452,
BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid

Map date: **1974-1977**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed 1957
Revised 1975
Edition N/A
Copyright 1976
Levelled 1973

Surveyed N/A
Revised N/A
Edition N/A
Copyright 1977
Levelled 1973

Surveyed 1958
Revised 1974
Edition N/A
Copyright 1974
Levelled 1973

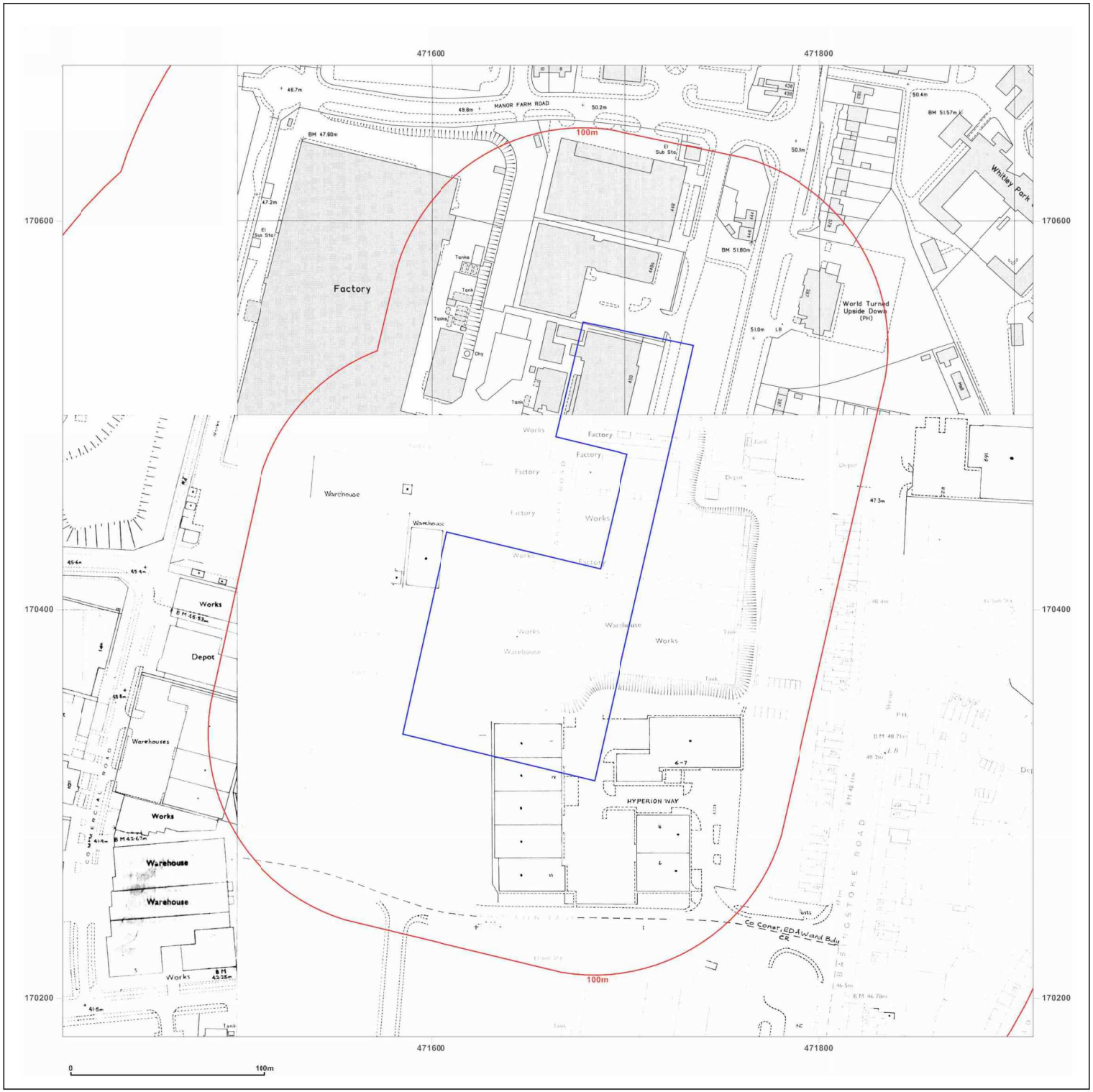
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Groundsure INSIGHTS

Site Details:

Procter & Gamble, 452,
BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid
Map date: **1986-1988**
Scale: 1:1,250
Printed at: 1:2,000

N
W E
S

Surveyed 1957
Revised 1987
Edition N/A
Copyright 1988
Levelled 1973

Surveyed 1973
Revised 1987
Edition N/A
Copyright 1987
Levelled 1973

Surveyed N/A
Revised N/A
Edition N/A
Copyright 1986
Levelled 1972

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Groundsure INSIGHTS

Site Details:

Procter & Gamble, 452,
BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid
Map date: **1987-1989**
Scale: 1:1,250
Printed at: 1:2,000

N
W E
S

Surveyed N/A
Revised N/A
Edition N/A
Copyright 1987
Levelled 1973

Surveyed 1973
Revised 1989
Edition N/A
Copyright 1989
Levelled 1973

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Groundsure INSIGHTS

Site Details:

Procter & Gamble, 452,
BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid
Map date: 1993
Scale: 1:1,250
Printed at: 1:2,000

N
W E
S

Surveyed 1993 Revised 1993 Edition N/A Copyright N/A Levelled N/A	Surveyed 1993 Revised N/A Edition N/A Copyright 1993 Levelled N/A
Surveyed 1993 Revised N/A Edition N/A Copyright 1993 Levelled N/A	Surveyed 1993 Revised N/A Edition N/A Copyright 1993 Levelled N/A

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Site Details:

Procter & Gamble, 452,
BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid
Map date: **1993-1995**
Scale: 1:1,250
Printed at: 1:2,000

N
W E
S

Surveyed 1973
Revised 1993
Edition N/A
Copyright 1988
Levelled N/A

Surveyed 1995
Revised 1995
Edition N/A
Copyright 1995
Levelled N/A

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Site Details:

Procter & Gamble, 452,
BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: County Series
Map date: **1898**
Scale: 1:10,560
Printed at: 1:10,560

N
W E
S

Surveyed 1877
Revised 1898
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1876
Revised 1898
Edition N/A
Copyright N/A
Levelled N/A

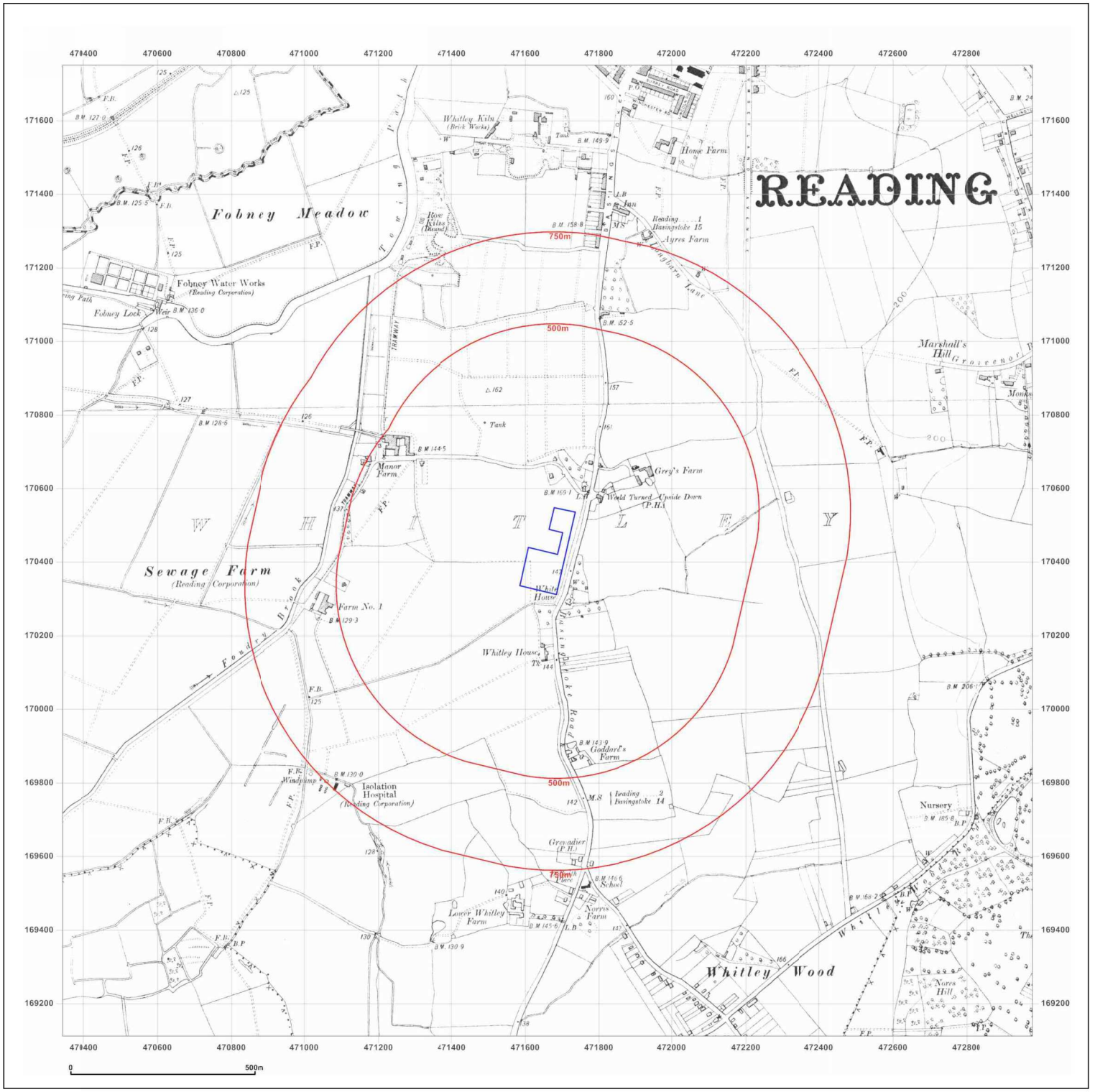
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Site Details:

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BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: County Series

Map date: **1913**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
S

Surveyed 1877
Revised 1910
Edition 1913
Copyright N/A
Levelled N/A

Surveyed 1876
Revised 1913
Edition 1913
Copyright N/A
Levelled N/A

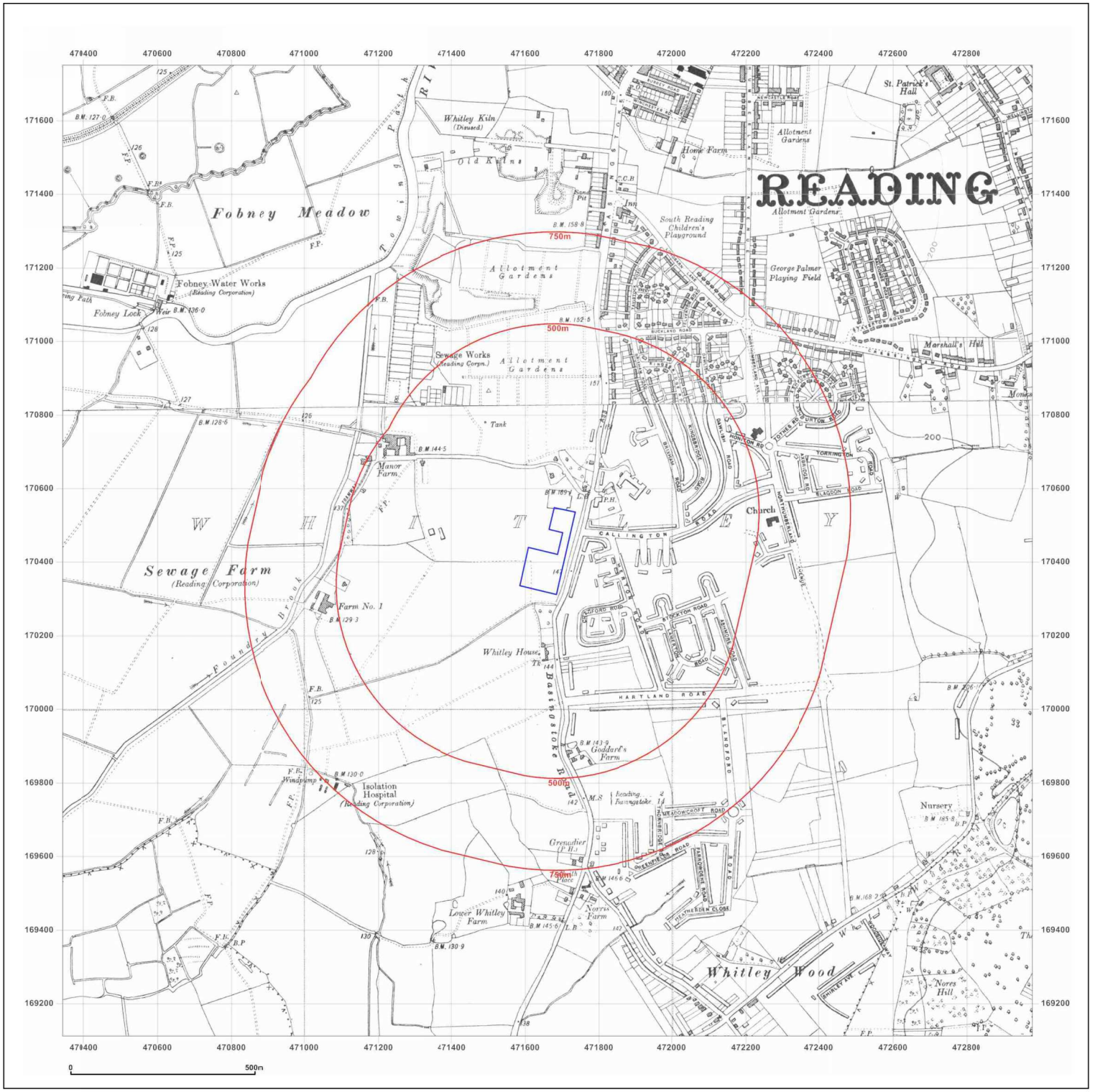
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Site Details:

Procter & Gamble, 452,
BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: County Series
Map date: **1933-1938**
Scale: 1:10,560
Printed at: 1:10,560

N
W E
S

Surveyed 1877
Revised 1933
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1876
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

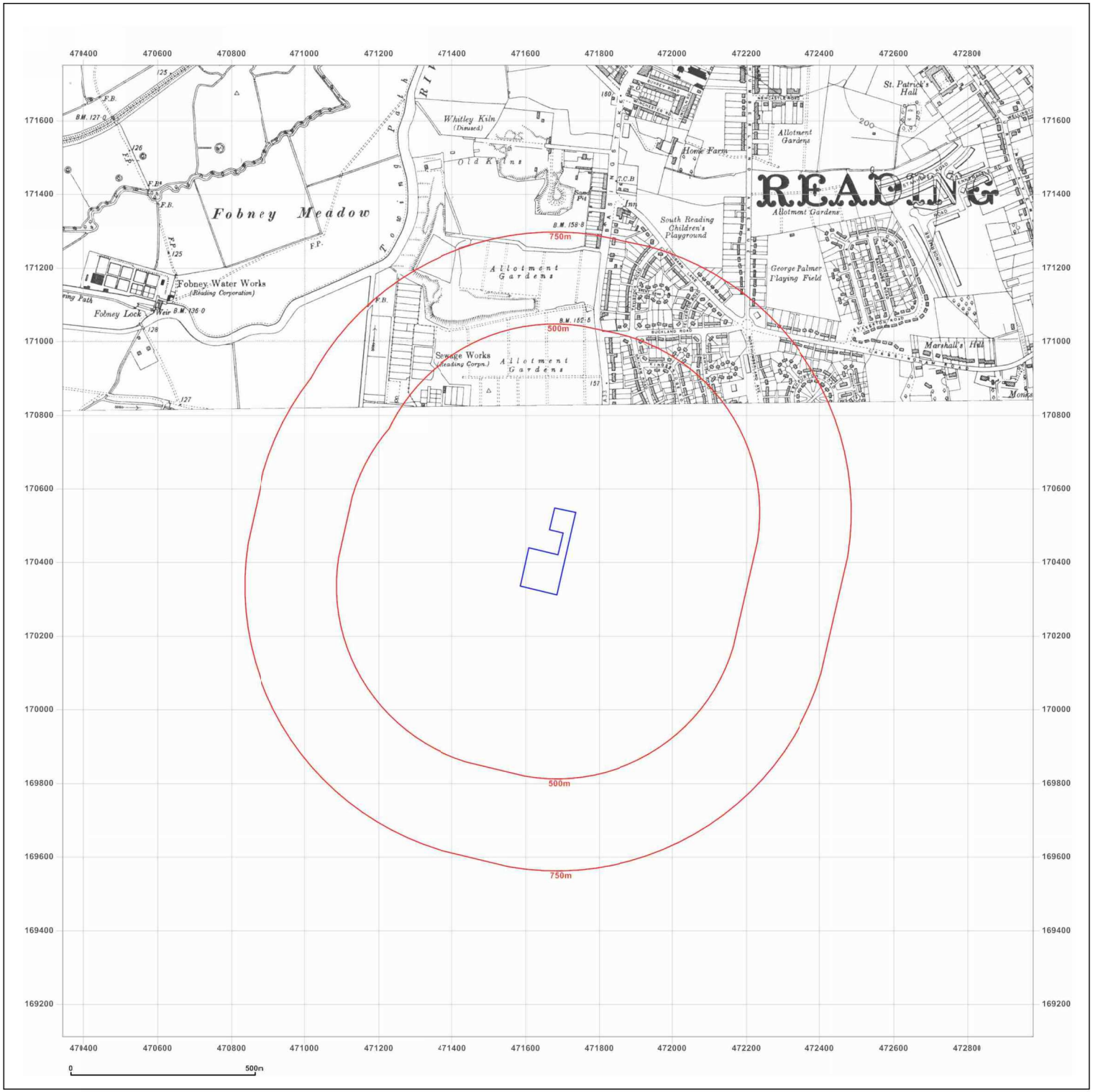
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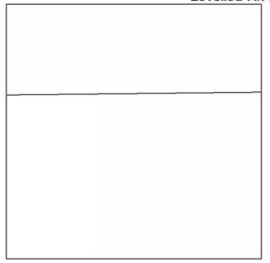
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BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: County Series
Map date: **1938**
Scale: 1:10,560
Printed at: 1:10,560

N
W E
S

Surveyed 1877
Revised 1938
Edition 1938
Copyright N/A
Levelled N/A



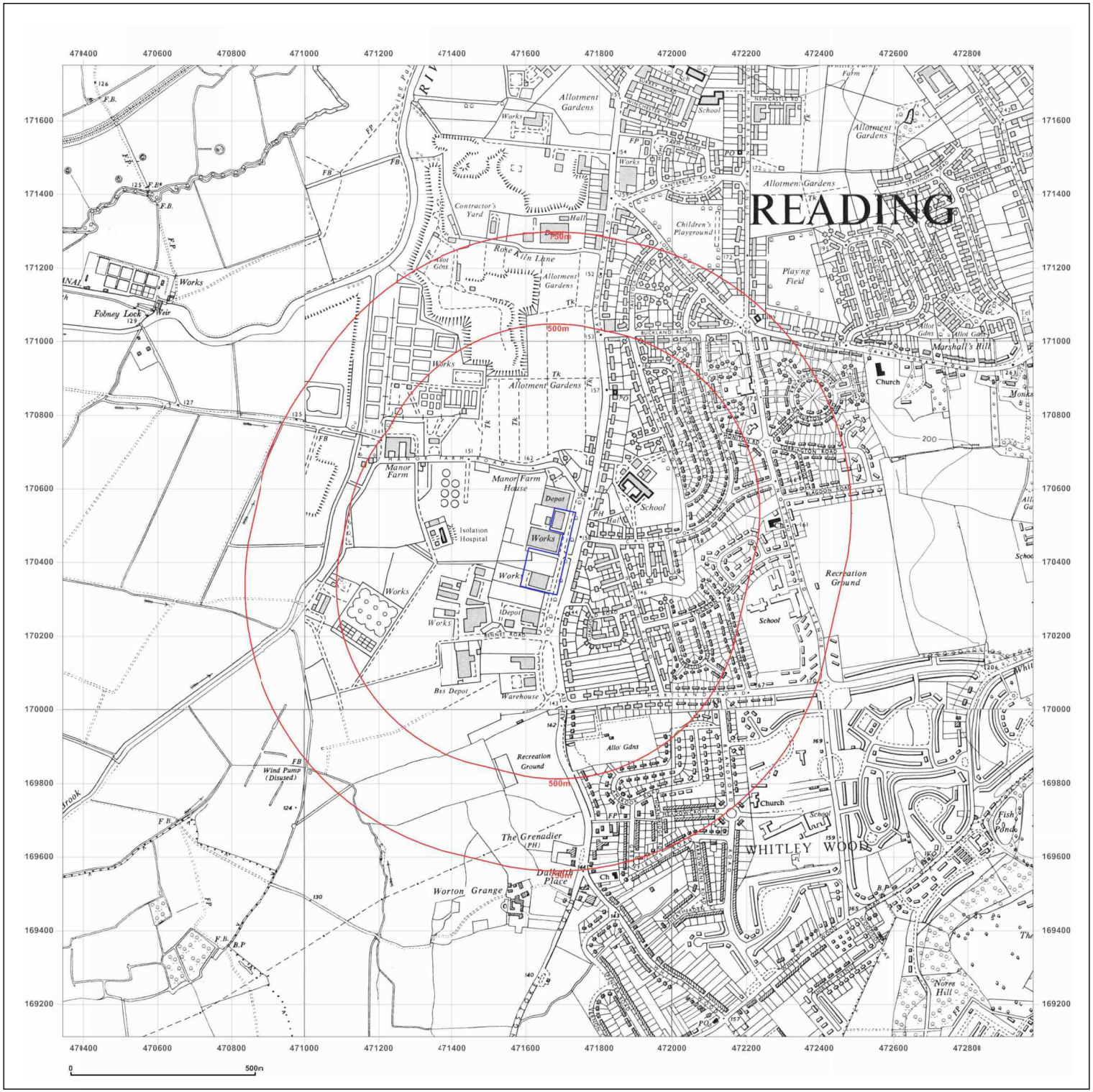
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Site Details:

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BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: Provisional
Map date: **1961-1962**
Scale: 1:10,560
Printed at: 1:10,560

N
W E
S

Surveyed 1959
Revised 1961
Edition N/A
Copyright 1962
Levelled N/A

Surveyed N/A
Revised 1961
Edition N/A
Copyright 1961
Levelled N/A

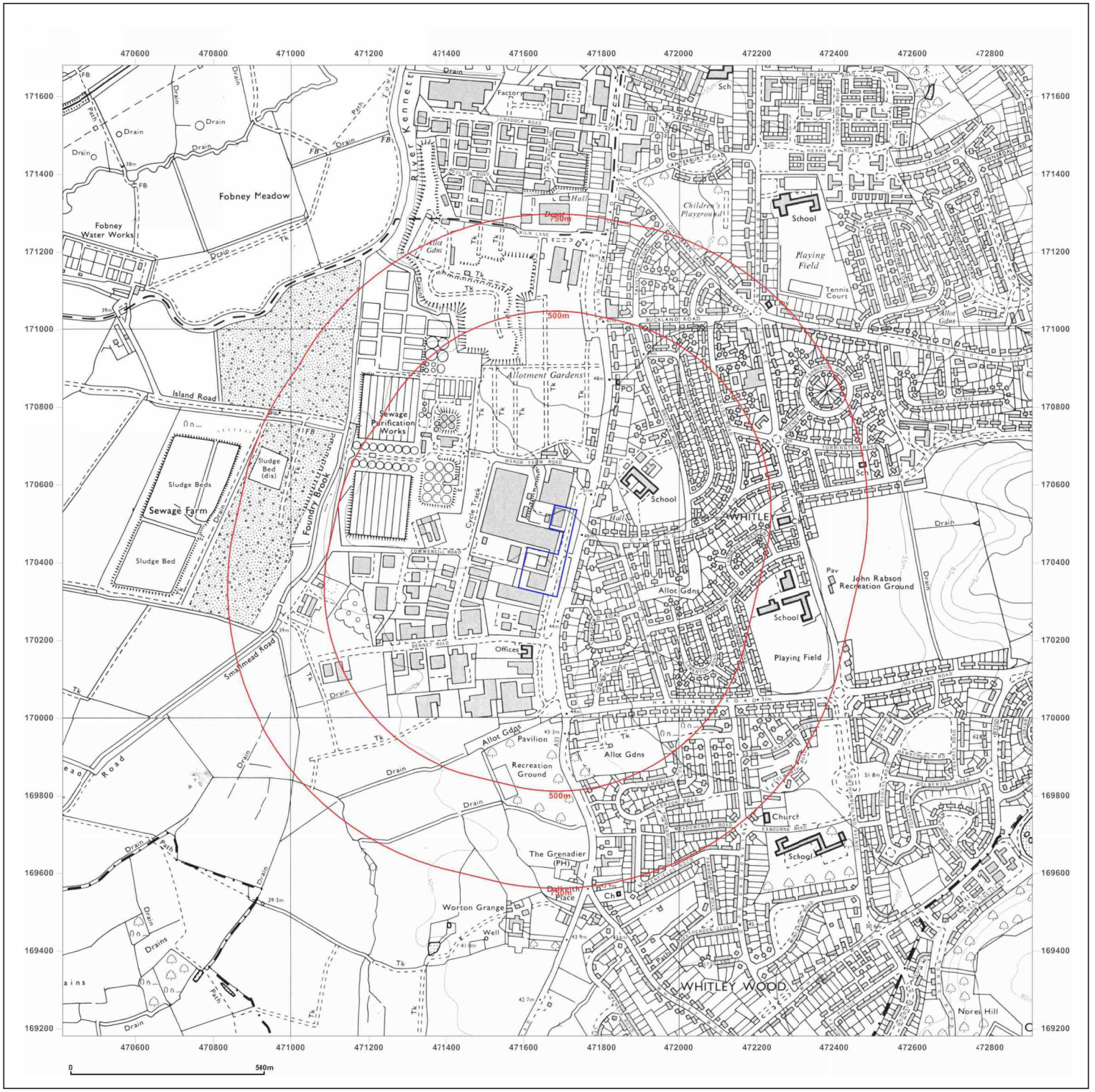
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Site Details:

