

Appendix J

Land quality

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J1 Additional methodology

J1.1 Assessment methodology

The methodology for ground conditions and contamination is set out in the main ES. The additional methodology set out in this appendix covers the assessment criteria used to define the significance criteria, effects (likelihood and magnitude) and receptor sensitivity.

J1.2 Assessment criteria

Table J1.1: Ground conditions and contaminated land - significance criteria

Effect	Description
Substantial adverse	Severe or irreversible detrimental effect to human health. Severe temporary or irreversible reduction in the quality of a potable groundwater or surface water resource of local, regional or national importance. Irreversible or severe temporary detrimental effect on animal or plant populations. Irreversible detrimental effect to nationally important geological feature. Irreversible detrimental effect to building structure resulting in collapse or demolition.
Moderate adverse	Long-term minor or short-term moderate detrimental effect to human health. A minor or moderate, local-scale reduction in the quality of potable groundwater or surface water resources of local, regional or national importance, reversible with time. Reversible widespread reduction in the quality of groundwater or surface water resources used for commercial or industrial abstractions. Medium-term, reversible detrimental effect on animal or plant populations. Medium-term, reversible detrimental effect to nationally important geological features. Detrimental effect to building structure requiring remedial engineering works.
Minor adverse	Short-term minor detrimental effect to human health. A minor or moderate temporary detrimental effect in the quality of groundwater or surface water resources that are used for, or have the potential to be used for, commercial or industrial abstractions. Short-term reversible detrimental effect on animal or plant populations. Short-term reversible detrimental effect to nationally important geological features. Detrimental effect to building structures not requiring remedial engineering works.
Negligible	No appreciable effect on human, animal or plant health, potable groundwater or surface water resources or geological features of importance.
Minor beneficial	Minor reduction in risk to human, animal or plant health. Minor local-scale improvement to the quality of potable groundwater or surface water resources. Moderate local-scale improvement to groundwater or surface water resources that are used for, or have potential to be used for, industrial or commercial abstractions.
Moderate beneficial	Moderate reduction in risk to human, animal or plant health. Moderate local-scale improvement to the quality of potable groundwater or surface water resources. Major local-scale, or moderate wide-scale, improvement to the quality of groundwater or surface water resources used for commercial or industrial abstraction only.
Substantial beneficial	Major reduction in risk to human, animal or plant health. Major local-scale/moderate to major improvement in the quality of a potable groundwater or surface water resource of local, regional or national importance.

The magnitude of the effect takes into account the severity and the likelihood of the effect. The likelihood is assessed as detailed in Table J1.3 and the severity is assessed as in per the significance criteria in Table J1.1.

Table J1.2: Ground conditions and contaminated land - magnitude of effect

		Likelihood			
		Unlikely	Low likelihood	Likely inevitable	High likelihood
Severity	Substantial	Minor	Moderate	Major	Major
	Moderate	Negligible	Minor	Moderate	Moderate
	Minor	Negligible	Negligible	Minor	Minor
	Negligible	Negligible	Negligible	Negligible	Negligible

Table J1.3: Ground conditions and contaminated land - likelihood of effect

Effect	Definition
Unlikely	An effect which whilst theoretically possible will probably never be realised.
Low likelihood	An effect that is considered possible when considered over the Proposed Development lifetime.
Likely inevitable	An effect which is considered likely when considered over the Proposed Development lifetime, but not inevitable.
High likelihood	An effect that is considered to be a direct and inevitable consequence of the Proposed Development or which is considered to be probable even when considered in the short term.

Table J1.4: Ground conditions and contaminated land - receptor sensitivity

Sensitivity	Description
High	<p>Construction site workers without the use of any personal protective equipment (PPE) above that normally expected on a construction project or implementation of any additional health and safety procedures.</p> <p>Principal chalk aquifer, layers of rock or drift deposits that have high intergranular and/or fracture permeability meaning they usually provide a high level of water storage. They may support water supply (potable resources) and/or river base flow on a strategic scale importance in terms of water quantity and quality.</p> <p>Surface water immediately adjacent or onsite.</p> <p>Future users of low rise residential buildings and gardens areas.</p>
Medium	<p>Construction site workers with the use specific PPE and additional health & safety procedures.</p> <p>Residents, workers and outdoor leisure users adjacent and up to 100m from the boundary of the active or construction site.</p> <p>Secondary A Aquifers, 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.</p> <p>Surface water up to 100m from the site boundary.</p> <p>Future users of public open space and high rise managed residential buildings.</p> <p>Existing and proposed utilities and infrastructure.</p> <p>Designated ecological receptors up to 100m of the site and new flora on the site directly over Made Ground.</p>
Low	Construction site workers specifically within areas where excavation will not be taking place with the use of PPE and health & safety procedures.

Sensitivity	Description
	<p>Residential and outdoor leisure users more than 100m from the site boundary.</p> <p>Secondary B Aquifer or Secondary Undifferentiated, groundwater table predominantly lower permeability layers which may store and yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. Surface waterbodies over 100m from the site.</p> <p>Future users in commercial areas of the Proposed Development.</p> <p>Utilities and structures designed to withstand local ground conditions e.g. aggressive ground and local geotechnics.</p> <p>New flora in specifically engineered landscape features.</p>

J1.3 Risk classification tables

The classification of the probability is shown in Table J1.3.5.

Table J1.3.5 Classification of probability

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

The classification of consequence is outlined in Table J1.3.6.

Table J1.3.6 Classification of consequence

Classification	Definition	Examples
Severe	Short term (acute) risk to human health likely to result in 'significant harm' as defined by the Environment Protection Act 1990, Part IIA. Short term risk of pollution of sensitive water resource. (Note: Water Resources Act contains no scope for considering significance of pollution). Catastrophic damage to buildings/property. A short-term risk to a particular ecosystem, or organisation forming part of such ecosystem (note: the definitions of ecological systems within the draft circular on Contaminated Land, DETR 2000).	High concentrations of cyanide on the surface of an informal recreation area. Major spillage of contaminants from site into controlled water. Explosion, causing building collapse (can also equate to a short term human health risk if buildings are occupied).
Medium	Chronic damage to human health ('a significant harm' as defined in DETR, 2000). Pollution of sensitive water resources. (Note: Water Resources Act contains no scope for considering significance of pollution). A significant change in a particular ecosystem, or organism forming part of such ecosystem, (note: the definitions of ecological systems within draft circular on Contaminated Land, DETR,2000).	Concentration of a contaminant from site exceed the generic, or site-specific assessment criteria. Leaching of contaminants from a site to a major or minor aquifer. Death of a species within a designated nature reserve.
Mild	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services ('significant harm' as defined in the draft circular on Contaminated Land, DETR, 2000). Damage to sensitive buildings/structures/services or the environment.	Pollution of non-classified groundwater. Damage to building rendering it unsafe to occupy (for example foundation damage resulting in instability).
Minor	Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve. Non-permanent health effects to human health (easily prevented by means such as personal protective clothing etc), easily repairable effects of damage to buildings, structures and services,	The presence of contaminants at such concentrations that protective equipment is required during site works. The loss of plants in a landscaping scheme. Discolouration of concrete.

The combination of the probability (also referred to as the likelihood and the consequence provides the risk rating as shown in Table J1.3.7.

Table J1.3.7 Risk rating

		Consequence			
		Severe	Medium	Mild	Minor
Probability	High likelihood	Very high risk	High risk	Moderate risk	Moderate/low risk
	Likely	High risk	Moderate risk	Moderate/low risk	Low risk
	Low likelihood	Moderate risk	Moderate/low risk	Low risk	Very low risk
	Unlikely	Moderate/low risk	Low risk	Very low risk	Very low risk

J2 Preliminary risk assessment (Arup, 2019)

Westminster City Council

Ebury Bridge Estate

Ground contamination desk study
and preliminary risk assessment

226923-CL-RP-001

Issue | 8 August 2019

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 266923-61

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Risk assessment methodology

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Executive summary

This ground contamination preliminary risk assessment has been prepared for Westminster City Council to support the proposed redevelopment of the Ebury Bridge Estate. The report presents and assesses the latest desk-based information for the site and the surroundings, considering the historical and current land uses, the environmental setting and development proposals.

The site has a varied history consisting of predominantly industrial use from 1820s up until the 1920s. The eastern half of the site was formerly occupied by the Grosvenor Canal which was constructed in 1823. Various wharfs and industrial land uses, including a saw mill and warehouses were in the west of the site. The canal was infilled in 1928 and the associated industrial buildings demolished. Most of the existing residential apartment buildings were constructed in the early 1930s. A moor woks and later a corporation yard (a depot) was historically in the south of the site. The corporation yard was replaced with Edgson House and adjacent playground by the early 1950s, by which time the configuration of the site was close to the current condition.