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READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid

Map date: **1969-1973**

Scale: 1:10,000

Printed at: 1:10,000

N
W E
S

Surveyed 1970
Revised 1973
Edition N/A
Copyright 1973
Levelled N/A

Surveyed 1969
Revised 1969
Edition N/A
Copyright N/A
Levelled N/A

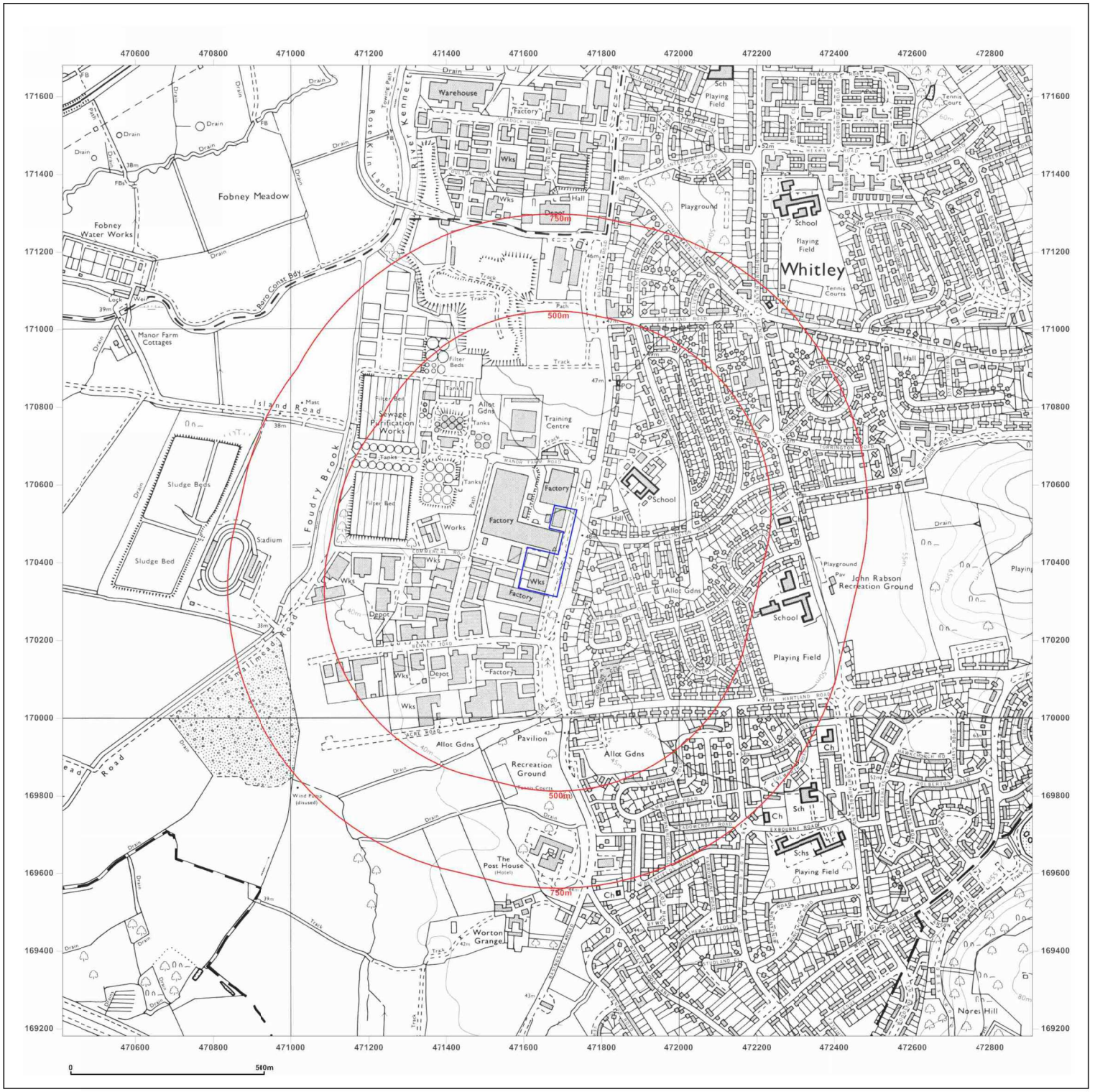
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Site Details:

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BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid

Map date: **1976-1979**

Scale: 1:10,000

Printed at: 1:10,000

N
W E
S

Surveyed 1977
Revised 1979
Edition N/A
Copyright 1979
Levelled 1969

Surveyed 1975
Revised 1976
Edition N/A
Copyright 1976
Levelled 1969

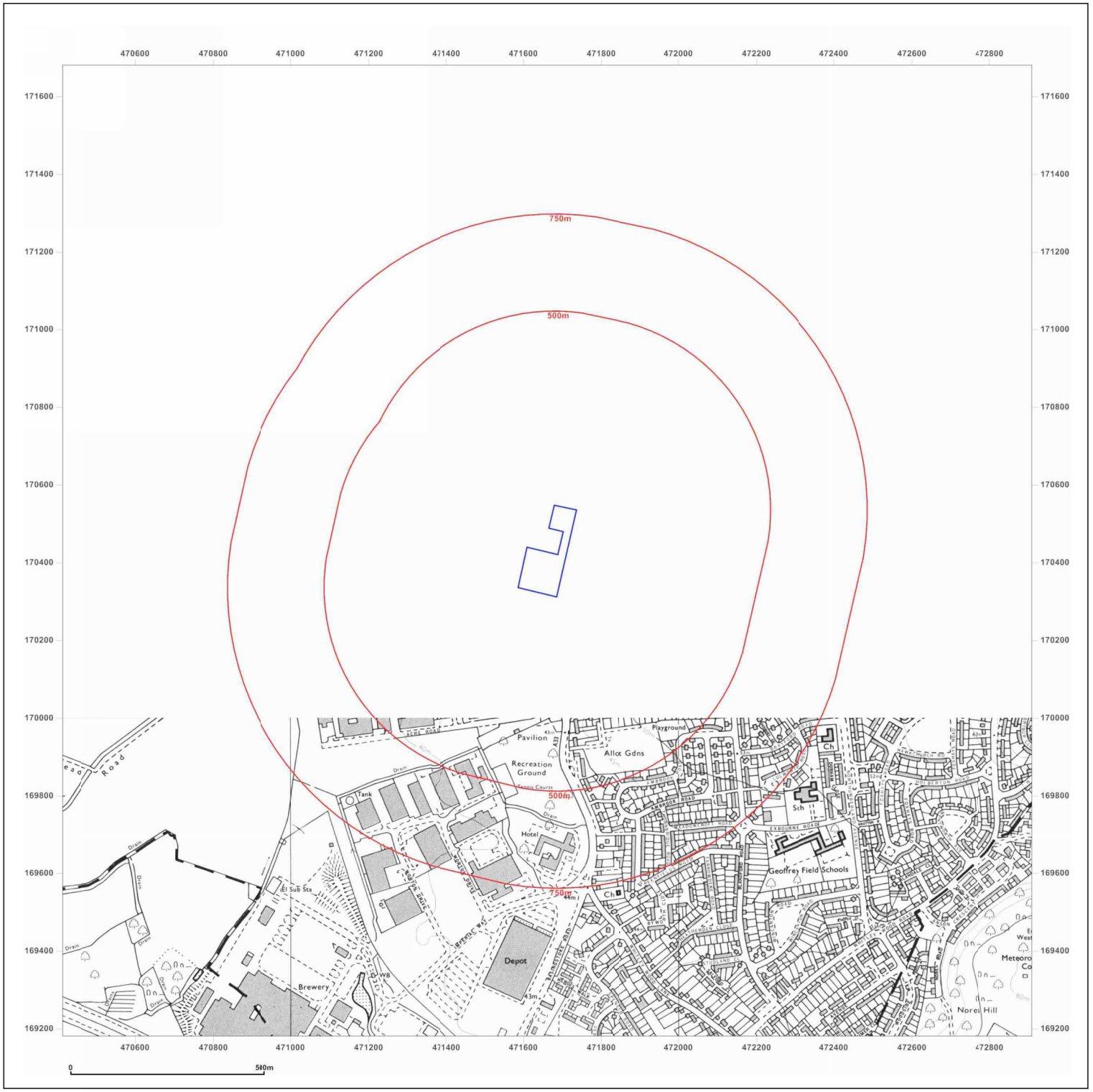
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Site Details:

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BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid
Map date: **1983**
Scale: 1:10,000
Printed at: 1:10,000

N
W E
S

Surveyed 1982
Revised 1983
Edition N/A
Copyright N/A
Levelled N/A

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Site Details:

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READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid

Map date: **1988-1989**

Scale: 1:10,000

Printed at: 1:10,000

N
W E
S

Surveyed 1987
Revised 1989
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1986
Revised 1988
Edition N/A
Copyright N/A
Levelled N/A

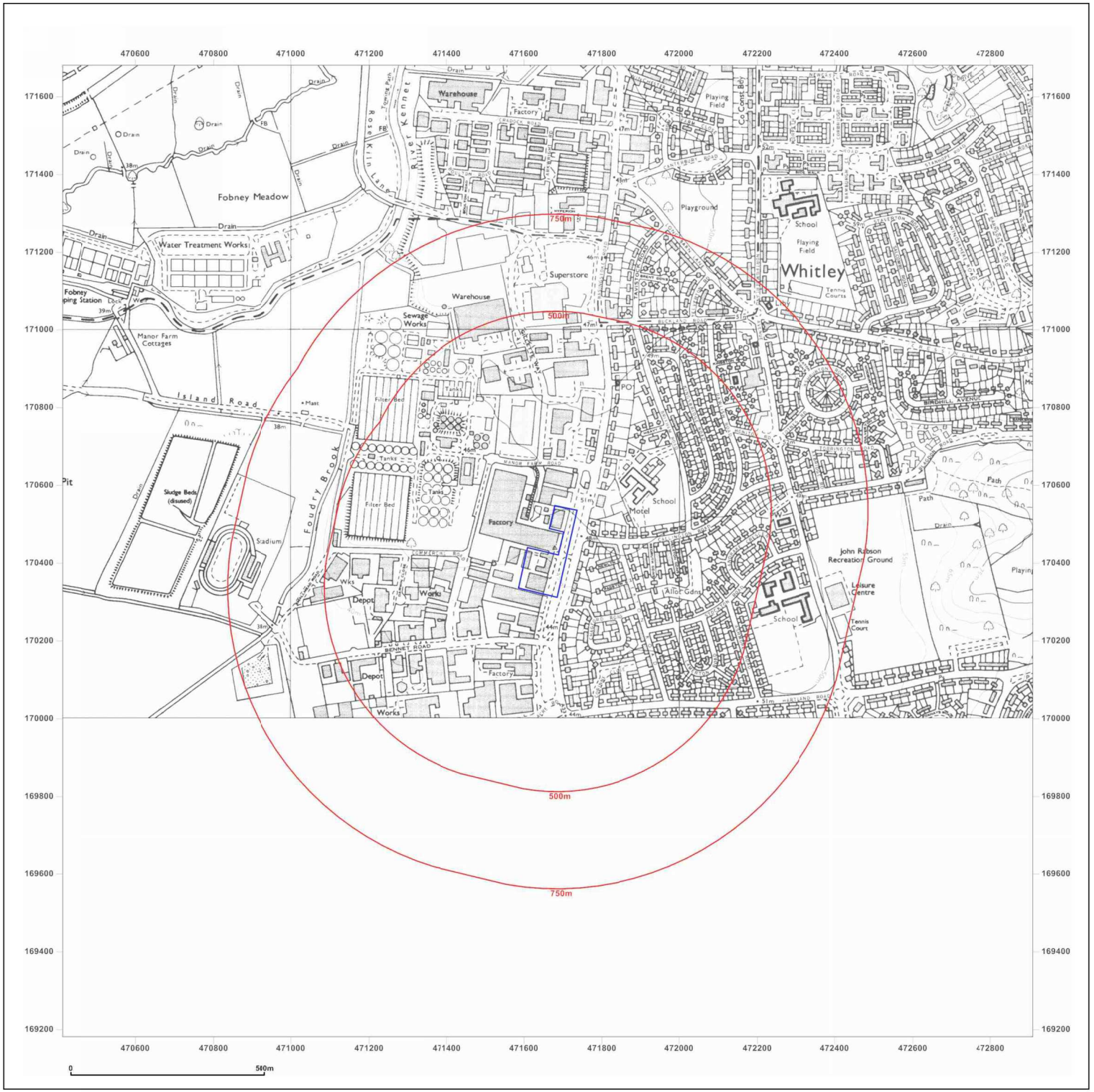
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Site Details:

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BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid
Map date: 1994
Scale: 1:10,000
Printed at: 1:10,000

N
W E
S

Surveyed 1987
Revised 1994
Edition N/A
Copyright N/A
Levelled N/A

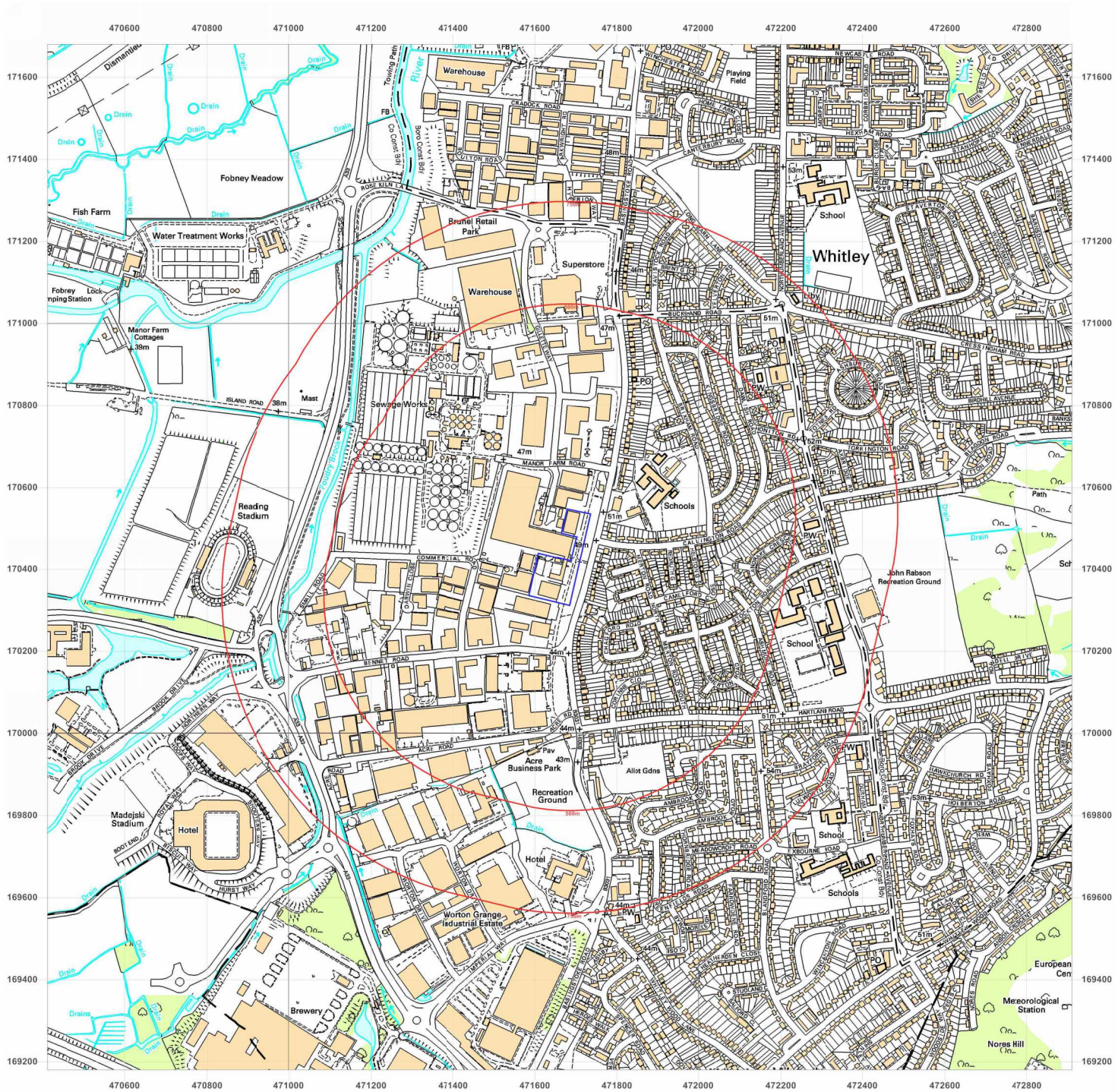
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Site Details:

Procter & Gamble, 452,
BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: 1:10,000 Raster
Map date: 2002
Scale: 1:10,000
Printed at: 1:10,000

N
W E
S

2002

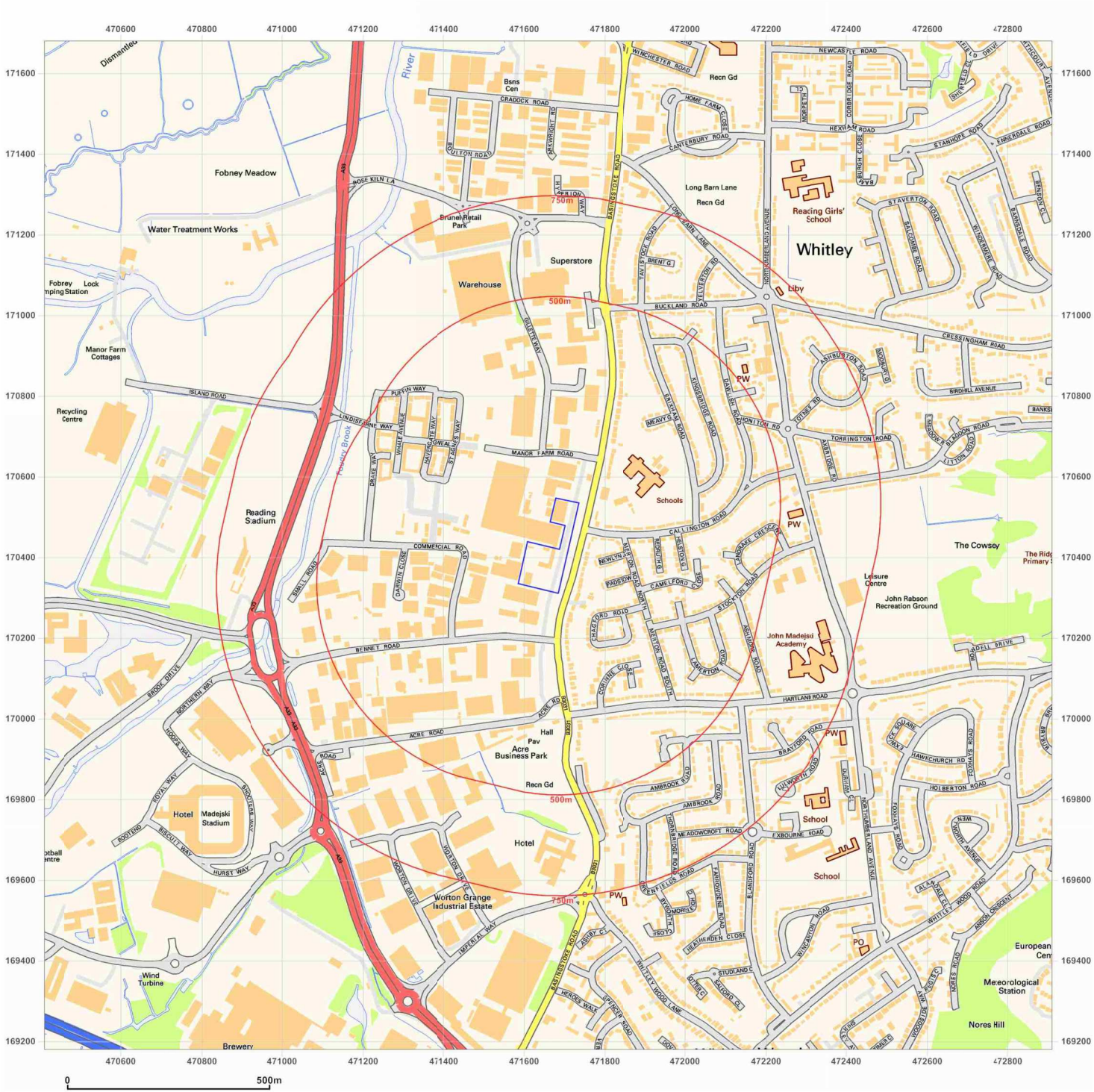
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Site Details:

Procter & Gamble, 452,
BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid
Map date: 2010
Scale: 1:10,000
Printed at: 1:10,000

N
W E
S

2010

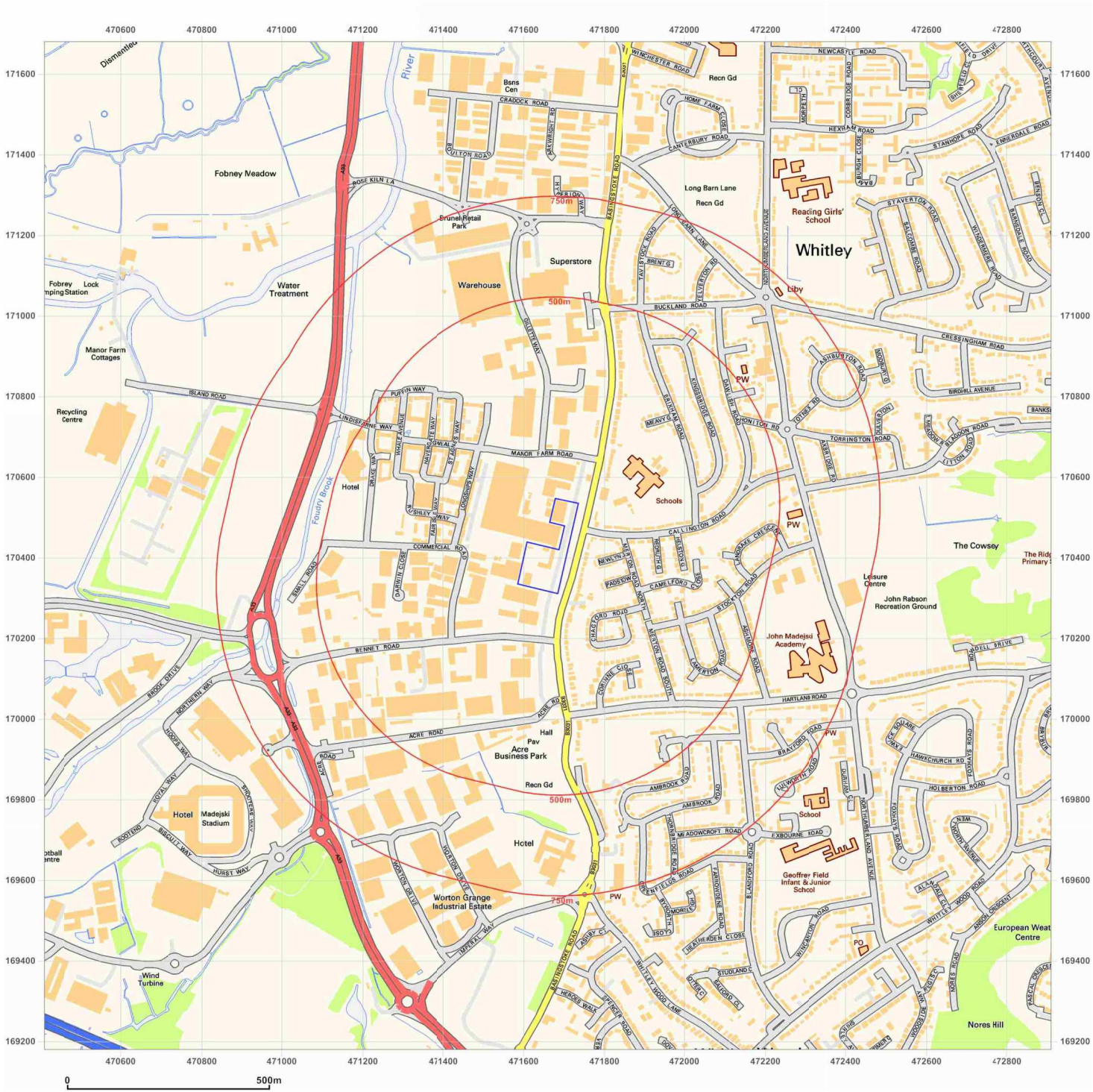
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Site Details:

Procter & Gamble, 452,
BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid
Map date: 2014
Scale: 1:10,000
Printed at: 1:10,000

N
W E
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2014

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Site Details:

Procter & Gamble, 452,
BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: County Series
Map date: **1877**
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S

Surveyed 1877
Revised 1877
Edition N/A
Copyright N/A
Levelled N/A

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Site Details:

Procter & Gamble, 452,
BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: County Series
Map date: **1899**
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S

Surveyed 1899
Revised 1899
Edition N/A
Copyright N/A
Levelled N/A

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Groundsure INSIGHTS

Site Details:

Procter & Gamble, 452,
BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: County Series
Map date: 1911
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S

Surveyed 1911
Revised 1911
Edition N/A
Copyright N/A
Levelled N/A

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Site Details:

Procter & Gamble, 452,
BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: County Series
Map date: 1936
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S

Surveyed 1936
Revised 1936
Edition N/A
Copyright N/A
Levelled N/A

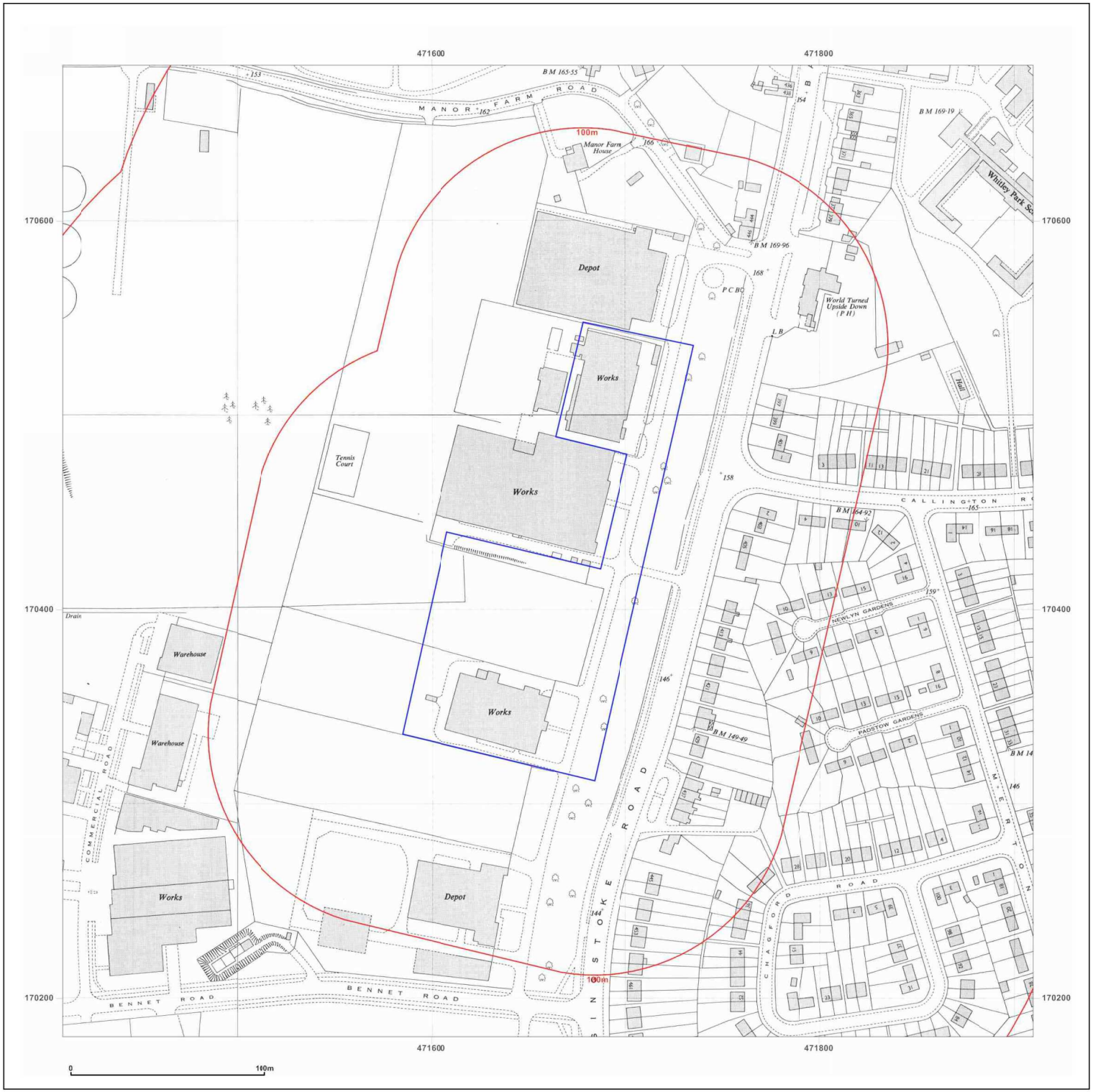
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Groundsure INSIGHTS

Site Details:

Procter & Gamble, 452,
BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid
Map date: **1957-1958**
Scale: 1:1,250
Printed at: 1:2,000

N
W E
S

Surveyed 1957
Revised 1957
Edition N/A
Copyright N/A
Levelled 1951

Surveyed 1957
Revised 1957
Edition N/A
Copyright N/A
Levelled 1951

Surveyed 1958
Revised 1958
Edition N/A
Copyright N/A
Levelled 1951

Surveyed 1957
Revised 1957
Edition N/A
Copyright N/A
Levelled 1951

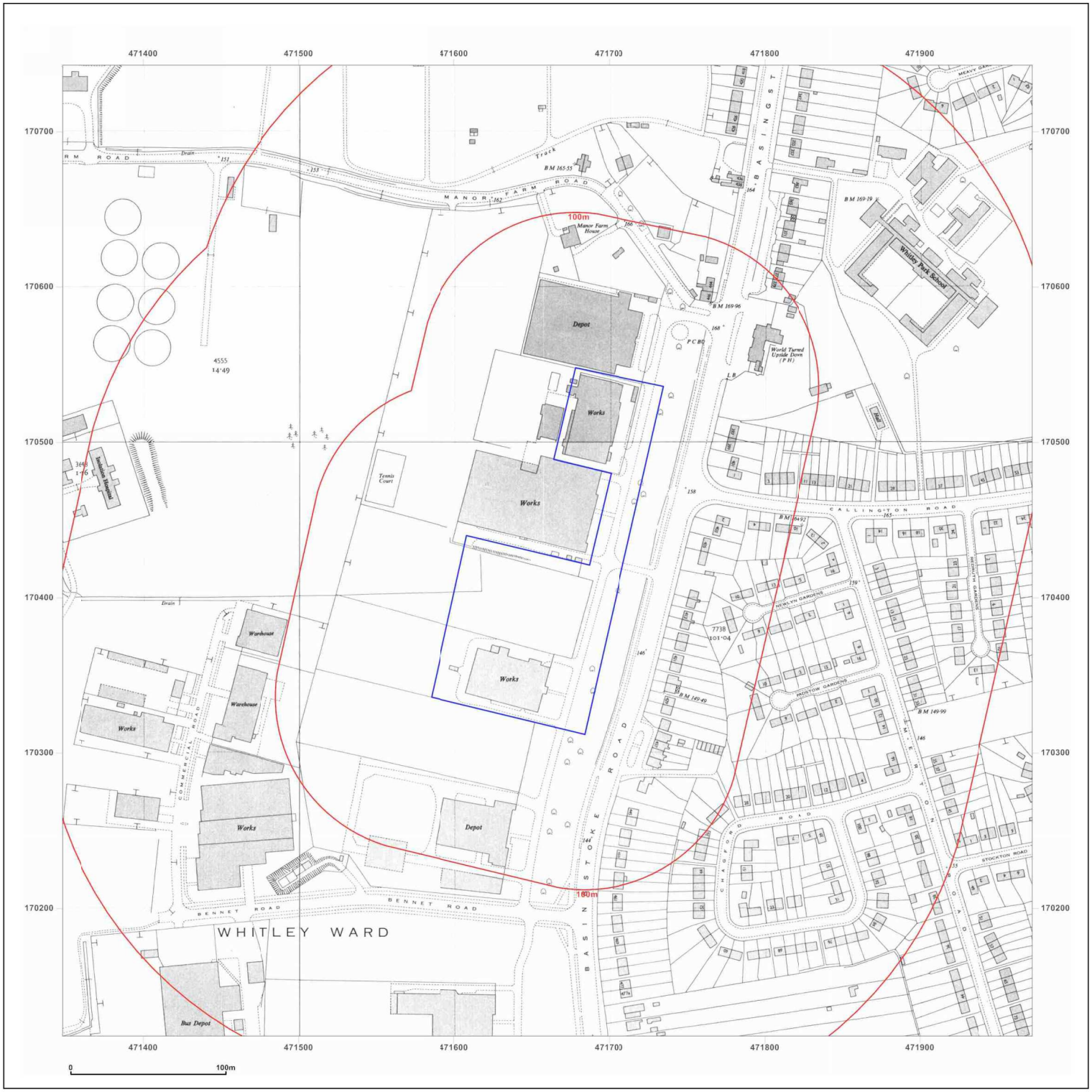
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Site Details:

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BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid
Map date: **1958**
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S

Surveyed 1958
Revised 1958
Edition 1959
Copyright 1959
Levelled 1951

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Groundsure INSIGHTS

Site Details:

Procter & Gamble, 452,
BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid
Map date: 1966
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S

Surveyed 1966
Revised 1966
Edition N/A
Copyright 1969
Levelled 1951

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Groundsure INSIGHTS

Site Details:

Procter & Gamble, 452,
BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid
Map date: **1965-1968**
Scale: 1:1,250
Printed at: 1:2,000

N
W E
S

Surveyed 1957 Revised 1965 Edition N/A Copyright 1965 Levelled 1951	Surveyed 1957 Revised 1965 Edition N/A Copyright 1965 Levelled 1951
Surveyed 1958 Revised 1966 Edition N/A Copyright 1967 Levelled 1951	Surveyed 1957 Revised 1967 Edition N/A Copyright 1968 Levelled 1951

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READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid

Map date: **1974-1977**

Scale: 1:1,250

Printed at: 1:2,000

N
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Surveyed 1957
Revised 1975
Edition N/A
Copyright 1976
Levelled 1973

Surveyed N/A
Revised N/A
Edition N/A
Copyright 1977
Levelled 1973

Surveyed 1958
Revised 1974
Edition N/A
Copyright 1974
Levelled 1973

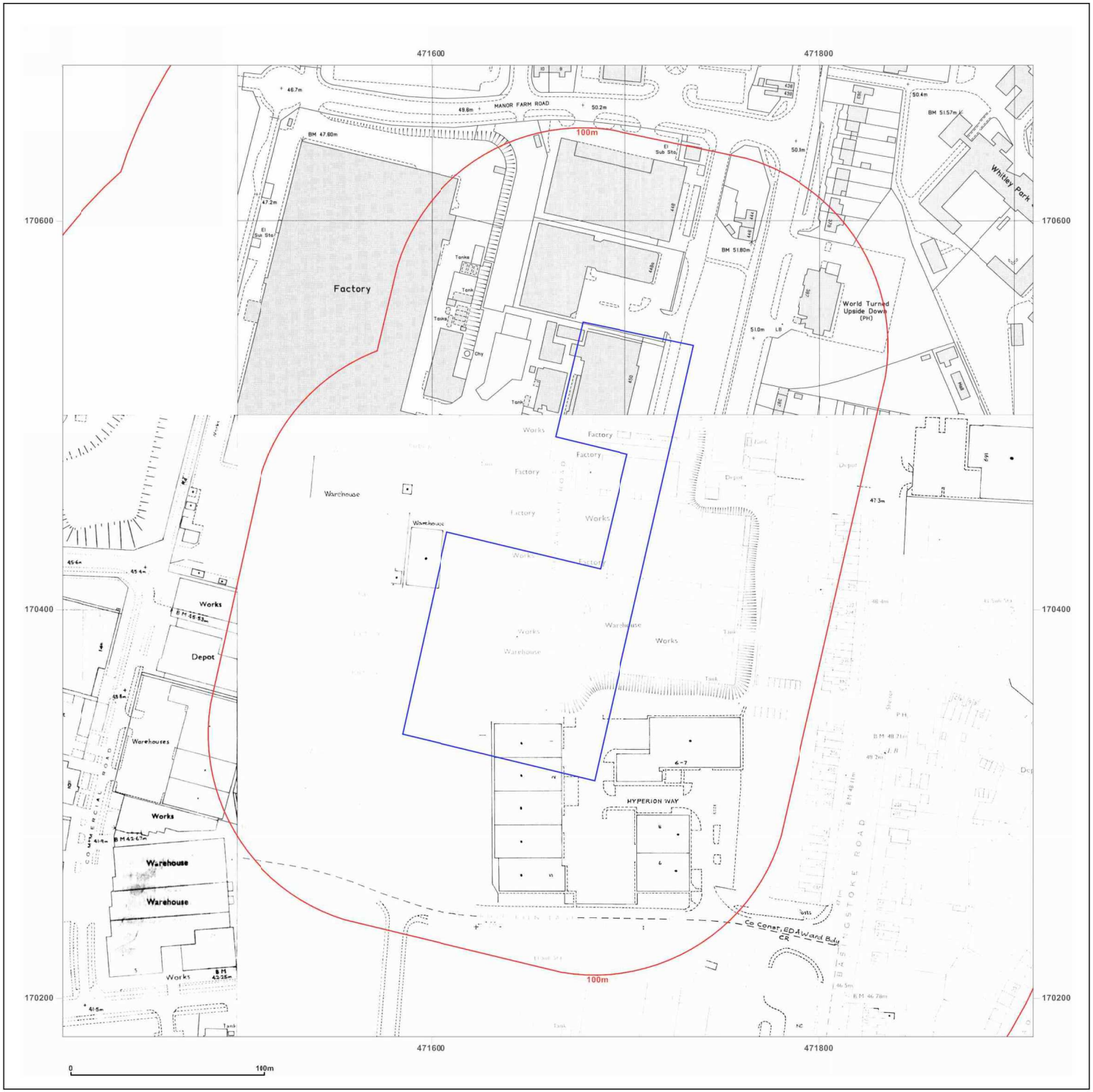
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Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid
Map date: **1986-1988**
Scale: 1:1,250
Printed at: 1:2,000

N
W E
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Surveyed 1957
Revised 1987
Edition N/A
Copyright 1988
Levelled 1973

Surveyed 1973
Revised 1987
Edition N/A
Copyright 1987
Levelled 1973

Surveyed N/A
Revised N/A
Edition N/A
Copyright 1986
Levelled 1972

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Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid
Map date: **1987-1989**
Scale: 1:1,250
Printed at: 1:2,000

N
W E
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Surveyed N/A
Revised N/A
Edition N/A
Copyright 1987
Levelled 1973

Surveyed 1973
Revised 1989
Edition N/A
Copyright 1989
Levelled 1973

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READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid
Map date: 1993
Scale: 1:1,250
Printed at: 1:2,000

N
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Surveyed 1993 Revised 1993 Edition N/A Copyright N/A Levelled N/A	Surveyed 1993 Revised N/A Edition N/A Copyright 1993 Levelled N/A
Surveyed 1993 Revised N/A Edition N/A Copyright 1993 Levelled N/A	Surveyed 1993 Revised N/A Edition N/A Copyright 1993 Levelled N/A

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Groundsure INSIGHTS

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BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid
Map date: **1993-1995**
Scale: 1:1,250
Printed at: 1:2,000

N
W E
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Surveyed 1973
Revised 1993
Edition N/A
Copyright 1988
Levelled N/A

Surveyed 1995
Revised 1995
Edition N/A
Copyright 1995
Levelled N/A

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Site Details:

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BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: County Series
Map date: **1898**
Scale: 1:10,560
Printed at: 1:10,560

N
W E
S

Surveyed 1877
Revised 1898
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1876
Revised 1898
Edition N/A
Copyright N/A
Levelled N/A

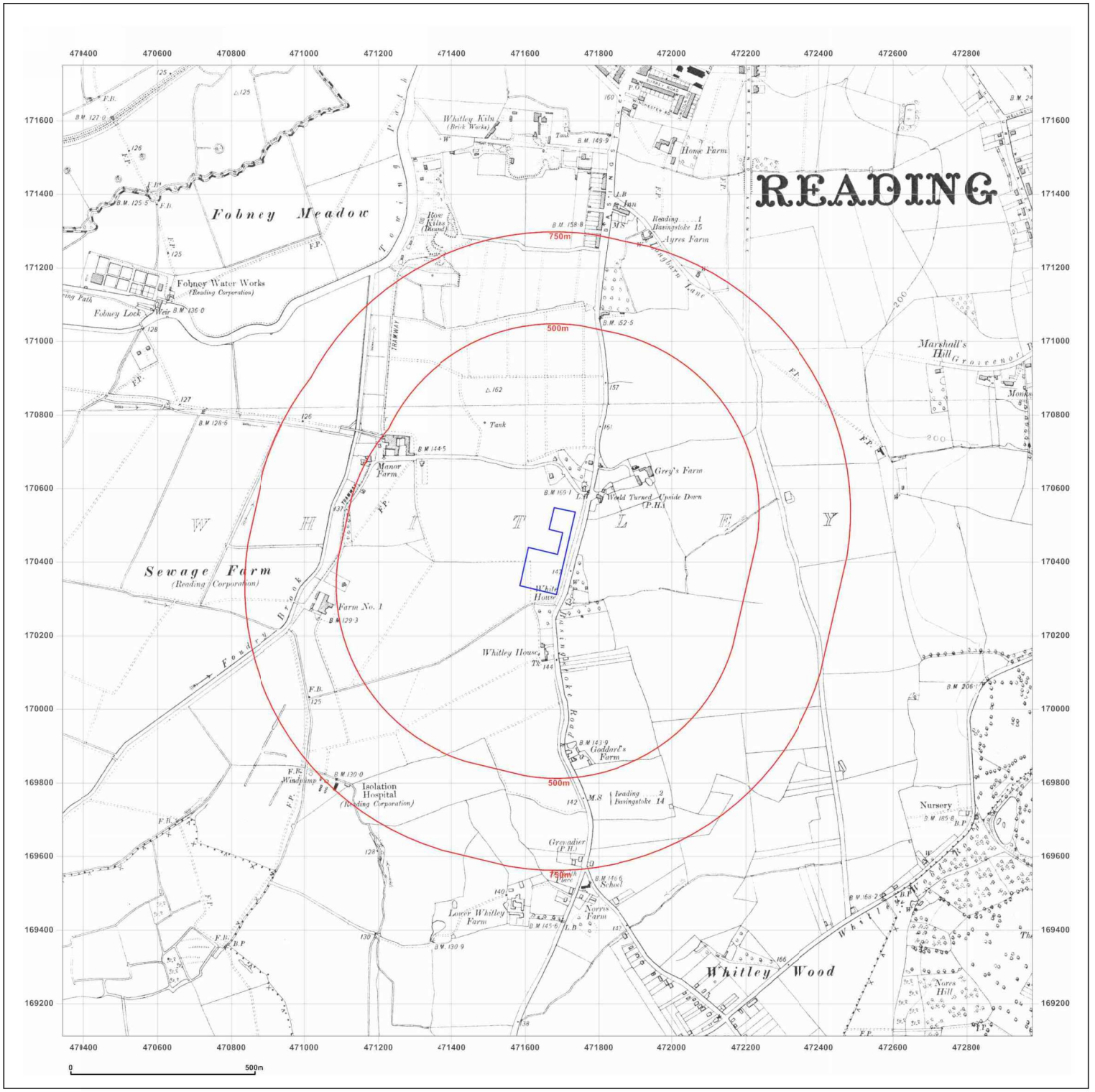
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Site Details:

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READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: County Series

Map date: **1913**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
S

Surveyed 1877
Revised 1910
Edition 1913
Copyright N/A
Levelled N/A

Surveyed 1876
Revised 1913
Edition 1913
Copyright N/A
Levelled N/A

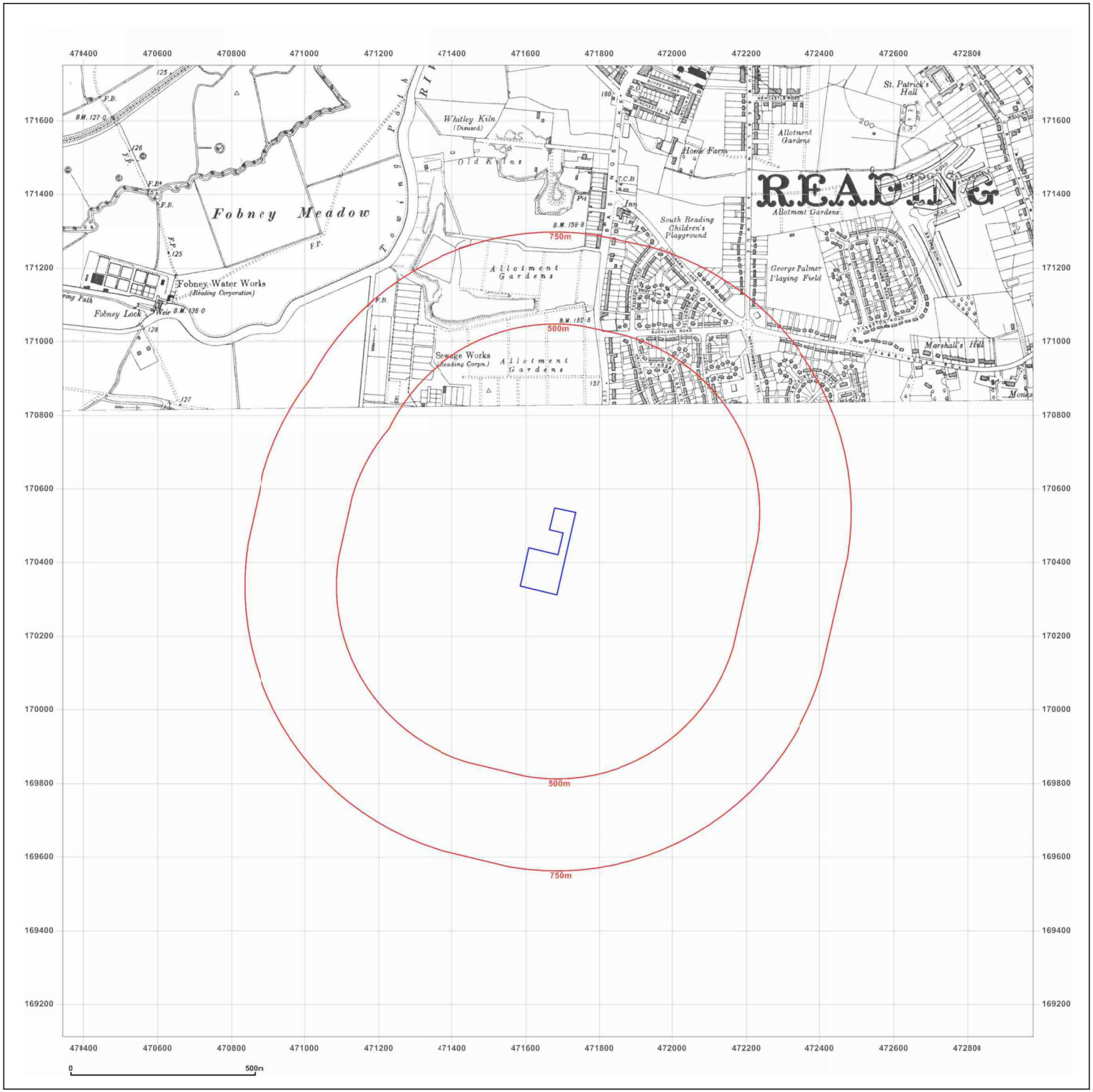
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Site Details:

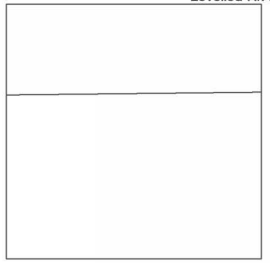
Procter & Gamble, 452,
BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: County Series
Map date: **1938**
Scale: 1:10,560
Printed at: 1:10,560

N
W E
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Surveyed 1877
Revised 1938
Edition 1938
Copyright N/A
Levelled N/A