The site currently comprises a residential housing estate, with small commercial units occupying the ground and basement floor levels of the two buildings adjacent to the Ebury Bridge Road (Rye House and Bucknill House). Contemporary sources of ground contamination are relatively limited, including a small dry-cleaner in the north west of the site. A former petrol filling station is located offsite to the west, which is a potential source of local groundwater pollution. Overall the site is considered to have a moderate potential for ground contamination to be present based on the historical and contemporary land uses.

The ground conditions are anticipated to comprise a variable thickness of Made Ground (approximately 6.5m associated with the infilled canal) over superficial deposits (Alluvium and River Terrace Deposits) which are underlain by a thick layer of London Clay (greater than 35m).

The River Terrace Deposits, which is classified by the Environment Agency as a secondary A aquifer. The principal Chalk aquifer lies at depth beneath the site, however this is protected by a thick layer of London Clay (aquitard). The site is not located within a groundwater source protection zone (SPZ); the closest abstraction is over 200m from site and the nearest surface water (Grosvenor Canal) is 100m south of site. The environmental sensitivity of the site is assessed to be low.

The preliminary risk assessment and initial conceptual site model have identified several potential pollutant linkages (PPLs) associated with the site and the proposed development. The outcome of the risk assessment is summarised in the table opposite.

Item	Risk characterisation (without mitigation)
Risk of harm to human health during construction	Moderate
Risk of harm to human health during operation	Moderate
Risk of pollution to groundwater in the [upper] secondary A aquifer	Moderate
Risk of pollution to groundwater in the [lower] principal aquifer	No pollutant linkage identified
Risk of pollution to surface water	Very low
Risks to building materials and services	Moderate to low
Risk of harm to ecological receptors	Very low

Only limited ground investigation has been undertaken onsite around Edgson House. An intrusive ground contamination investigation is required to characterise the contamination condition of the site, considering soil, groundwater and ground gases. The objectives of the ground investigation will be to characterise the ground conditions and to enable quantitative risk assessment of the potential plausible pollutant linkages identified in the conceptual model and preliminary risk assessment, taking into consideration the future use of the site. The proposed scope of the ground investigation is included within the conclusions of this report (Section 6).

It is anticipated that a staged contaminated land planning condition will be placed on the future consent for development, which will include a requirement for investigation, risk assessment and remediation (based on the outcome of the assessment). The remediation strategy and verification plan will need to be defined and agreed with the Westminster City Council contaminated land officer prior to commencement of development. Records to verify the completion of the remediation strategy will need to be maintained and incorporated into a verification report, to be reported after implementation of the scheme.

1 Introduction

1.1 Background

Westminster City Council is preparing a scheme for the redevelopment of the Ebury Bridge Estate. The scheme comprises a residential-led development, comprising new homes, a new public square, retail and community uses, parking and landscaping.

Ove Arup and Partners Ltd (Arup) has been appointed by Westminster City Council to provide ground contamination consultancy services for the scheme. This report presents a desk study and preliminary risk assessment and is intended to support the planning application for the redevelopment.

The objectives of this report are as follows:

- To identify and assess relevant sources of information concerning historical site uses, environmental setting, site sensitivity, ground conditions and the potential for ground contamination at the site and in the surrounding area.
- To assess the potential for ground contamination and undertake a preliminary risk assessment based on a conceptual site model, considering risks associated with the construction and operational stages of the proposed development.
- To identify next steps, including requirement for ground investigation and further contamination assessments.
- To provide information sufficient to support the planning application and to satisfy the requirement for a preliminary risk assessment, which is expected to comprise the first stage of the future contaminated land planning condition.

1.2 Scope of work

The scope of work for this desk study and preliminary risk assessment comprises the following:

- Undertake a review of desk-based information collated for the site concerning historical and current site uses and provide an assessment of the potential for ground contamination and nature of any contaminative sources.
- Outline the local geology, hydrogeology and hydrology conditions and provide an appraisal of the environmental setting and site sensitivity.
- Undertake an environmental reconnaissance survey to assess the current site configuration and condition.
- Consider relevant information and details of the proposed development to inform an initial conceptual site model and preliminary risk assessment, to assess potential implications from ground contamination to the development.
- Provide recommendations for the redevelopment of the site and identify requirements for intrusive ground investigation.

This desk-based ground contamination preliminary risk assessment has been prepared in general accordance with the National Planning Policy Framework and BS10175:2011+A2:2017 Investigation of potentially contaminated sites, Code of practice [1].