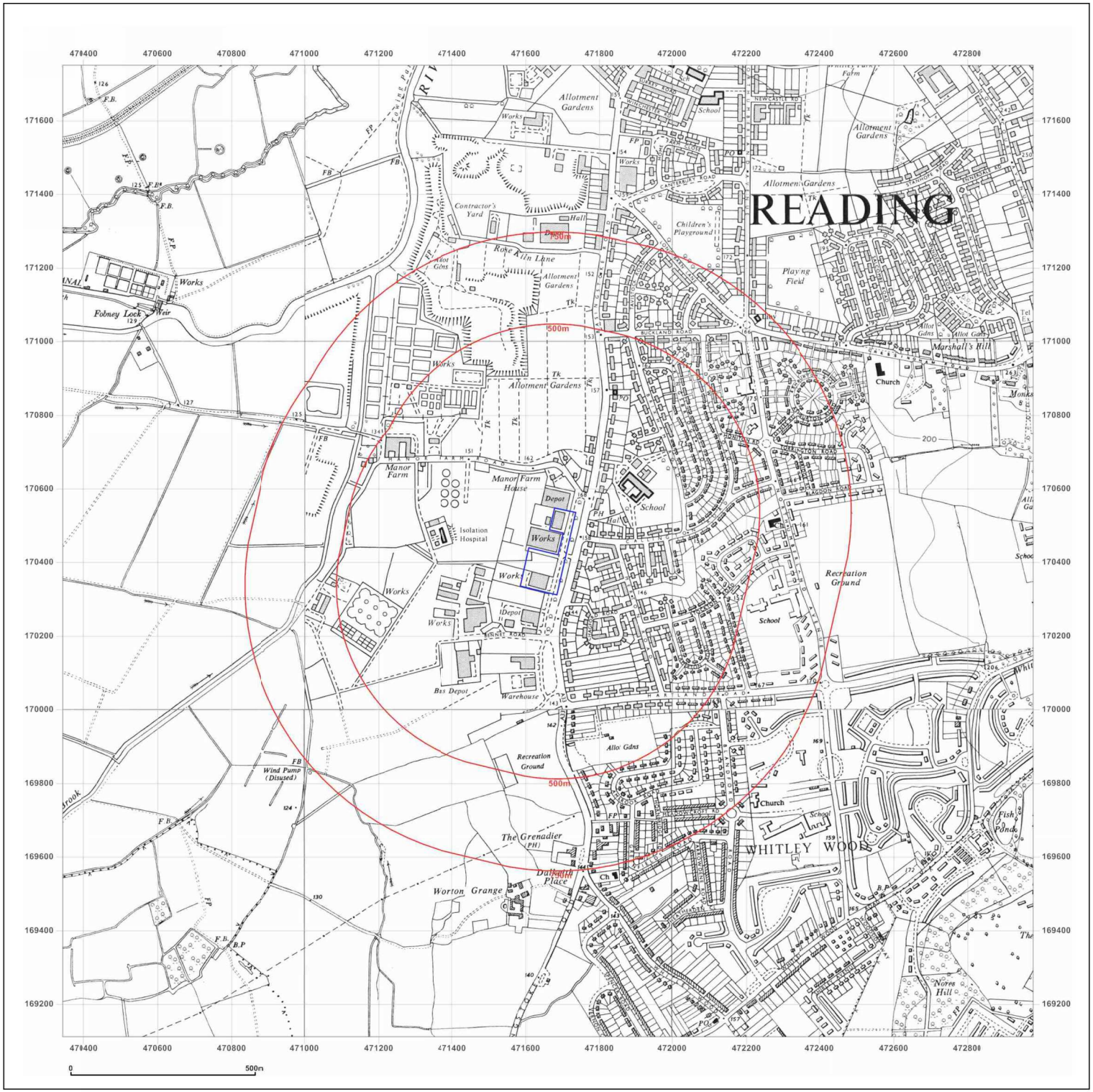
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Site Details:

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READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: Provisional
Map date: **1961-1962**
Scale: 1:10,560
Printed at: 1:10,560

N
W E
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Surveyed 1959
Revised 1961
Edition N/A
Copyright 1962
Levelled N/A

Surveyed N/A
Revised 1961
Edition N/A
Copyright 1961
Levelled N/A

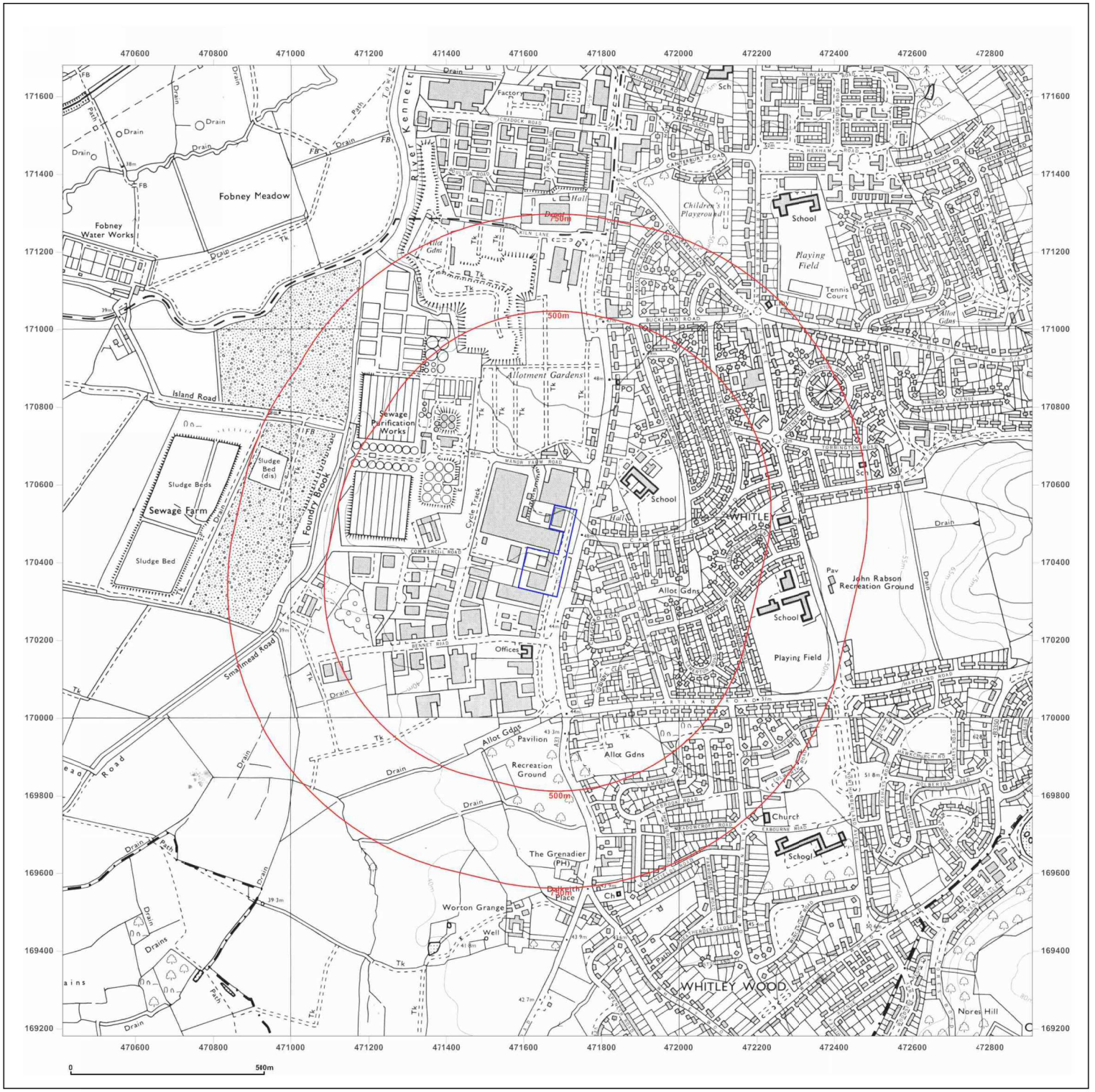
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Site Details:

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READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid

Map date: **1969-1973**

Scale: 1:10,000

Printed at: 1:10,000

N
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Surveyed 1970
Revised 1973
Edition N/A
Copyright 1973
Levelled N/A

Surveyed 1969
Revised 1969
Edition N/A
Copyright N/A
Levelled N/A

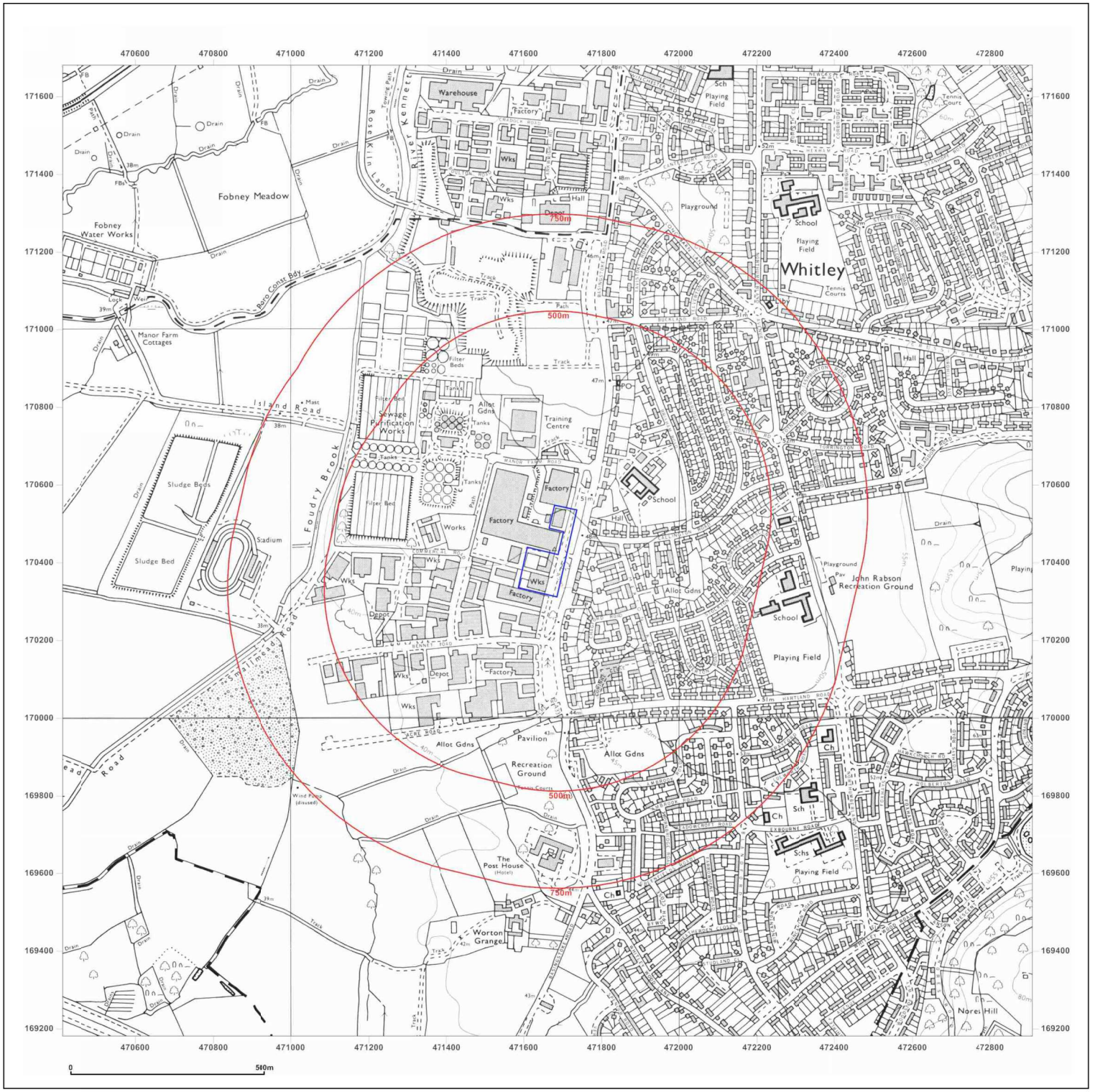
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Site Details:

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BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid

Map date: **1976-1979**

Scale: 1:10,000

Printed at: 1:10,000

N
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Surveyed 1977
Revised 1979
Edition N/A
Copyright 1979
Levelled 1969

Surveyed 1975
Revised 1976
Edition N/A
Copyright 1976
Levelled 1969

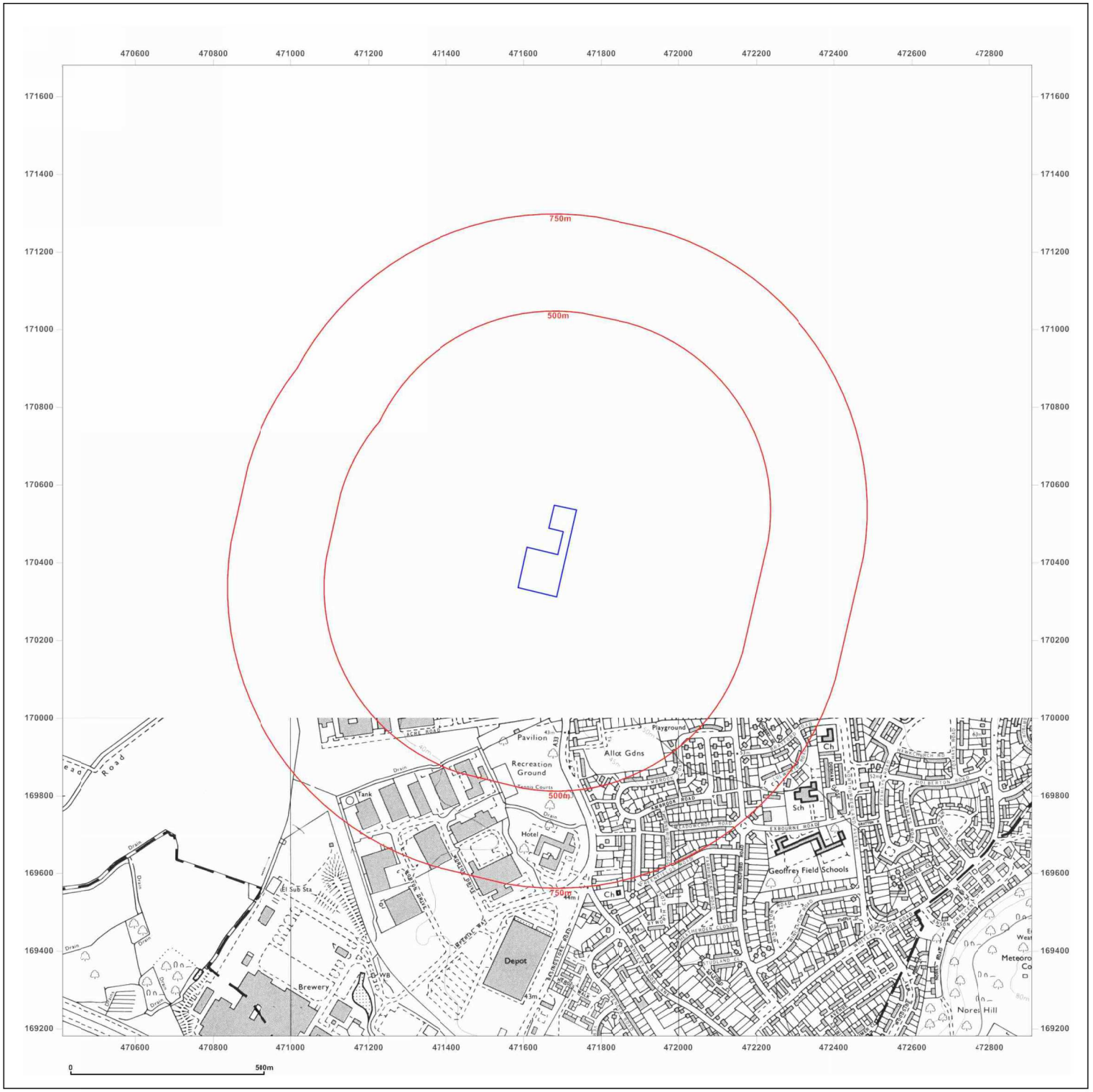
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Site Details:

Procter & Gamble, 452,
BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid
Map date: **1983**
Scale: 1:10,000
Printed at: 1:10,000

N
W E
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Surveyed 1982
Revised 1983
Edition N/A
Copyright N/A
Levelled N/A

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Site Details:

Procter & Gamble, 452,
BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid

Map date: **1988-1989**

Scale: 1:10,000

Printed at: 1:10,000

N
W E
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Surveyed 1987
Revised 1989
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1986
Revised 1988
Edition N/A
Copyright N/A
Levelled N/A

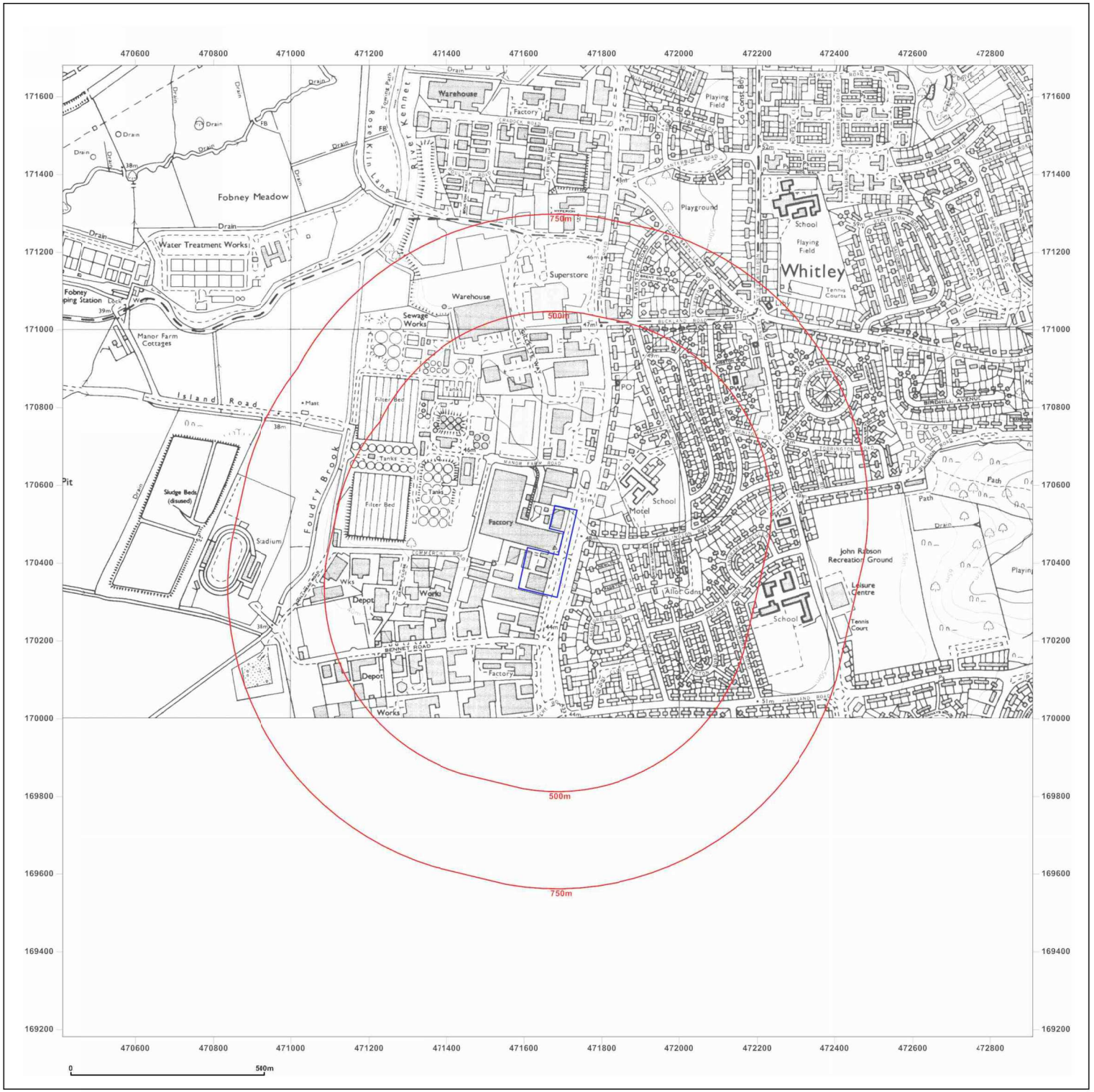
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Site Details:

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BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid
Map date: 1994
Scale: 1:10,000
Printed at: 1:10,000

N
W E
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Surveyed 1987
Revised 1994
Edition N/A
Copyright N/A
Levelled N/A

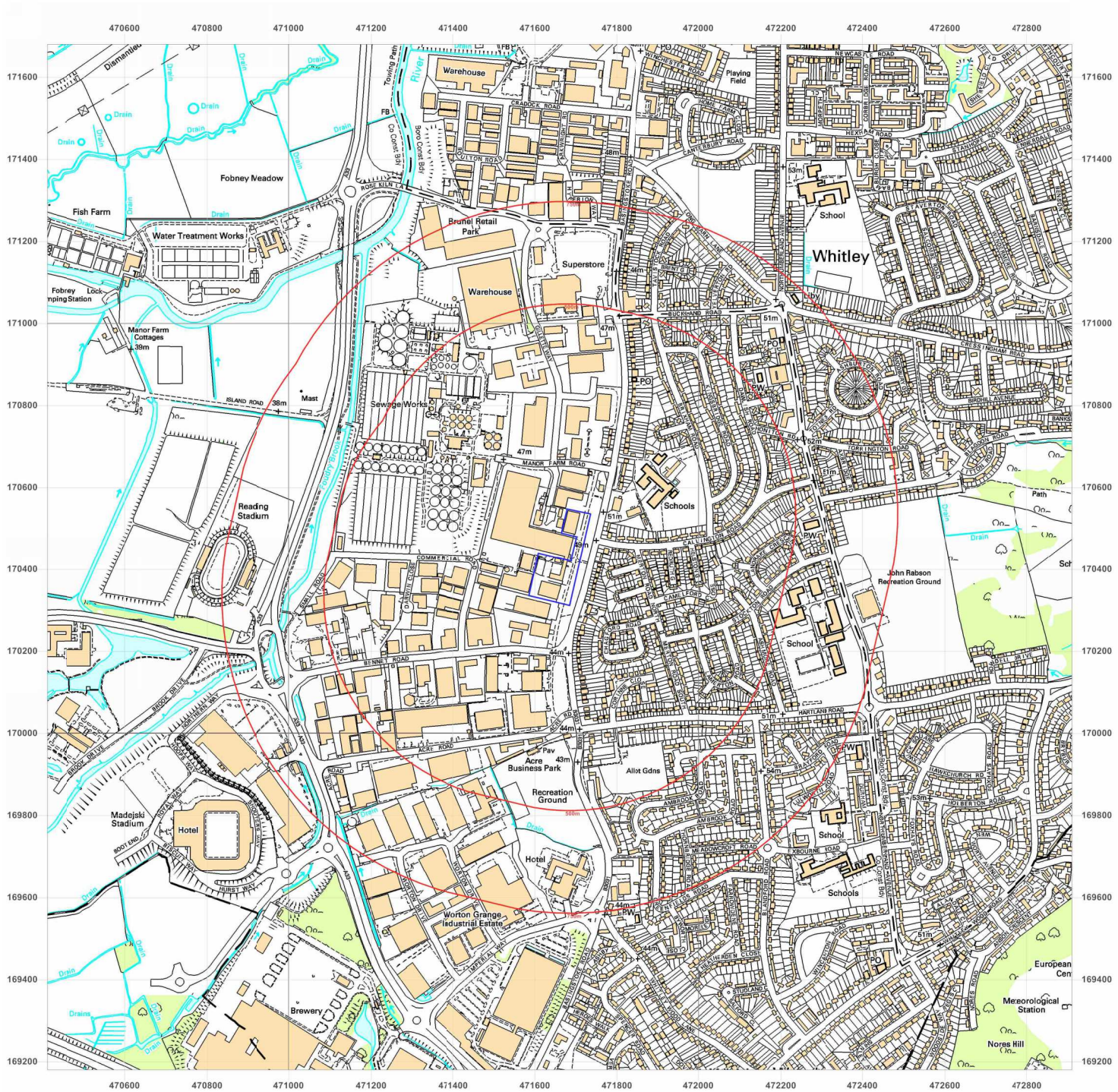
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Site Details:

Procter & Gamble, 452,
BASINGSTOKE ROAD,
READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: 1:10,000 Raster
Map date: 2002
Scale: 1:10,000
Printed at: 1:10,000

N
W E
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2002

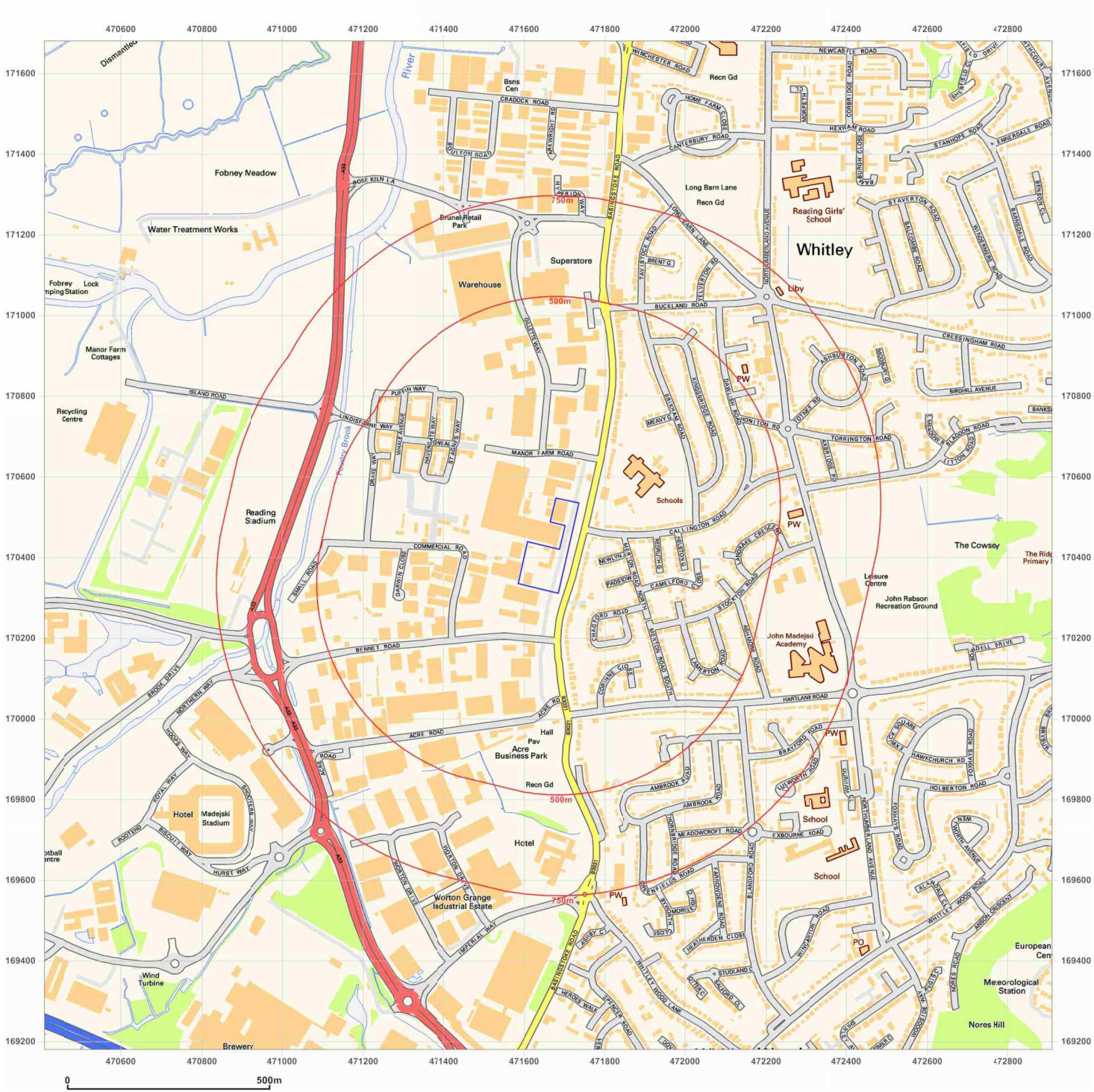
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Groundsure INSIGHTS

Site Details:

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READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid
Map date: 2010
Scale: 1:10,000
Printed at: 1:10,000

N
W E
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2010

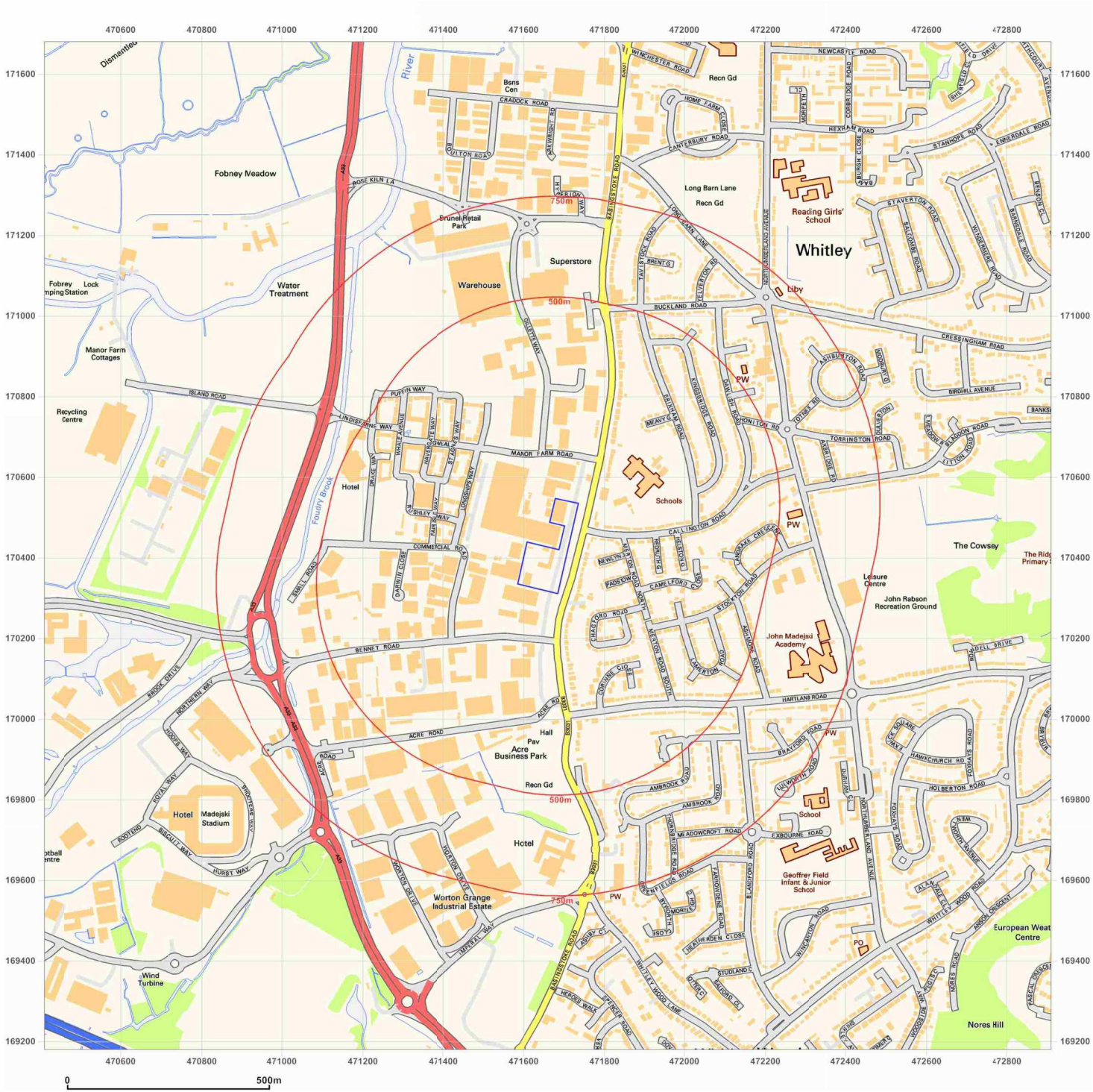
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READING, RG2 0QE

Client Ref: 249765-00
Report Ref: GS-3078903
Grid Ref: 471660, 170430

Map Name: National Grid
Map date: 2014
Scale: 1:10,000
Printed at: 1:10,000

N
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2014

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Appendix B

Local Authority search

Alison Bell
Director of Environment and Neighbourhood Services
Civic Offices, Bridge St, Reading, RG1 2LU

☎ 0118 937 3787

Our Ref:551157

Direct: ☎ 0118 9372314
e_mail: ross.jarvis@reading.gov.uk

15 July 2016

Arup Limited
13 Fitzroy Street
W1T 4BQ

Your contact is: Ross Jarvis - Environmental Protection & Nuisance

Dear Arup

ENVIRONMENTAL INFORMATION REGULATIONS 2004
RE: Environmental Information Request: 452 Basingstoke Road, Reading, RG2 0QE

I write with reference to your recent request for environmental information in relation to the above site. A search of records held at Reading Borough Council has found the following:

1. The site has been identified by Reading Borough Council as being potentially contaminated due to its former use as an engineering works.

2. The site has been identified for future investigation under the Council's Part IIA inspection strategy. In its current industrial/commercial use the site is classified as a low risk. There is no schedule set for the investigation of the site.

3. The site is adjacent to the Kennet Island development. This was recently built on the site of a former sewage works. The site investigation reports carried out for that development can be found under planning application 141735 o nthe council's planning portal:
http://planning.reading.gov.uk/fastweb_PL/welcome.asp

4. There are the following records of landfill sites within 250m of the site. The fill material of this landfill has been categorised as inert. The source of the fill material is not known.

site_name	geology	licence_no	ngr	area	hectares	sourcethm	date_close	gaspot
MANOR FARM READING	Reading/Woolwich Beds	No Licence	SU 713 705	34786.780	3.479	westlandfills.db	Unknown	Low

5. Should you require information on recent pollution incidents please direct your enquiries to the Environment Agency at:

Environment Agency
Isis House,
Wallingford,
Oxfordshire,
OX10 8BD
Tel: 01491 832801

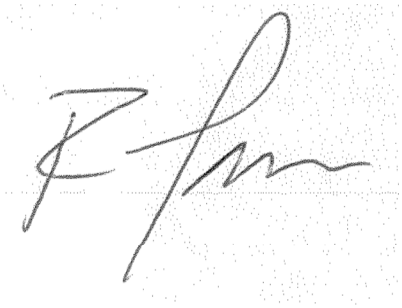
6. The Council have not issued any Environmental Permits to premises within 250m of the site. The Environment Agency hold records of larger part A installations that may be in the vicinity. The Environment Agency can be contacted using the above details.

The information in this letter is given on the understanding that the Council accepts no liability for the use to which it is put and gives no guarantee as to the state of the land in question.

The information given represents the position within the Environmental Health database at the date of this letter and the Council can give no guarantee as to the impact of any future events in relation to the site in question.

If you would like to discuss the contents of this letter further, I can be contacted on 0118 9372314.

Yours sincerely,



Ross Jarvis
Senior Technical Officer
Environmental Protection

Appendix C

Ground investigation report

soils
LIMITED

Ground Investigation Report

at
Gillette UK, 452 Basingstoke Road,
Reading, Berkshire, RG2 0QE

for
Gillette UK, Reading

Reference: 15573/GIR
June 2016

Control Document

Project
Gillette UK, 452 Basingstoke Road, Reading, Berkshire, RG2 0QE

Document Type
Ground Investigation Report

Document Reference
15573

Document Status
Final

Date
June 2016

Prepared by
Raja Vangaveti MEng. (Hons), MSc, DIC.



First check by
Eur Ing R B Higginson BSc, PGDip, CEng, MICE, FGS.



Second check by
N J Lambert BSc (Hons), FGS CSci, CEnv, MIEnvSci.



This is not a valid document for use in the design of the project unless it is titled Final in the document status box.

Current regulations and good practice were used in the preparation of this report. The recommendations given in this report must be reviewed by an appropriately qualified person at the time of preparation of the scheme design to ensure that any recommendations given remain valid in light of changes in regulation and practice, or additional information obtained regarding the site.

AGS Association of Geotechnical & Geoenvironmental Specialists
Quality Systems Certifications Ltd ISO 9001 : 2015 REGISTERED FIRM
Quality Systems Certifications Ltd ISO 18001 : 2007 REGISTERED FIRM
BGA CORPORATE MEMBER 2016 www.britishgeotech.org.uk

Commission

Soils Limited was commissioned by Gillette UK, Reading to undertake a Ground Investigation on land at Gillette UK, 452 Basingstoke Road, Reading, Berkshire, RG2 0QE. The scope of the investigation was outlined in the Soils Limited quotation reference Q17552 dated 27th April 2016.

This document comprises the Ground Investigation Report and incorporates the results, discussion and conclusions to this intrusive works.

There was no request to undertake a Phase I Desk Study at the site prior to, or contamination testing during, this investigation.

Standards

The site works were undertaken in accordance with the following standards:

- BS 5930:2015 and BS EN ISO 22476-2 2005+A1:2011 for WS/DP
- BS EN 1997-1:2004+A1:2013 Eurocode 7. Geotechnical design
- BS EN ISO 14688-1:2002+A1:2013 - Geotechnical investigation and testing - Identification and description
- BS EN ISO 14688-2:2004+A1:2013 - Geotechnical investigation and testing - Principles for a classification

The geotechnical laboratory testing was performed by GEO Site & Testing Services Ltd (GSTL) in accordance with the methods given in BS 1377:1990 Parts 1 to 8 and their UKAS accredited test methods.

For the preparation of this report, the relevant BS code of practice was adopted for the geotechnical laboratory testing technical specifications, in the absence of the relevant Eurocode specifications (ref: ISO TS 17892).

The chemical analyses were undertaken by QTS Environmental Limited in accordance with their UKAS and MCERTS accredited test methods or their documented in-house testing procedures. This investigation did not comprise an environmental audit of the site or its environs.

Trial hole is a generic term used to describe a method of direct investigation. The term trial pit, borehole or window sample borehole implies the specific technique used to produce a trial hole.

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Section 1 Introduction

1.1 Objective of Investigation

Soils Limited was commissioned by Gillette UK, Reading to undertake a Ground Investigation to supply the client and their designers with information regarding ground conditions, to assist in preparing a foundation scheme for development that was appropriate to the settings present on the site.

The investigation was to be undertaken to provide and comment on appropriate foundation options for the proposed commercial development. The investigation was to be made by means of in-situ testing and geotechnical laboratory testing undertaken on soil samples taken from the trial holes.

There was no request to undertake a Phase I Desk Study at the site or contamination testing as part of this investigation.

1.2 Location

The site was located at Gillette UK, 452 Basingstoke Road, Reading, Berkshire RG2 0QE and had an approximate O.S Land Ranger Grid Reference of SU 715 708.

The site location plan is given in Figure 1.

1.3 Site Description

At the time of reporting the site comprised a concrete slab with a warehouse at Gillette UK, 452 Basingstoke Road, Reading, Berkshire, RG2 0QE. For confidentiality purposes, no detailed information regarding the site was disclosed to the drillers.

An Ordnance Survey Map has been included in Figure 2.

1.4 Proposed Development

The proposed development comprised the installation of a water treatment plant and associated equipment. The location for site works comprised of a concrete slab within an existing warehouse housing factory equipment.

The water tank would be resting on the existing concrete slab with on 16 L-shaped legs off 200mm x 200mm x 12mm steel plate foot. The water tank is made of polypropylene and has a diameter is a 2.2m and a height of 2.7m and an anticipated maximum leg load of 4.75kN per leg, which resulted in a ground pressure of 119kN/m^2.

No drawings were provided by the client for the proposed development when this report was being written. Proposed development plants when provided will be attached within this report and sent across as an addendum. Soils Limited must be notified about any

such changes.

1.5 Anticipated Geology

The 1:50,000 BGS map showed the site to be located directly upon the bedrock of the London Clay Formation with no superficial deposits overlying.

1.5.1 London Clay Formation

London Clay comprises a stiff grey fissured clay, weathering to brown near surface. Concretions of argillaceous limestone in nodular form (Claystones) occur throughout the formation. Crystals of gypsum (Selenite) are often found within the weathered part of the London Clay, and precautions against sulphate attack to concrete are sometimes required.

The lowest part of the formation is a sandy beds with black rounded gravel and occasional layers of sandstone and is known as the Harwich Formation.

1.6 Limitations and Disclaimers

This Ground Investigation Report relates to the site located at Gillette UK, 452 Basingstoke Road, Reading, Berkshire, RG2 0QE and was prepared for the sole benefit of Gillette UK, Reading (The “Client”). The report was prepared solely for the brief described in Section 1.1 of this report.

Soils Limited disclaims any responsibility to the Client and others in respect of any matters outside the scope of the above.

This report has been prepared by Soils Limited, with all reasonable skill, care and diligence within the terms of the Contract with the Client, incorporation of our General Conditions of Contact of Business and taking into account the resources devoted to us by agreement with the Client.

The report is personal and confidential to the Client and Soils Limited accept no responsibility of whatever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report wholly at its own risk.

The Client may not assign the benefit of the report or any part to any third party without the written consent of Soils Limited.

The ground is a product of continuing natural and artificial processes. As a result, the ground will exhibit a variety of characteristics that vary from place to place across a site, and also with time. Whilst a ground investigation will mitigate to a greater or lesser degree against the resulting risk from variation, the risks cannot be eliminated.

The investigation, interpretations, and recommendations given in this report were prepared for the sole benefit of the client in accordance with their brief. As such these do

not necessarily address all aspects of ground behaviour at the site.

Current regulations and good practice were used in the preparation of this report. An appropriately qualified person must review the recommendations given in this report at the time of preparation of the scheme design to ensure that any recommendations given remain valid in light of changes in regulation and practice, or additional information obtained regarding the site.

The depth to roots and/or of desiccation may vary from that found during the investigation. The client is responsible for establishing the depth to roots and/or of desiccation on a plot by plot basis prior to the construction of foundations. Supplied site surveys may not include substantial shrubs or bushes and is also unlikely to have data or any trees, bushes or shrubs removed prior to or following the site survey.

Where trees are mentioned in the text this means existing trees, substantial bushes or shrubs, recently removed trees (approximately 20 years to full recovery on cohesive soils) and those planned as part of the site landscaping).

Ownership of land brings with it onerous legal liabilities in respect of harm to the environment. “Contaminated Land” is defined in Section 57 of the Environment Act 1995 as:

“Land which is in such a condition by reason of substances in, on or under the land that significant harm is being caused or that there is a significant possibility of such harm being caused or that pollution of controlled waters is being, or is likely to be caused”.

The investigation, analysis or recommendations in respect of contamination are made solely in respect of the prevention of harm to vulnerable receptors, using where possible best practice at the date of preparation of the report. The investigation and report do not address, define or make recommendations in respect of environmental liabilities. A separate environmental audit and liaison with statutory authorities is required to address these issues.

Ownership of copyright of all printed material including reports, laboratory test results, trial pit and borehole log sheets, including drillers log sheets remains with Soils Limited. License is for the sole use of the client and may not be assigned, transferred or given to a third party.

Section 2 Site Works

2.1 Proposed Project Works

The proposed intrusive investigation was designed to provide information on the ground conditions and to aid the design of foundations for the proposed commercial development. The intended investigation, as outlined within the Soils Limited quotation (Q17552 dated 27th April 2016), was therefore to comprise the following items:

- Concrete coring of the slab;
- Windowless sampler boreholes and dynamic probes (DPSH);
- 8 No. Atterberg Limit Tests;
- 4 No. compressive strength tests on concrete cores taken from the slab;

2.1.1 Actual Project Works

The actual project works were undertaken on 11th May 2016 and comprised:

- 4No. concrete cores (WS/CC1 – WS/CC4);
- 4No. windowless sampler boreholes (WS1 – WS4);
- 4No. dynamic probes (DPSH) (DP1 – DP4);
- Geotechnical laboratory testing;

The four windowless sampler boreholes (WS1, WS2, WS3 and WS4) were backfilled with arising's. The locations for the boreholes were identified by the client and all the boreholes were carried out to a maximum depth of 2m as instructed by the client.

Following completion of site works, soil cores were logged and sub sampled so that samples could be sent to the laboratory for both contamination and geotechnical testing.

2.2 Ground Conditions

On 11th May 2016 four windowless sampler boreholes (WS1 – WS4) were drilled, using an Archway Competitor, to depths ranging between 3.00 and 4.00m below ground level (bgl) at locations selected by Soils Limited using a development plan provided by the client. Four dynamic probes, super heavy, (DP1 – DP4) were driven prior and adjacent to their corresponding windowless sampler borehole to depths of 2.00m bgl. The maximum depths of trial holes have been included in Table 2.1.

All trial holes were scanned with a Cable Avoidance Tool (C.A.T.) and GENNY prior to excavation to ensure the health and safety of the operatives.

Table 2.1 Final Depth of Trial Holes

Trial Hole	Depth (m bgl)	Probe Hole	Depth (m bgl)
WS1 (CC)	2.00	DP1	2.00
WS2 (CC)	2.00	DP2	2.00
WS3 (CC)	2.00	DP3	2.00

Trial Hole	Depth (m bgl)	Probe Hole	Depth (m bgl)
WS4 (CC)	2.00	DP4	2.00

Note:

The soil conditions encountered were recorded and soil sampling commensurate with the purposes of the investigation was carried out. The depths given on the trial hole logs and quoted in this report were measured from ground level.

The soils encountered from immediately below ground surface have been described in the following manner. Where the soil incorporated an organic content such as either decomposing leaf litter or roots, or has been identified as part of the in-situ weathering profile, it has been described as Topsoil both on the logs and within this report. Where man has clearly either placed the soil, or the composition altered, with say greater than an estimated 5% of a non-natural constituent, it has been referred to as Made Ground both on the log and within this report.

For more complete information about the soils encountered within the general area of the site reference should be made to the detailed records given within Appendix A, but for the purposes of discussion, the succession of conditions encountered in the trial holes in descending order can be summarised:

Concrete
Made Ground (MG)
Head Deposits (HD)
London Clay Formation (LCF)

The ground conditions encountered in the trial holes are summarised in Table 2.2.

Table 2.2 Ground Conditions

Strata	Age	Depth Encountered (m bgl)		Typical Thickness (m)	Typical Description
		Top	Bottom		
Concrete	Recent	G.L.	0.20	0.20	Concrete slab
MG[2]	Recent	0.20	0.50 - 0.60	0.30	Light brown slightly clayey sandy fine to coarse sub-angular to angular flint brick concrete and tarmac.
HD	Recent	0.50-0.60	1.80 - 2.00[1]	Not Proven[3]	Brown orange green sandy CLAY. Rare fine sub-angular flint gravels. Occasional black staining present.
LCF	Eocene	0.40-0.60	2.00[1]	Not Proven[3]	Soft greyish brown slightly silty CLAY with occasional lenses of silty fine sand. Sand is fine.

Note: [1] Final depth of trial hole [2] BGS maps showed no artificial deposits but Made Ground was encountered underneath the existing building and was anticipated to have been generated during the construction of the current warehouse onsite. [3] Base of strata not encountered

2.3 Ground Conditions Encountered in Trial Holes

The ground conditions encountered in trial holes have been described below in descending order.

2.3.1 Made Ground

Soils described as Made Ground were encountered in all four trial holes from ground level to depths ranging between 0.20 (WS1 and WS2) and 0.60m bgl (WS3). The Made Ground typically comprised light brown slightly clayey sandy fine to coarse sub-angular to angular flint brick concrete and tarmac. The depths of Made Ground have been included in Table 2.3.

Table 2.3 Final Depth of Made Ground

Trial Hole	Strata	Depth (m bgl)
WS/DP1	MG[2]	0.20
WS/DP2	MG[2]	0.20
WS/DP3	MG[2]	0.60
WS/DP4	MG[2]	0.50

Note: [1] Final depth of trial hole. [2] BGS maps showed no artificial deposits but Made Ground was encountered underneath the existing building and was anticipated to have been generated during the construction of the current warehouse onsite.

2.3.2 Head Deposits

Soils described as Head Deposits were encountered in three (WS1, WS2 and WS3) of the four holes directly below the Made Ground and persisted to 1.80m bgl to full exploratory depths of the boreholes. The Head Deposits typically comprised of brown orange green sandy CLAY with Rare fine sub-angular flint gravels. Occasional black staining present. The depths of Head Deposits have been included in Table 2.4.

Table 2.4 Final Depth of Head Deposits

Trial Hole	Strata	Depth (m bgl)
WS/DP1	HD[1]	2.00
WS/DP2	HD	1.80
WS/DP3	HD[1]	2.00

Note: [1] Final depth of trial hole.

2.3.3 London Clay Formation

Soils described as London Clay Formation were encountered in two (WS2 and WS4) of the four holes directly below the Made Ground and Head Deposits. The London Clay Formation typically comprised soft greyish brown slightly silty CLAY with occasional lenses of silty fine sand. Sand is fine. London Clay Formation was not encountered in all the boreholes but was anticipated to be present under the

Head Deposits across the site.

Table 2.5 Final Depth of London Clay Formation

Trial Hole	Depth (m bgl)
WS/DP2	2.00[I]
WS/DP4	2.00[I]

Note: [I] Final depth of trial hole

2.4 Roots

Roots were encountered in one (WS1) out of the four trial holes at a maximum depth of 2.00m bgl. The depths of root penetration have been included in Table 2.6.

Table 2.6 Depth of Root Penetration

Trial Hole	Depth (m bgl)
WS/DP1	2.00[I]

Note: [I] Final depth of trial hole

Roots may be found to greater depth at other locations on the site particularly close to trees and/or trees that have been removed both within the site and its close environs.

2.5 Groundwater

Groundwater was not encountered within any of the trail holes. Changes in groundwater level occur for a number of reasons including seasonal effects and variations in drainage. The investigation was conducted in May (2016), when groundwater levels should be rising from their annual minimum (lowest) elevation, which typically occurs around September.

Further groundwater monitoring was not conducted and was not within the scope of this report and the clients brief.

Section 3 Discussion of Geotechnical In – Situ and Laboratory Testing

3.1 Dynamic Probe Tests

Dynamic probing (DPSH) was undertaken at four locations (DP1 to DP4) adjacent and prior to the drilling of their respective windowless sampler boreholes to 2.00m bgl.