1.3 Information sources

This report provides an assessment of the latest desk-based information for the site. The report is presented based on the information summarised below and referenced within subsequent sections.

- A Groundsure environmental search report, dated May 2019. This comprises environmental sensitivity maps and permitting records (EnviroInsight), geological sensitivity maps and records (GeoInsight) and historical ordnance survey maps and Goad insurance plans (MapInsight), and is presented in Appendix B [2].
- An environmental search report provided by Westminster City Council in May 2019 which is presented in Appendix C [3].
- An environmental reconnaissance survey of the site was conducted on 16 April 2019. The survey is described in Section 2, and associated photographs are included in Appendix D.
- Previous ground contamination assessments and ground investigation information used to support earlier planning applications for the site.
- Web-based databases including the British Geological Survey (BGS), Westminster City Council Planning Portal, Grace's Guide and MAGIC.

1.4 Limitations

This report has been produced by Arup for use by Westminster City Council in connection with the proposed redevelopment of the site. It is not intended for and should not be relied upon by any third party except as provided for in Arup's agreement with Westminster City Council.

Arup has based this desk study on the sources of information detailed within the report and believes them to be reliable but cannot and does not guarantee the authenticity or reliability of 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.

This report has 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 in this report to be reassessed in the light of the circumstances.

This report does not present a survey or assessment of the location, condition or liabilities associated with hazardous materials in the building fabric such as (but not limited to) asbestos containing materials or lead.

It does not present a risk assessment for the potential presence or disturbance of unexploded ordnance (UXO) at the site.

2 The site

2.1 Site location

The site is in Pimlico within the City of Westminster centred approximately at National Grid Reference 528583E 178352N. The site is bounded by Ebury Bridge to the north, a Network Rail owned access road to the east, which services the British Transport Police building (offsite to the south), with the major railway lines servicing Victoria Station beyond, access roads to the Grosvenor Waterside Development to the south, and Ebury Bridge Road to the west. The Chelsea Barracks redevelopment site is beyond Ebury Bridge Road to the south west. The River Thames is located approximately 300m to the south.

The site is roughly a trapezium-shaped land of approximately 1.9ha and is approximately 250m by 95m in plan. A site location is shown in Drawing 1.