Dynamic probing involves the driving of a metal cone into the ground via a series of steel rods. These rods are driven from the surface by a hammer system that lifts and drops a 63.5kg hammer onto the top of the rods through a set height, thus ensuring a consistent energy input. The number of hammer blows that are required to drive the cone down by each 100mm increment are recorded. These blow counts then provide a comparative assessment from which correlations have been published, based on dynamic energy, which permit engineering parameters to be generated.

The dynamic probe results were converted to equivalent SPT "N" values based on dynamic energy using in-house computer software (Geostru).

The inferred undrained strength of the cohesive soils was based on the equivalent SPT "N" blow counts, derived from the relationship suggested by Stroud (1974). (Ref: Stroud, M. A. 1974, "The Standard Penetration Test – its application and interpretation", Proc. ICE Conf. on Penetration Testing in the UK, Birmingham. Thomas Telford, London.).

Table 3.1 SPT "N" Blow Count Cohesive Classification

Classification	Undrained Cohesive Strength C_u (kPa)
Extremely low	<10
Very low	10 – 20
Low	20 – 40
Medium	40 – 75
High	75 – 150
Very high	150 – 300
Extremely high	> 300

(Ref: EN ISO 14688-2:2004 Clause 5.3.)

The relative density of the granular soils was classified based on the relationship given in Table 3.2.

Table 3.2 SPT "N" Blow Count Granular Classification

Classification	SPT "N" blow count (blows/300mm)
Very loose	0 to 4
Loose	4 to 10
Medium dense	10 to 30
Dense	30 to 50
Very dense	Greater than 50

(Ref: The Standard Penetration Test (SPT): Methods and Use, CIRIA Report 143, 1995)

Table 3.3 provides an interpretation of the equivalent SPT N blow counts for the soils encountered in the windowless sampler boreholes and those inferred from the dynamic probe counts.

Table 3.3 Interpretation of Dynamic Probe Blow Counts (DPSH)

DP	Strata/Depth (m bgl)/Description	Equivalent SPT N Blow Counts	Inferred Cohesive Strength / Granular Strength Classification
DP1	HD/0.20 – 2.00[1]/Sandy Gravelly CLAY	6 – 9	Low to Medium Strength (C_u=30–45kPa)
DP2	HD/0.20 – 1.80[1]/Clayey Gravelly SAND	11– 16	Medium Dense Granular Classification
DP2	LCF/1.80 – 2.00[1]/ Greyish brown silty CLAY	6	Low Cohesive Strength (C_u=30kPa)
DP3	HD/0.60 – 2.00[1] /Sandy Gravelly CLAY	4 - 7	Low Cohesive Strength (C_u=20–35kPa)
DP4	LCF / 0.50 – 2.00[1]/Sandy Gravelly CLAY	4 - 6	Low Cohesive Strength (C_u=20–30kPa)

Note: [1] Ground conditions inferred past the base of windowless sampler boreholes.

The results from dynamic probing inferred that the cohesive soils of the Head Deposits were of a **low to medium cohesive strength**. Undrained cohesive strengths of between **20kPa and 45kPa** were inferred from the correlations explained in Table 3.1.

The results from dynamic probing inferred that the granular soils of the Head Deposits were of a **medium dense granular strength classification** inferred from the correlations explained in Table 3.2.

The results from dynamic probing inferred that the cohesive soils of the London Clay Formation were of a **low cohesive strength**. Undrained cohesions of **30kPa** were inferred from the correlations explained in Table 3.1. The test results have be presented in Appendix A.

3.2 Atterberg Limit Tests

Atterberg limits tests were performed on seven samples obtained from the London Clay Formation, a summary of the results has been presented in Table 3.4.

Table 3.4 Atterberg Limit Test Interpretation

Stratum	Moisture Content (%)	Plasticity Index (%)	Passing 425μm Sieve (%)	Modified Plasticity Index (%)	Soil Classification	Volume Change Potential BRE
WS1 (0.50)	18	50	78	39.0	CV	Medium
WS1 (0.90)	16	36	77	27.7	CH	Medium
WS2 (1.30)	15	27	73	19.7	CI	Low
WS2 (1.90)	33	39	92	35.9	CH	Medium
WS3 (0.70)	18	39	63	24.6	CH	Medium
WS4 (0.60)	30	37	100	37.0	CH	Medium
WS4 (1.80)	32	39	100	39.0	CH	Medium

Stratum	Moisture Content (%)	Plasticity Index (%)	Passing 425μm Sieve (%)	Modified Plasticity Index (%)	Soil Classification	Volume Change Potential BRE

Note: BRE Volume Change Potential refers to BRE Digest 240 (based on Atterberg results) Soils Classification based on British Soil Classification System. The most common use of the term clay is to describe a soil that contains enough clay-sized material or clay minerals to exhibit cohesive properties. The fraction of clay-sized material required varies, but can be as low as 15%. Unless stated otherwise, this is the sense used in Digest 240. The term can be used to denote the clay minerals. These are specific, naturally occurring chemical compounds, predominately silicates. The term is often used as a particle size descriptor. Soil particles that have a nominal diameter of less than 2 μm are normally considered to be of clay size, but they are not necessarily clay minerals. Some clay minerals are larger than 2 μm and some particles, 'rock flour' for example, can be finer than 2 μm but are not clay minerals.

(The Atterberg Limit Tests were undertaken in accordance with BS 1377:Part 2:1990 Clauses 3.2, 4.3 and 5)

The results from Atterberg Limits Tests confirmed that the soils of the Head Deposits had **low to medium volume change potential** in accordance with both BRE Digest 240.

The results from Atterberg Limits Tests confirmed that the soils of the London Clay Formation had **medium volume change potential** in accordance with both BRE Digest 240.

3.3 Unconfined Compressive Strength Tests

Compressive Strength Tests were performed on four cored samples from each of the window sample locations. A summary of the unconfined compressive strength tests in concrete have been summarised in Table 3.5 and the test results have been presented in Appendix A.

Table 3.5 Unconfined Compressive Strength Tests in Concrete

Stratum	Diameter (mm)	Length (mm)	Length/ Diameter Ratio	Compressive Strength (N/mm^2)
WS1 (CC1)	142.8	104.3	0.73	26.1
WS1 (CC2)	142.7	112.9	0.79	24.8
WS2 (CC3)	142.9	122.0	0.85	23.8
WS2 (CC4)	142.5	142.4	1.00	33.3

Note: Compressive strength calculated as per BS EN 12390-3:2009

Section 4 Foundation Design

4.1 General

An engineering appraisal of the soil types encountered during the site investigation and likely to be encountered during the redevelopment of this site is presented. Soil descriptions are based on analysis of disturbed samples taken from the trial holes.

4.1.1 Made Ground and Topsoil

The terms *Fill* and *Made Ground* are used to describe material, which has been placed by man either for a particular purpose e.g. to form an embankment, or to dispose of unwanted material. For the former use, the Fill and/or Made Ground may well have been selected for the purpose and placed and compacted in a controlled manner. With the latter, great variations in material type, thickness and degree of compaction invariably occur and there can be deleterious or harmful matter, as well as potentially methanogenic organic material.

The BSI Code of Practice for Foundations, BS 8004:1986, Clause 2.2.2.3.5 Made Ground and Fill, includes the caveat that *'all Topsoil should be treated as suspect, because of the likelihood of extreme variability'*.

Soils described as Made Ground were encountered in all four trial holes from ground level to depths ranging between 0.20 (WS1 and WS2) and 0.60m bgl (WS3). The Made Ground typically comprised light brown slightly clayey sandy fine to coarse sub-angular to angular flint brick concrete and tarmac. The depths of Made Ground have been included in Table 2.3.

A result of the inherent variability, particularly of uncontrolled Fill and/or Made Ground is that it is usually unpredictable in terms of bearing capacity and settlement characteristics. Foundations should, therefore, be taken through any Made Ground and either into, or onto a suitable underlying natural stratum of adequate bearing characteristics.

4.1.2 Head Deposits

Soils described as Head Depostis were encountered in three (WS1, WS2 and WS3) of the four holes directly below the Made Ground and persisted to 1.80m bgl to full exploratory depths of the boreholes. The Head Deposits typically comprised of brown orange green sandy CLAY with Rare fine sub-angular flint gravels. Occasional black staining present. The depths of Head Deposits have been included in Table 2.4.

The results from dynamic probing inferred that the cohesive soils of the Head Deposits were of a **low to medium cohesive strength**. Undrained cohesive strengths of between **20kPa and 45kPa** were inferred from the correlations explained in Table 3.1.

The results from dynamic probing inferred that the granular soils of the Head Deposits were of a **medium dense granular strength classification** inferred from the correlations explained in Table 3.2.

The results from Atterberg Limits Tests confirmed that the soils of the Head Deposits had **low to medium volume change potential** in accordance with both BRE Digest 240.

4.1.3 London Clay Formation

Soils described as London Clay Formation were encountered in two (WS2 and WS4) of the four holes directly below the Made Ground and Head Deposits. The London Clay Formation typically comprised soft greyish brown slightly silty CLAY with occasional lenses of silty fine sand. Sand is fine. London Clay Formation was not encountered in all the boreholes but was anticipated to be present under the Head Deposits across the site

The results from dynamic probing inferred that the cohesive soils of the London Clay Formation were of a **low cohesive strength**. Undrained cohesions of **30kPa** were inferred from the correlations explained in Table 3.1. The test results have be presented in Appendix A.

The results from dynamic probing inferred that the granular soils of the London Clay Formation were of a **medium dense granular strength classification** inferred from the correlations explained in Table 3.2.

The results from Atterberg Limits Tests confirmed that the soils of the London Clay Formation had **medium volume change potential** in accordance with both BRE Digest 240.

The soils of the London Clay Formation are typically heavily overconsolidated and generally have moderate bearing capacity and moderate to low settlement characteristics and could be considered as a bearing stratum for the proposed development underneath the concrete slab as discussed in detail in Section 4.2.

4.1.4 Roots

Roots were encountered in one out of the four trial holes to a maximum depth of 2.00m bgl. Roots may be found to greater depth at other locations on the site particularly close to trees and/or trees that have been removed both within the site and its close environs.

4.1.5 Groundwater

Groundwater was not encountered within any of the trail holes. Changes in groundwater level occur for a number of reasons including seasonal effects and variations in drainage. The investigation was conducted in May (2016), when groundwater levels should be rising from their annual minimum (lowest) elevation, which typically occurs around September.

4.1.6 Guidance on Shrinkable Soils

The Building Research Establishment (BRE) Digests 240, 241 and 242 provide guidance on 'best practice' for the design and construction of foundations on shrinkable soils.

The results from Atterberg Limits Tests confirmed that the soils of the London Clay Formation had **low to medium volume change potential** in accordance with both BRE Digest 240.

As the proposed development is to be constructed on the existing concrete slab no foundation precautions can be undertaken.

4.2 Foundation Scheme

The proposed development comprised the installation of a water treatment plant and associated equipment. The location for site works comprised of a concrete slab within an existing warehouse that comprised of factory equipment.

The water tank would be resting on the existing concrete slab with on 16 L-shaped legs off 200mm x 200mm x 12mm steel plate foot. The water tank is made of polypropanene and has a diameter is a 2.2m and a height of 2.7m and an anticipated maximum leg load of 4.75kN per leg, which resulted in a ground pressure of 119kN/m^2.

No drawings were provided by the client for the proposed development when this report was being written. Proposed development plants when provided will be attached within this report and sent across as an addendum. Soils Limited must be notified about any such changes.

Ground, live roots and disturbed or desiccated cohesive soils onto the concrete resting on top London Clay Formation, was considered a suitable bearing stratum for the proposed development.

4.2.1 'Additional Load' on Existing Concrete Slab

The existing structure has been there for a considerable period of time and any excess pore water pressures from that initial development would have dissipated by now. Therefore, any increase in pressure on the ground via the existing foundations may be regarded as a new load.

It should be noted that roots were recorded to the base of WS1 at 2.00m bgl. It is assumed that these originate from vegetation that has been present on site for a considerable amount of time and will not impact the soils of the Head Deposits and the London Clay Formation in terms of shrinking and swelling risk, given the high volume change potential identified. It is also assumed the existing building is structurally sound. A residual risk remains on site should the existing vegetation be cleared from around the building.

Based on the anticipated pressure of 4.75kN per leg which resulted in a ground pressure of 119kN/m^2 resting on 16 L-shaped legs off 200mm x 200mm x 12mm steel plate foot as provided by the client. A Pad foundation stress analysis was carried out on top of the concrete layer using commercial software. Table 4.1 shows the calculated anticipated settlement characteristics for the loads.

Table 4.1 Anticipated settlement for proposed bearing capacity

Depth (m bgl)	Size (m)	Bearing Capacity (kPa)	Anticipated Settlement (mm)
G.L	0.2 x 0.2	119	15

Note:

The allowable bearing values given were calculated based on the dynamic probe blow counts analysed using foundation design software (Geostru). For the bearing value given above, settlements should not exceed the presented values. The concrete slab would be suitable to withstand the stresses of 119kPa. However, calculations against punch through failure were not calculated and will be required.

The bearing values given incorporated a factor of safety of at least three against general shear failure. The anticipated settlement includes both elastic settlement and long-term drained settlement (in the case of cohesive soils).

Differential settlement was anticipated from the concentrated loads directly underneath the L-Shaped water treatment plant, which was anticipated to be up to 8mm.

4.3 Imported Material

Any soil, which is to be imported onto the site, must undergo chemical analysis to permit classification prior to its importation and placement in order to ascertain its status with specific regard to contamination, i.e. to prove that it is suitable for the purpose for which it is intended.

4.4 Discovery Strategy

There may be areas of contamination not identified during the course of the investigation. Such occurrences may also be discovered during the demolition and construction phases for the redevelopment of the site.

Care should be taken during excavation works especially to investigate any soils, which appear by eye (e.g. such as fibrous materials, large amounts of ash and unusual discolouration), odour (e.g. fuel, oil and chemical type odours or unusual odours such as

sweet odours or fishy odours) or wellbeing (e.g. light headedness and/or nausea, burning of nasal passages and blistering or reddening of skin due to contact with soil) to be contaminated or of unusual and/or different character to standard soils or those analysed.

In the event of any discovery of potentially contaminated soils or materials, this discovery should be quarantined and reported to the most senior member of site staff or the designated responsible person at the site for action. The location, type and quantity must be recorded and the Local Authority, and a competent and appropriate third party Engineer/Environmental consultant notified immediately. An approval from the Local authority must be sought prior to implementing any proposed mitigation action.

The discovery strategy must remain on site at all times and must demonstrate a clear allocation of responsibility for reporting and dealing with contamination. A copy of the strategy must be placed on the health and safety notice board and /or displayed in a prominent area where all site staff are able to take note of and consult the document at any time. Any member of the workforce entering the site to undertake any excavation must be made aware of the potential to discover contamination and the discovery strategy.

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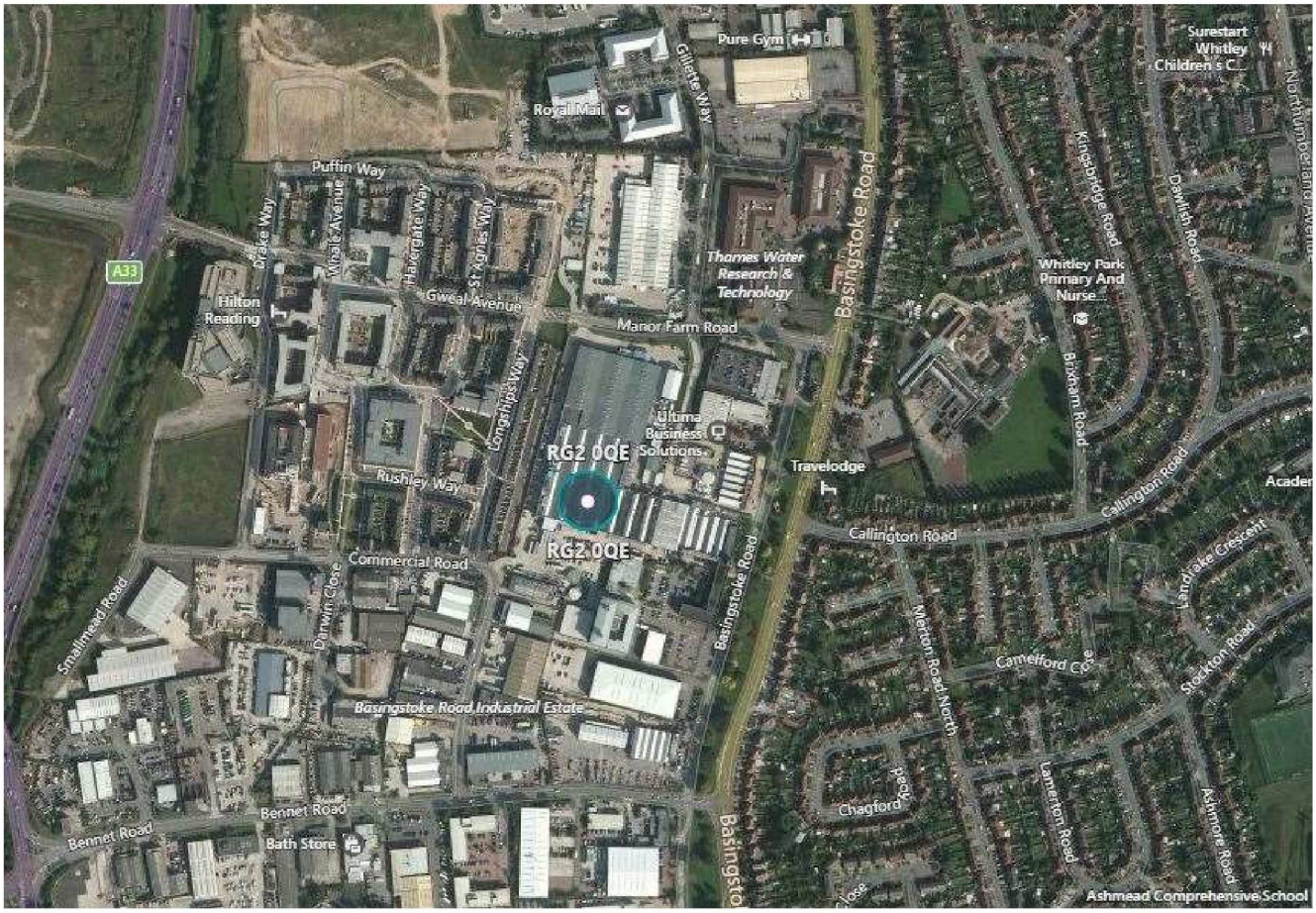


Figure number	Title
1	Site Location Map

Project	Date
Gillette UK, 452 Basingstoke Road, Reading Berkshire, RG2 0QE	May 2016

Client	Job Number
Gillette UK, Reading	15573

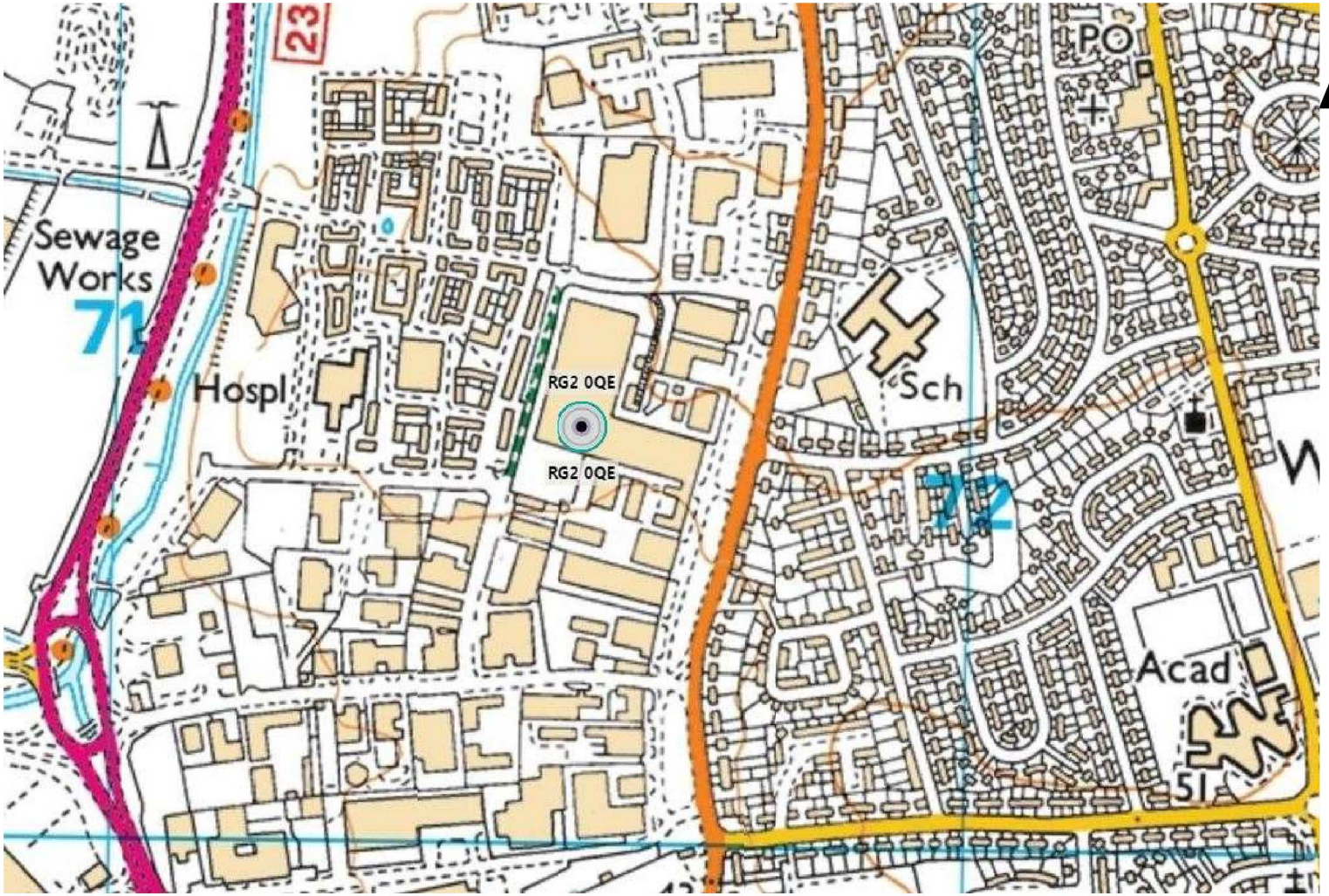


Figure number
2

Project
Gillette UK, 452 Basingstoke Road, Reading Berkshire, RG2 0QE

Client
Gillette UK, Reading

Title
Aerial Photograph

Date
May 2016

Job Number
15573

Appendix A Field Work

Soils Limited
Newton House, Cross Road, Tadworth KT20 5SR
Tel: 01737 814221 Email: admin@soilslimited.co.uk

Borehole Log

Borehole No.
WS1
Sheet 1 of 1

Project Name: Gillette UK	Project No.: 15573	Co-ords:	Hole Type WS
Location: Gillette UK , 452 Basingstoke Road, Reading Berkshire, RG2 0QE		Level:	Scale 1:50
Client: Four Star Services		Dates: 11/05/2016	Logged By

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.20			CONCRETE
		0.30	D		0.40			Light brown slightly clayey sandy fine to coarse sub-angular to angular flint brick concrete and tarmac GRAVEL. MADE GROUND.
		0.50	D					Stiff olive green mottled orangish brown sandy silty CLAY with bands of sands. Sand is fine. Gravel is rare fine to medium sub-angular flint gravels. Occasional black possible hydrocarbon staining to 1.30. Occasional rootlets. HEAD DEPOSITS.
		0.90	D					
		1.30	D					
		1.80	D					
					2.00			End of Borehole at 2.00m

General Remarks:
Rootlets to 2.0

Groundwater Remarks:

Borehole Type
CP: Cable Percussive
WS: Windowless Sampler
RC: Rotary Cored

Sample Types
D: Disturbed
B: Bulk
J: Jar
W: Water
U: Undisturbed

In-Situ Testing
SPT: Split spoon - Standard Penetration Test
CPT: Cone - Standard Penetration Test

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Newton House, Cross Road, Tadworth KT20 5SR
Tel: 01737 814221 Email: admin@soilslimited.co.uk

Borehole Log

Borehole No. **WS2**
Sheet 1 of 1

Project Name: Gillette UK	Project No.: 15573	Co-ords:	Hole Type WS
Location: Gillette UK , 452 Basingstoke Road, Reading Berkshire, RG2 0QE		Level:	Scale 1:50
Client: Four Star Services		Dates: 11/05/2016	Logged By

Well	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m AOD)	Legend	Stratum Description
					0.20			CONCRETE
		0.30	D		0.40			Brown clayey sandy fine to coarse angular flint and concrete GRAVEL. Sand is fine to coarse. MADE GROUND.
		0.50	D		0.70			Stiff orangish brown gravelly sandy CLAY. Sand is fine. Gravel is fine to medium sub-angular flint. Occasional black and olive green with possible hydrocarbon staining. HEAD DEPOSITS.
		0.90	J+D					Brown and olive green mixed clayey fine SAND. Rare fine to medium sub-angular flint gravels. Frequent dark grey possible hydrocarbon staining. HEAD DEPOSITS.
		1.30	J+D					
		1.90	J+D		1.80			Very soft greyish brown slightly silty CLAY. LONDON CLAY FORMATION.
					2.00			End of Borehole at 2.00m

General Remarks:

Groundwater Remarks:

Borehole Type
CP: Cable Percussive
WS: Windowless Sampler
RC: Rotary Cored

Sample Types
D: Disturbed
B: Bulk
J: Jar
W: Water
U: Undisturbed

In-Situ Testing
SPT: Split spoon - Standard Penetration Test
CPT: Cone - Standard Penetration Test

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Newton House, Cross Road, Tadworth KT20 5SR
Tel: 01737 814221 Email: admin@soilslimited.co.uk

Borehole Log

Borehole No.
WS3
Sheet 1 of 1

Project Name: Gillette UK	Project No.: 15573	Co-ords:	Hole Type WS
Location: Gillette UK , 452 Basingstoke Road, Reading Berkshire, RG2 0QE		Level:	Scale 1:50
Client: Four Star Services		Dates: 11/05/2016	Logged By

Well	Water Strikes	Sample and In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m AOD)	Legend	Stratum Description
					0.20			CONCRETE
		0.30	D					Light brown slightly clayey sandy fine to coarse sub-angular to angular flint brick concrete and tarmac GRAVEL. A piece of plastic tape at 0.60. MADE GROUND.
		0.70	D		0.60			Stiff brown mottled orange CLAY with occasional lenses of silty fine sand. Rare fine sub-angular flint gravels. Occasional black hydrocarbon staining. HEAD DEPOSITS.
		0.90	D					
		1.30	J+D		1.20			Stiff olive green mottled light brown and grey CLAY with occasional lenses of silty fine sand. Rare fine sub-angular flint gravels. Occasional black hydrocarbon staining. HEAD DEPOSITS.
		1.80	J+D					
					2.00			End of Borehole at 2.00m

General Remarks:

Groundwater Remarks:

Borehole Type
CP: Cable Percussive
WS: Windowless Sampler
RC: Rotary Cored

Sample Types
D: Disturbed
B: Bulk
J: Jar
W: Water
U: Undisturbed

In-Situ Testing
SPT: Split spoon - Standard Penetration Test
CPT: Cone - Standard Penetration Test

Soils Limited
Newton House, Cross Road, Tadworth KT20 5SR
Tel: 01737 814221 Email: admin@soilslimited.co.uk

Borehole Log

Borehole No.
WS4
Sheet 1 of 1

Project Name: Gillette UK	Project No.: 15573	Co-ords:	Hole Type WS
Location: Gillette UK , 452 Basingstoke Road, Reading Berkshire, RG2 0QE		Level:	Scale 1:50
Client: Four Star Services		Dates: 11/05/2016	Logged By

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m AOD)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.20			CONCRETE
		0.30	D		0.50			Light brown slightly clayey sandy fine to coarse sub-angular to angular flint and concrete GRAVEL. MADE GROUND
		0.60	J+D					Stiff greyish brown mottled light grey CLAY with occasional lenses of silty fine sand. Occasional black possible hydrocarbon staining. LONDON CLAY FORMATION.
		0.90	J+D					
		1.30	J+D					
		1.80	J+D					
					2.00			End of Borehole at 2.00m

General Remarks:

Groundwater Remarks:

Borehole Type
CP: Cable Percussive
WS: Windowless Sampler
RC: Rotary Cored

Sample Types
D: Disturbed
B: Bulk
J: Jar
W: Water
U: Undisturbed

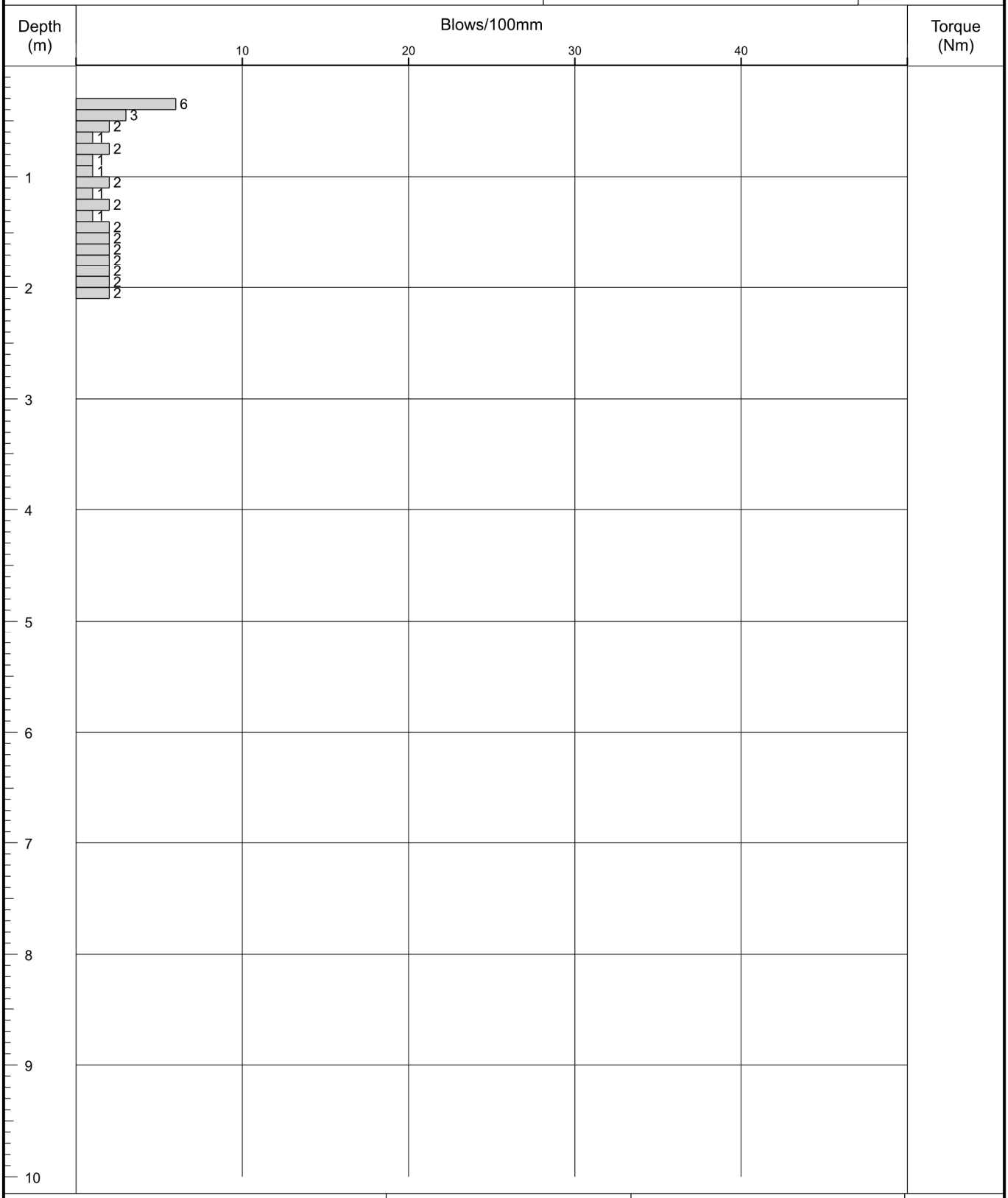
In-Situ Testing
SPT: Split spoon - Standard Penetration Test
CPT: Cone - Standard Penetration Test

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Probe Log

Borehole No.
DP1
Sheet 1 of 1

Project Name: Gillette UK	Project No. 15573	Co-ords: -	Hole Type DP
Location: Gillette UK , 452 Basingstoke Road, Reading Berkshire, RG2 0QE		Level:	Scale 1:50
Client: Four Star Services		Dates: 11/05/2016 - 11/05/2016	Logged By



Remarks	Fall Height	Cone Base Diameter	
	Hammer Wt	Final Depth	2.00
	Probe Type	Log Scale	1:50

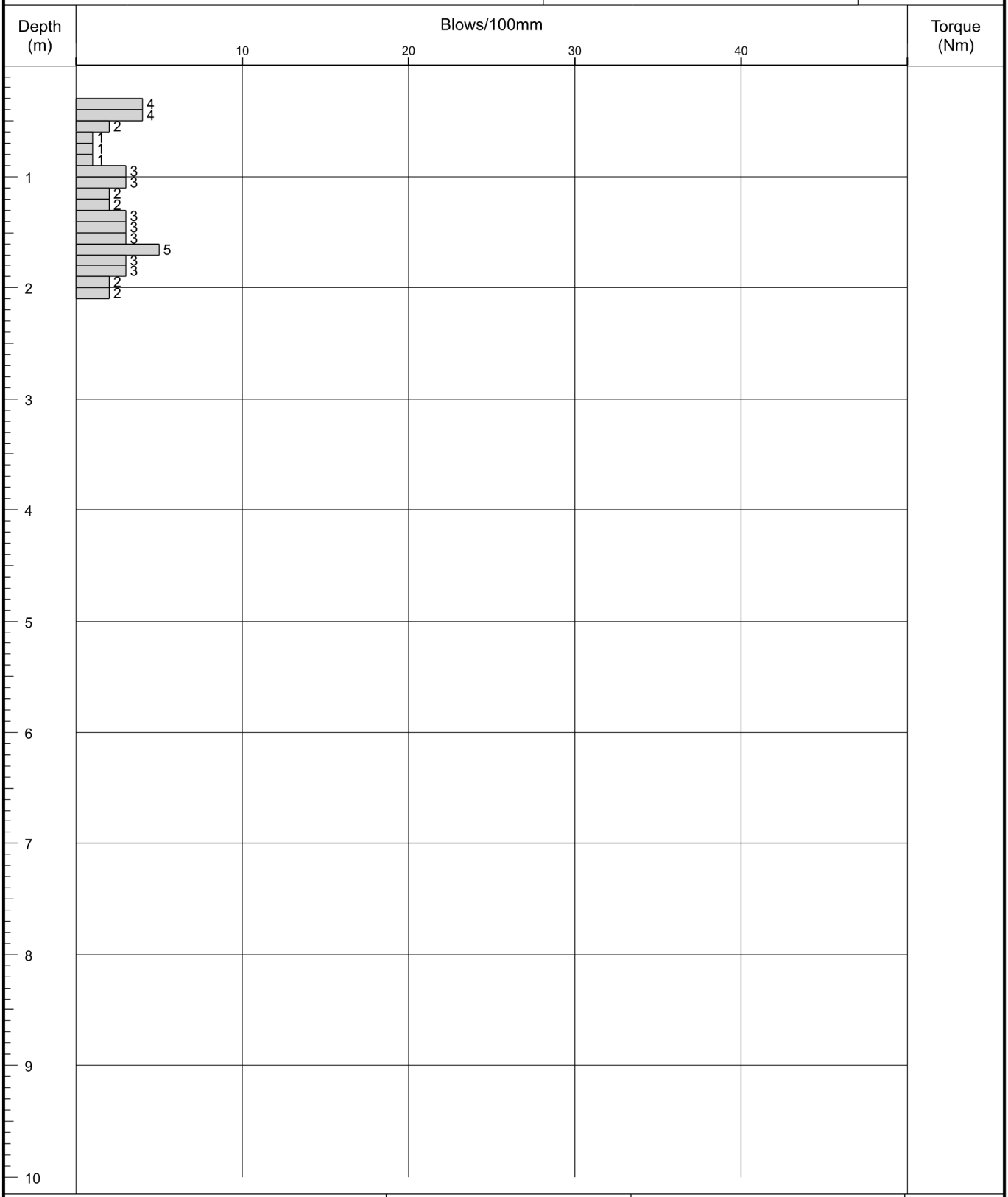
AGS

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Probe Log

Borehole No.
DP2
Sheet 1 of 1

Project Name: Gillette UK	Project No. 15573	Co-ords: -	Hole Type DP
Location: Gillette UK , 452 Basingstoke Road, Reading Berkshire, RG2 0QE		Level:	Scale 1:50
Client: Four Star Services		Dates: 11/05/2016 - 11/05/2016	Logged By



Remarks	Fall Height	Cone Base Diameter	
	Hammer Wt	Final Depth	2.00
	Probe Type	Log Scale	1:50

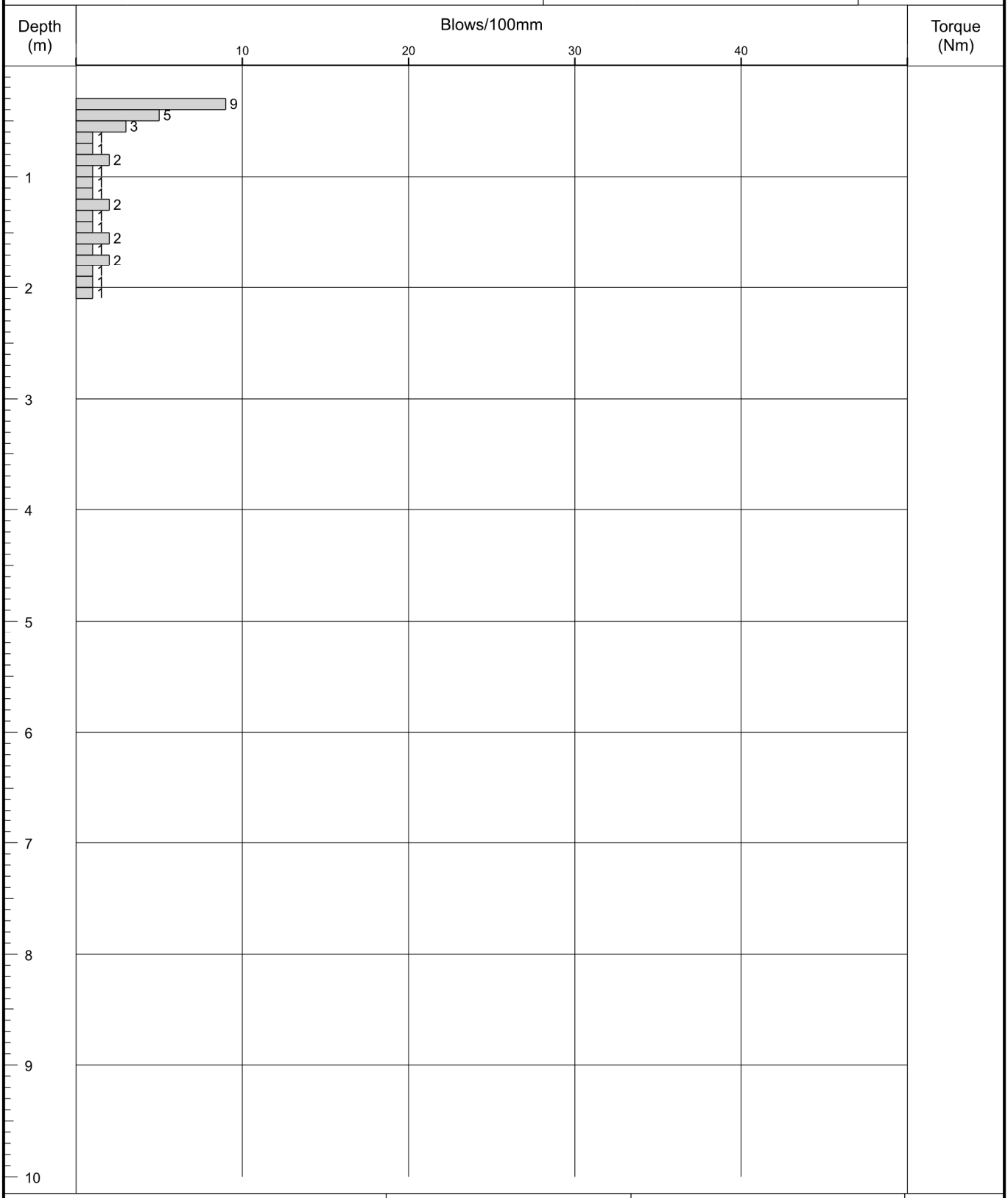
AGS

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Probe Log

Borehole No.
DP3
Sheet 1 of 1

Project Name: Gillette UK	Project No. 15573	Co-ords: -	Hole Type DP
Location: Gillette UK , 452 Basingstoke Road, Reading Berkshire, RG2 0QE		Level:	Scale 1:50
Client: Four Star Services		Dates: 11/05/2016 - 11/05/2016	Logged By



Remarks	Fall Height	Cone Base Diameter	
	Hammer Wt	Final Depth	2.00
	Probe Type	Log Scale	1:50

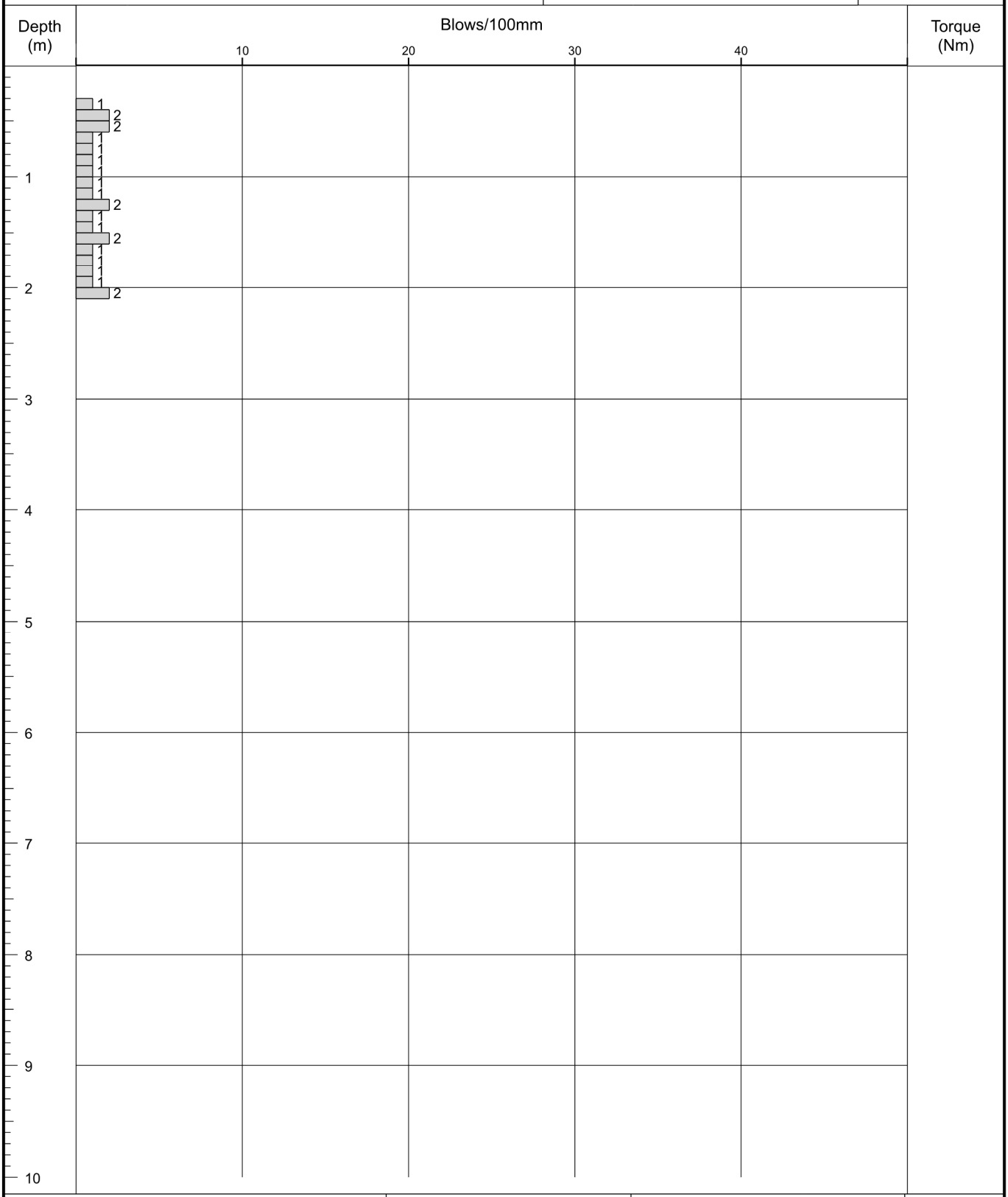
AGS

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Probe Log

Borehole No.
DP4
Sheet 1 of 1

Project Name: Gillette UK	Project No. 15573	Co-ords: -	Hole Type DP
Location: Gillette UK , 452 Basingstoke Road, Reading Berkshire, RG2 0QE		Level:	Scale 1:50
Client: Four Star Services		Dates: 11/05/2016 - 11/05/2016	Logged By



Remarks	Fall Height	Cone Base Diameter	
	Hammer Wt	Final Depth	2.00
	Probe Type	Log Scale	1:50

AGS

Appendix B Geotechnical Laboratory Results

Laboratory Report

UKAS TESTING
2788

GSTL
GEO Site & Testing Services Ltd

Contract Number: 31032

Client's Reference: **15573/RV**

Report Date: **23-05-2016**

Client **Soils Limited**
Newton House
Cross Road
Tadworth
Surrey
KT20 5SR

Contract Title: **Gillette UK**
For the attention of: **Raja Vangaveti**

Date Received: **17-05-2016**
Date Commenced: **17-05-2016**
Date Completed: **23-05-2016**

Test Description	Qty
Moisture Content 1377 : 1990 Part 2 : 3.2 - * UKAS	7
4 Point Liquid & Plastic Limit (LL/PL) 1377 : 1990 Part 2 : 4.3 & 5.3 - * UKAS	7
Concrete Cylinder - Testing in Compression BS EN 12390-2 2009	4
Disposal of Samples on Project	1

Notes: **Observations and Interpretations are outside the UKAS Accreditation**
*** - denotes test included in laboratory scope of accreditation**
- denotes test carried out by approved contractor
@ - denotes non accredited tests

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced in full, without the prior written approval of the laboratory.

Approved Signatories:
Alex Wynn (Associate Director) - Benjamin Sharp (Contracts Manager) - Emma Sharp (Office Manager)
Paul Evans (Quality/Technical Manager) - Vaughan Edwards (Managing Director)

GEO Site & Testing Services Ltd
Unit 4, Heol Aur, Dafen Ind Estate, Dafen, Llanelli, Carmarthenshire SA14 8QN
Tel: 01554 784040 Fax: 01554 784041 info@gstl.co.uk gstl.co.uk

Client ref: 15573

Location: Gillette UK

Contract Number: 31032

Hole Number	Sample Number	Type	Depth (m)	Description of Sample*
WS1		D	0.50	Brown fine to coarse sandy silty CLAY.
WS2		D	0.90	Brown fine to medium gravelly fine to coarse sandy silty CLAY.
WS2		D	1.30	Brown fine gravelly fine to coarse sandy silty CLAY.
WS2		D	1.90	Brown fine to medium sandy silty CLAY.
WS3		D	0.70	Brown fine to coarse gravelly fine to coarse sandy silty CLAY.
WS4		D	0.60	Brown fine sandy silty CLAY.
WS4		D	1.80	Brown fine sandy silty CLAY.

Note: Results on this table are in summary format and may not meet the requirements of the relevant standards, additional information is held by the laboratory

GSTL
GEO SITE & TESTING SERVICES LTD

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Ben Sharp (Contracts Manager)

Date: 23.5.16

UKAS TESTING
2788

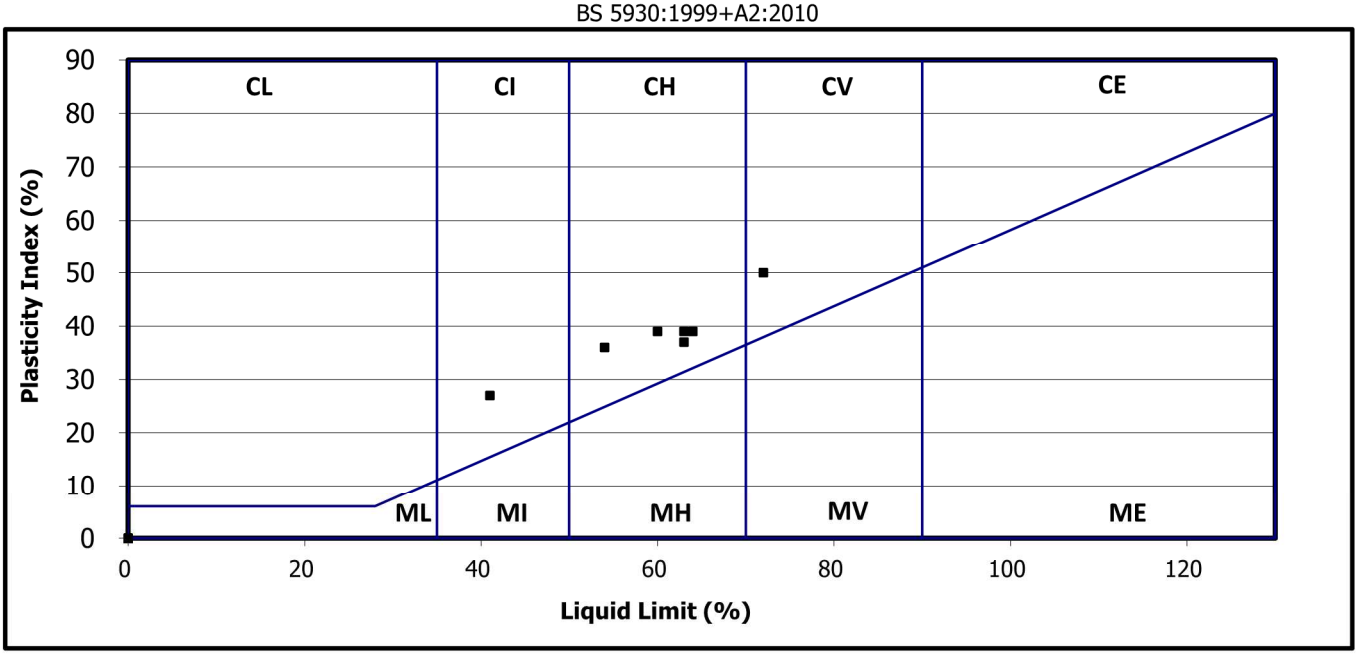
Test Report: **Method of the Determination of the plastic limit and plasticity index**
BS 1377 : Part 2 : 1990 Method 5

Client ref: **15573**
Location: **Gillette UK**
Contract Number: **31032**

Hole/ Sample Number	Sample Type	Depth m	Moisture Content % Cl. 3.2	Liquid Limit % Cl. 4.3/4.4	Plastic Limit % Cl. 5.	Plasticity Index % Cl. 6.	% Passing .425mm	Remarks
WS1	D	0.50	18	72	22	50	78	CV Very High Plasticity
WS2	D	0.90	16	54	18	36	77	CH High Plasticity
WS2	D	1.30	15	41	14	27	73	CI Intermediate Plasticity
WS2	D	1.90	33	63	24	39	92	CH High Plasticity
WS3	D	0.70	18	60	21	39	63	CH High Plasticity
WS4	D	0.60	30	63	26	37	100	CH High Plasticity
WS4	D	1.80	32	64	25	39	100	CH High Plasticity

Symbols: **NP : Non Plastic** **# : Liquid Limit and Plastic Limit Wet Sieved**

PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.
BS 5930:1999+A2:2010



For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Ben Sharp (Contracts Manager)
Date: 23.5.16

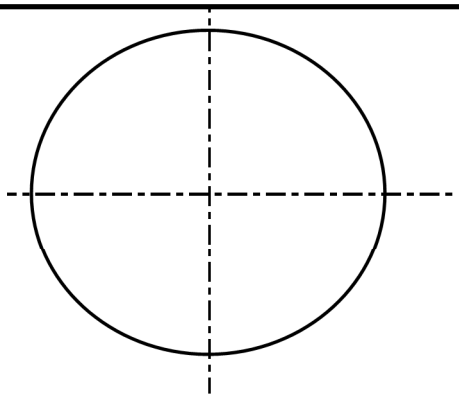
UKAS TESTING
2788

Test Report: **Testing concrete in structures. Cored specimens. Taking, examining and testing in compression BS EN 12504-1:2009 & BS EN 12504-3: 2009**

Client:	**Soils Ltd**
Location:	**Gillette UK**
Client Ref:	**15573**
Contract Number:	**16-12-84**

Core Description	**CC1**
Maximum aggregate Size (mm)	**20**
Date of Coring	**Unknown**
Date of Receipt	**N/A**
Date of Test	**26-05-16**
Method used for Preparation	**Cutting**
Condition On Test *	**Surface Dry**

* Surface Wet, Dry

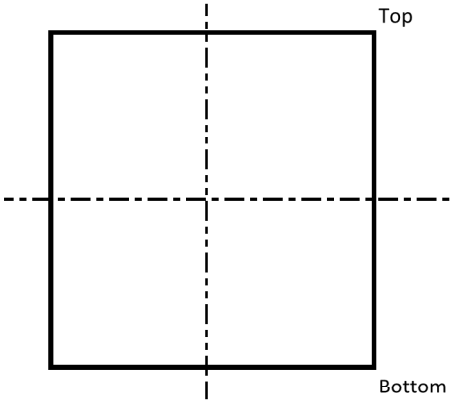


Vertical re-bar	
From Centre (mm)	N/A
Horizontal Rebar	
From Top (mm)	N/A
From Centre (mm)	N/A
Re-bar Diameter (mm)	N/A

RE-BAR NOT PRESENT

Measurement Dimensions: BS EN 12390-1: 2012

Size of sample Received in Lab (mm) Diameter	**142.8**
Length	**104.3**
Length Diameter ratio of prepared specimen:	**0.73**



Compression: BS EN 12390-3:2009

Compressive Strength N/mm2	**26.1**
Appearance of concrete and Type of Fracture	**Satisfactory**
Compaction of concrete, classification of void %	**13.0**
Any Deviations from the standard Method of Testing [1]	**n/a**

Remarks:

[1] All the testing was carried out in accordance with BS EN 12390-3: 2009 except as detailed

Technician Responsible
Wayne Honey

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Vaughan Edwards (Managing Director)

GSTL
GEO SITE & TESTING SERVICES LTD

Date: 23.5.16

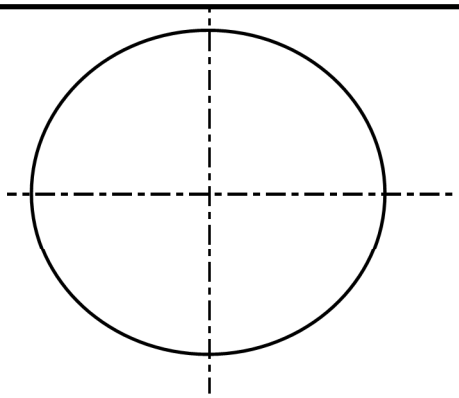
UKAS TESTING 2788

Test Report: **Testing concrete in structures. Cored specimens. Taking, examining and testing in compression BS EN 12504-1:2009 & BS EN 12504-3: 2009**

Client:	**Soils Ltd**
Location:	**Gillette UK**
Client Ref:	**15573**
Contract Number:	**16-12-84**

Core Description	**CC2**
Maximum aggregate Size (mm)	**20**
Date of Coring	**Unknown**
Date of Receipt	**N/A**
Date of Test	**26-05-16**
Method used for Preparation	**Cutting**
Condition On Test *	**Surface Dry**

* Surface Wet, Dry

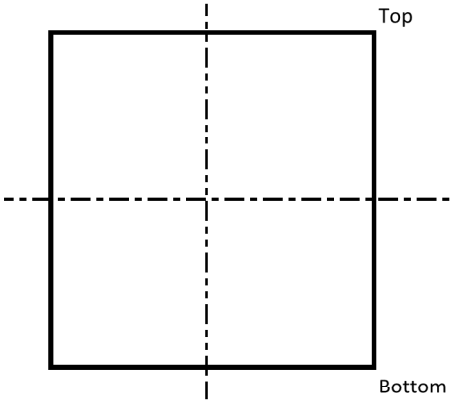


Vertical re-bar	
From Centre (mm)	N/A
Horizontal Rebar	
From Top (mm)	N/A
From Centre (mm)	N/A
Re-bar Diameter (mm)	N/A

RE-BAR NOT PRESENT

Measurement Dimensions: BS EN 12390-1: 2012

Size of sample Received in Lab (mm) Diameter	**142.7**
Length	**112.9**
Length Diameter ratio of prepared specimen:	**0.79**



Compression: BS EN 12390-3:2009

Compressive Strength N/mm2	**24.8**
Appearance of concrete and Type of Fracture	**Satisfactory**
Compaction of concrete, classification of void %	**13.0**
Any Deviations from the standard Method of Testing [1]	**n/a**

Remarks:

[1] All the testing was carried out in accordance with BS EN 12390-3: 2009 except as detailed

Technician Responsible
Wayne Honey

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Vaughan Edwards (Managing Director)

GSTL
GEO SITE & TESTING SERVICES LTD

Date: 23.5.16

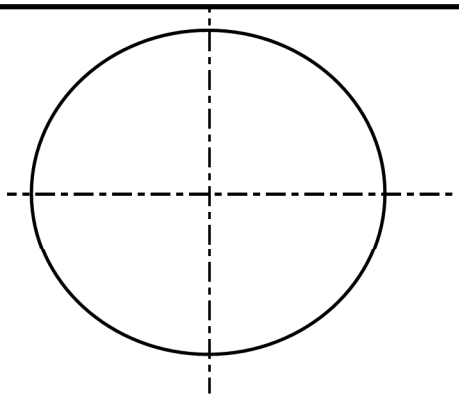
UKAS TESTING 2788

Test Report: **Testing concrete in structures. Cored specimens. Taking, examining and testing in compression BS EN 12504-1:2009 & BS EN 12504-3: 2009**

Client:	**Soils Ltd**
Location:	**Gillette UK**
Client Ref:	**15573**
Contract Number:	**16-12-84**

Core Description	**CC3**
Maximum aggregate Size (mm)	**20**
Date of Coring	**Unknown**
Date of Receipt	**N/A**
Date of Test	**26-05-16**
Method used for Preparation	**Cutting**
Condition On Test *	**Surface Dry**

* Surface Wet, Dry

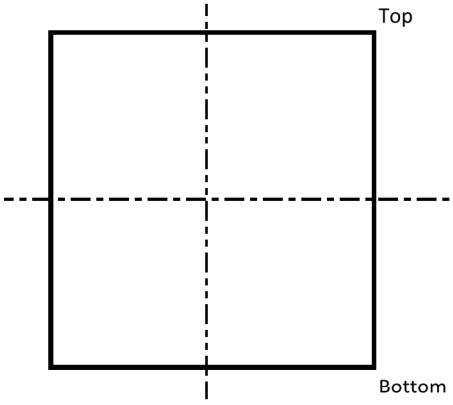


Vertical re-bar	
From Centre (mm)	N/A
Horizontal Rebar	
From Top (mm)	N/A
From Centre (mm)	N/A
Re-bar Diameter (mm)	N/A

RE-BAR NOT PRESENT

Measurement Dimensions: BS EN 12390-1: 2012

Size of sample Received in Lab (mm) Diameter	**142.9**
Length	**122**
Length Diameter ratio of prepared specimen:	**0.85**



Compression: BS EN 12390-3:2009

Compressive Strength N/mm2	**23.8**
Appearance of concrete and Type of Fracture	**Satisfactory**
Compaction of concrete, classification of void %	**13.0**
Any Deviations from the standard Method of Testing [1]	**n/a**

Remarks:

[1] All the testing was carried out in accordance with BS EN 12390-3: 2009 except as detailed

Technician Responsible
Wayne Honey

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Vaughan Edwards (Managing Director)

GSTL
GEO SITE & TESTING SERVICES LTD

Date: 23.5.16

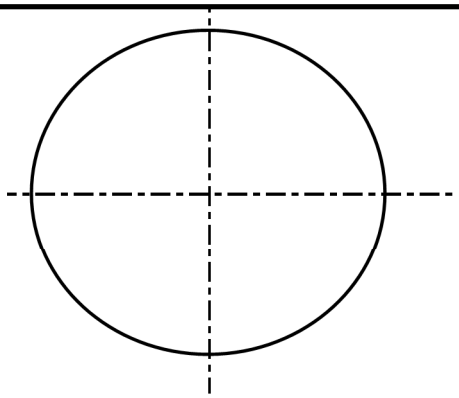
UKAS TESTING 2788

Test Report: **Testing concrete in structures. Cored specimens. Taking, examining and testing in compression BS EN 12504-1:2009 & BS EN 12504-3: 2009**

Client:	**Soils Ltd**
Location:	**Gillette UK**
Client Ref:	**15573**
Contract Number:	**16-12-84**

Core Description	**CC4**
Maximum aggregate Size (mm)	**20**
Date of Coring	**Unknown**
Date of Receipt	**N/A**
Date of Test	**26-05-16**
Method used for Preparation	**Cutting**
Condition On Test *	**Surface Dry**

* Surface Wet, Dry

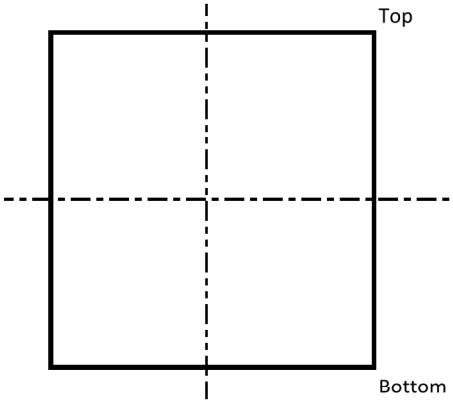


Vertical re-bar	
From Centre (mm)	N/A
Horizontal Rebar	
From Top (mm)	N/A
From Centre (mm)	N/A
Re-bar Diameter (mm)	N/A

RE-BAR NOT PRESENT

Measurement Dimensions: BS EN 12390-1: 2012

Size of sample Received in Lab (mm) Diameter	**142.5**
Length	**142.4**
Length Diameter ratio of prepared specimen:	**1.00**



Compression: BS EN 12390-3:2009

Compressive Strength N/mm2	**33.3**
Appearance of concrete and Type of Fracture	**Satisfactory**
Compaction of concrete, classification of void %	**0.5**
Any Deviations from the standard Method of Testing [1]	**n/a**

Remarks:

[1] All the testing was carried out in accordance with BS EN 12390-3: 2009 except as detailed

Technician Responsible
Wayne Honey

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Vaughan Edwards (Managing Director)

GSTL
GEO SITE & TESTING SERVICES LTD

Date: 23.5.16

UKAS TESTING 2788

Appendix C Information Provided by the Client

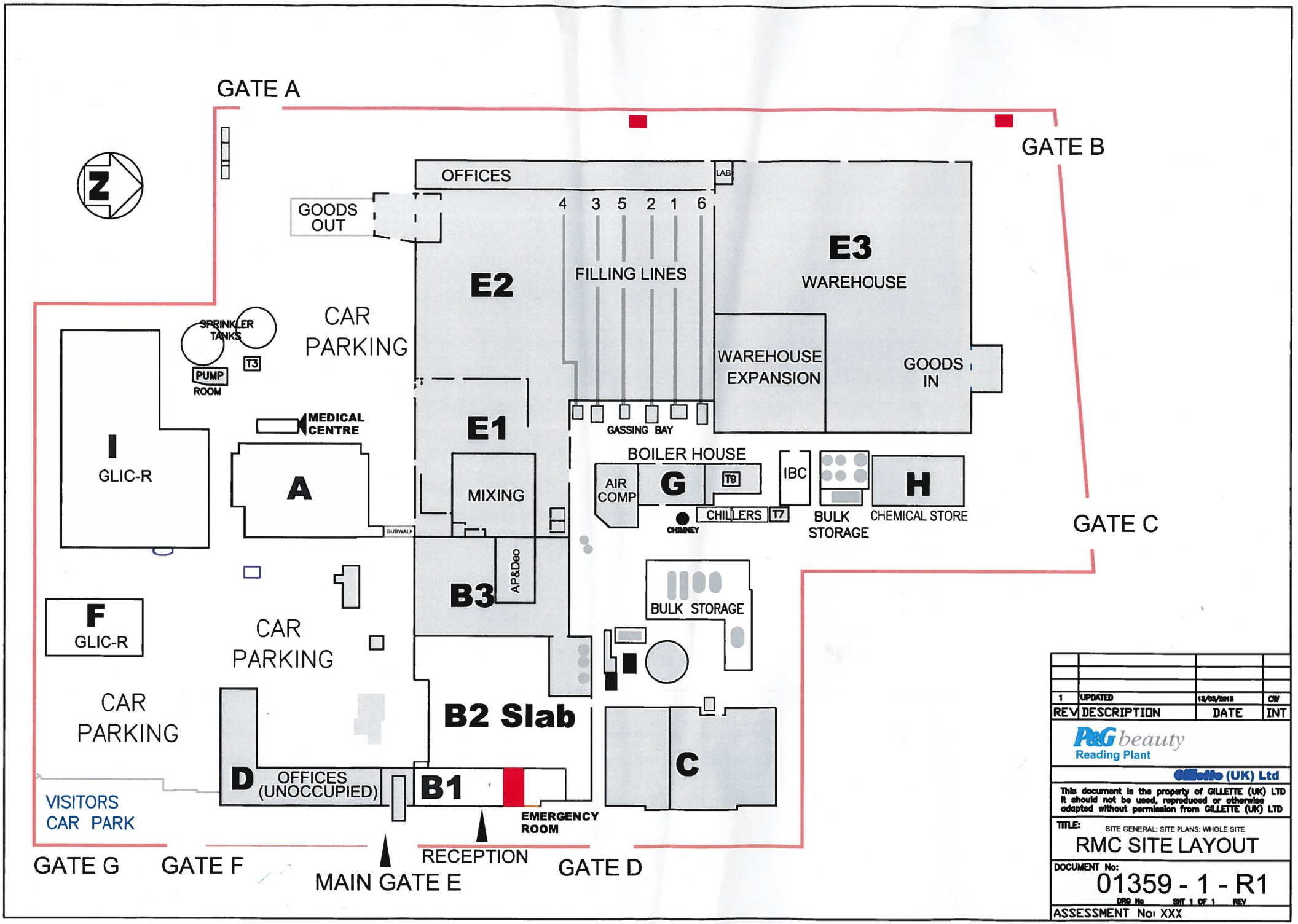
Soils Limited
Geotechnical & Environmental Consultants

Newton House
Cross Road, Tadworth
Surrey KT20 5SR

T 01737 814221
W soilslimited.co.uk

Appendix D

Site location plan



REV	DESCRIPTION	DATE	INT
1	UPDATED	13/03/2015	CW

P&G beauty
Reading Plant

Gillette (UK) Ltd

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TITLE: SITE GENERAL: SITE PLANS: WHOLE SITE

RMC SITE LAYOUT

DOCUMENT No:

01359 - 1 - R1

DRG No SHT 1 OF 1 REV

ASSESSMENT No: XXX

Appendix E

Proposed development drawings

Original Paper Size **A1**

NOTES

Do not scale dimensions from this drawing except for Local Authority planning purposes.

The contractor is responsible for checking dimensions, tolerances and references. Any discrepancies to be verified with the Project Manager before proceeding with the works.

This drawing is copyright to DHP and may not be reproduced in any form without prior written consent.

All current drawings and specifications for the project must be read in conjunction with the designers hazard and environment assessment record.

Scale 1:100
0 5m



PLANNING

Rev	Date	Description	Chk
P0	11.16	Issued For Planning	AP

243 Brooklands Road
Weybridge
Surrey KT13 0RH

T 01932 850100
W www.dhpuk.co.uk

Project
P&G Reading
452 Basingstoke Road
Reading RG2 0QE

Drawing
Proposed Ground Floor Plan

Drawn By	SP	Date	10.16
Project Manager		Scale	1:100

Project No.	Drawing No.	Stage/Rev
5504	2020	P / 0

L:\5504 - P&G reading\02 - Concept Design (Planning)\05 - CAD\Drawing\02-Proposed Planning\5504-2022-P1-Proposed Ground Floor Plan.dwg

Original Paper Size **A1**

NOTES

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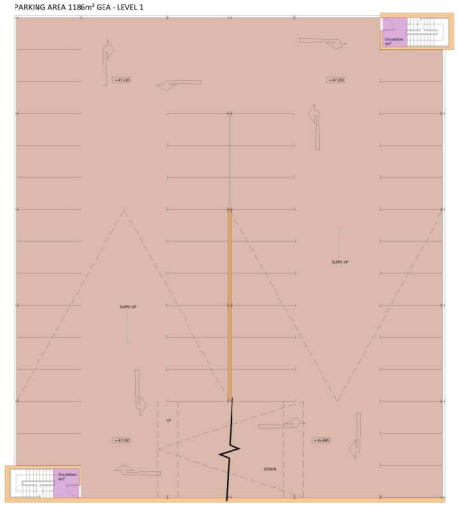
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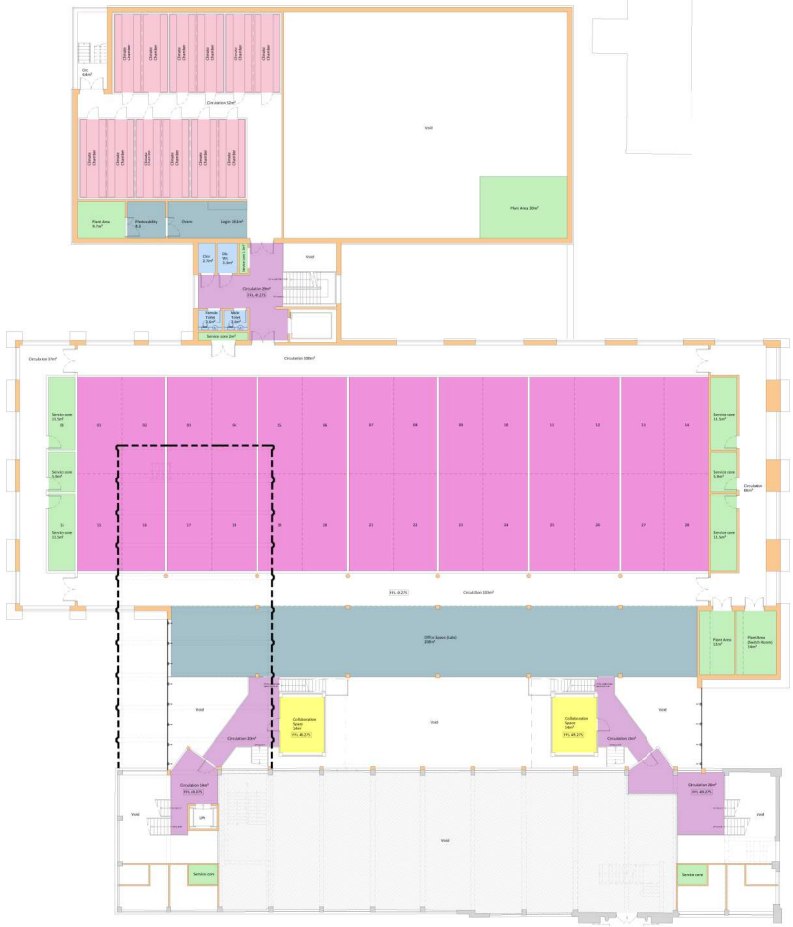
All current drawings and specifications for the project must be read in conjunction with the designers hazard and environment assessment record.

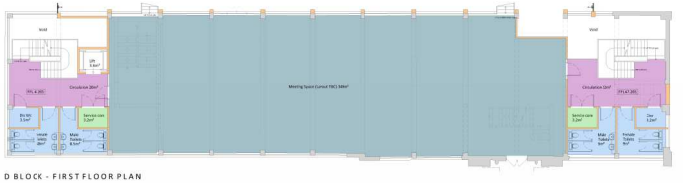
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PARKING AREA 1186m² GEA - LEVEL 1



LEVEL 1





D BLOCK - FIRST FLOOR PLAN

PLANNING

Rev	Date	Description	Chk
P0	11.16	Issued For Planning	AP

243 Brooklands Road
Weybridge
Surrey KT13 0RH

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W www.dhpuk.co.uk

Project
P&G Reading
452 Basingstoke Road
Reading RG2 0QE

Drawing
Proposed First Floor Plan

Drawn By	SP	Date	10.16
Project Manager		Scale	1:100

Project No.	Drawing No.	Stage/Rev
5504	2030	P / 0

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PLANNING



Rev	Date	Description	Chk
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Project
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452 Basingstoke Road
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Drawing
Proposed Second Floor Plan

Drawn By	SP	Date	10.16
Project Manager		Scale	1:100

Project No.	Drawing No.	Stage/Rev
5504	2040	P / 0

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Original Paper Size **A1**

NOTES

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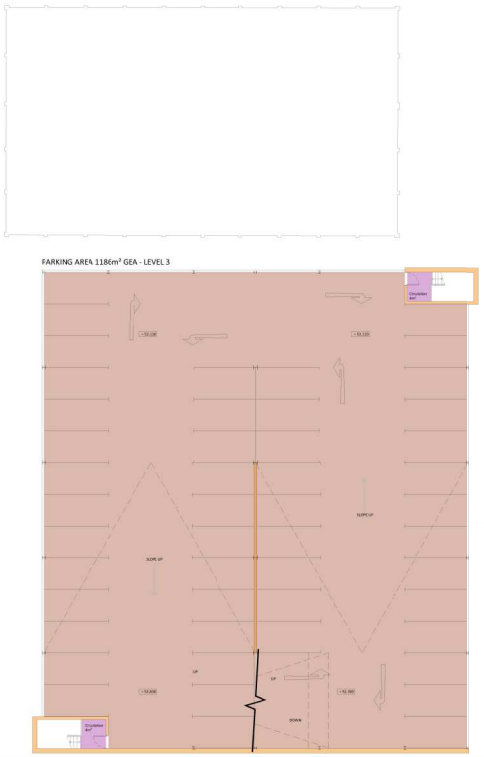
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PLANNING



Rev	Date	Description	Chk
P0	11.16	Issued For Planning	AP

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Project
P&G Reading
452 Basingstoke Road
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Drawing
Proposed Roof Plan

Drawn By	SP	Date	10.16
Project Manager		Scale	1:100

Project No.	Drawing No.	Stage/Rev
5504	2050	P / 0

L:\5504 - P&G reading\02 - Concept Design (Planning)\05 - CAD Drawings\02-Proposed Planning\5504-2050-P0-Proposed Roof Plan.dwg