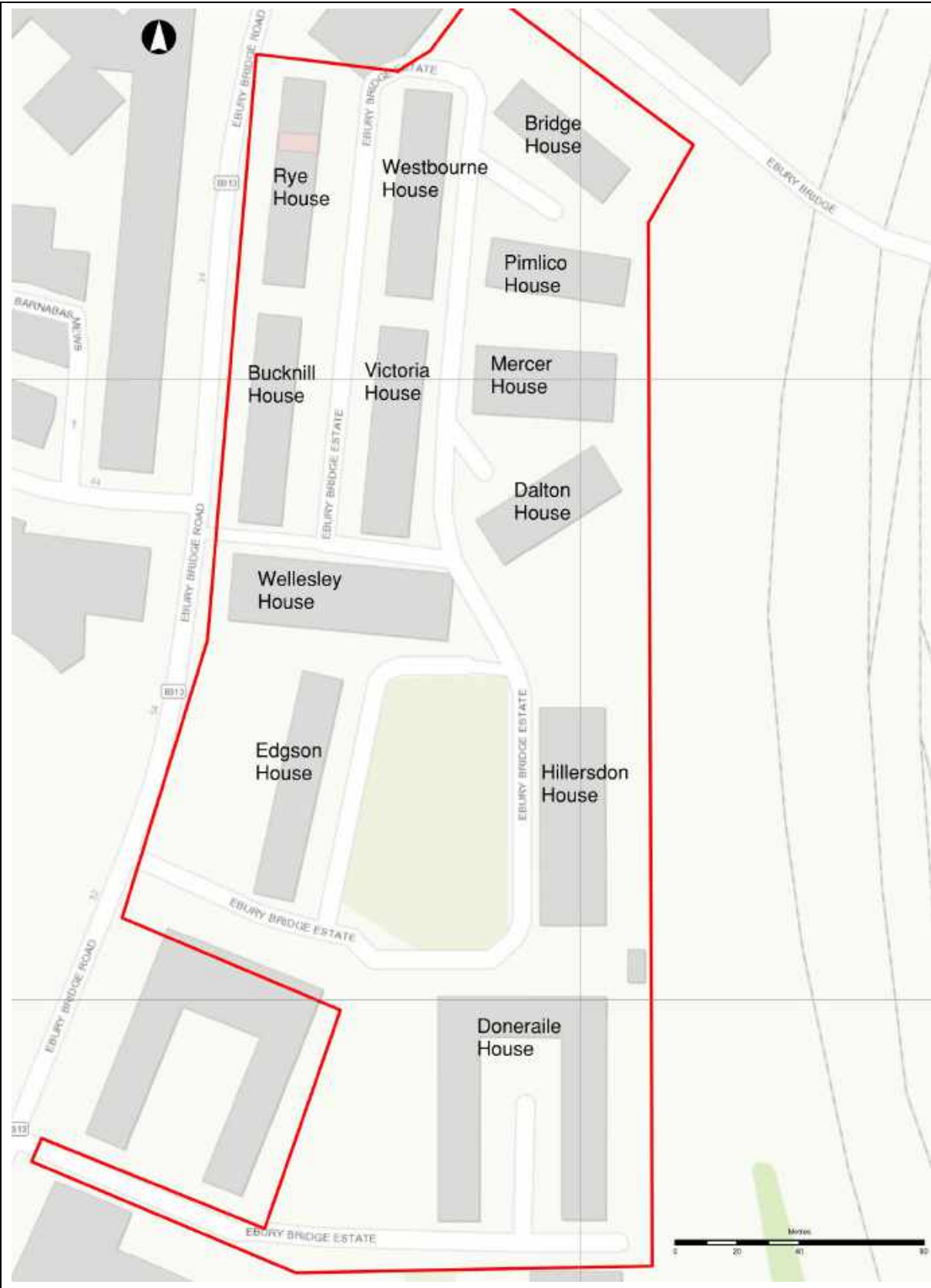
2.2 Current site uses

An environmental reconnaissance survey of the site was undertaken on 16 April 2019. The site is currently occupied by 13 multi-storey (between five and nine storeys) residential apartment buildings. The site configuration is shown on Figure 1. Details of the existing onsite buildings are summarised in Table 1. The three buildings in the west each have a single storey basement. Rye House and Bucknill House, have commercial units on the ground and basement levels including offices, several cafes and restaurants and a dry cleaner under Bucknill House.

Table 1 Description of existing on-site buildings

Building (date of construction)	Main features and description
Doneraile House (1934-38)	Six storey residential brick building with a central courtyard. The building was fully occupied at the time of the walkover.
Hillersdon House (1934-38)	Six storey residential brick building. The building had been vacated.
Edgson house (1953-55)	Nine storey former residential brick building with a single storey basement. The building was undergoing soft strip prior to demolition.
Wellesley House (1929-31) and Wainwright House (1980s)	Five storey residential brick building reducing to the three storeys in the east (Wainwright House). The buildings had been partially vacated.
Dalton House (1929-31)	Five storey residential brick building. The building had been vacated.
Victoria House (1929-31)	Five storey residential brick building. It was fully occupied.
Bucknill House (1929-31)	Five storey residential brick building with a single storey basement and commercial properties on the ground floor. It was occupied with residents.
Mercer House (1929-31)	Five storey residential brick building. It was partially occupied.
Pimlico House (1929-31)	Five storey residential brick building. It was partially occupied.
Rye House (1929-31)	Five storey residential brick building with a single storey basement and commercial properties on the ground floor. It was fully occupied.
Westbourne House (1929-31)	Five storey residential brick building. It was fully occupied.
Bridge House (1929-31)	Five storey residential brick building. It was partially occupied.

Figure 1 Current site uses







During the walkover Westminster City Council personnel advised that the apartments have individual gas fired boilers and there were no fuel tanks present onsite. This was corroborated by the reconnaissance survey.

Externally the site comprised access roads, parking spaces and lock-up style garages, soft landscaping and recreational grounds. A park containing semi-mature trees, lawn and a children’s play area was in the south between Edgson House and Hillersdon House. A multi-use games area (MUGA) was to the south of the park and to the west of Doneraile House.

A series of photos depicting site taken during the environmental reconnaissance survey are shown in Table 2 together with a description of potential contaminative sources. The main features of site are shown on Drawing 1.

Table 2 Photos of site taken during the Arup site walkover depicting features on site

Edgson House demolition area	
	
Edgson House was within hoarding and under the control of a demolition contractor. The building was undergoing soft strip prior to demolition. The external area comprised paved surfaces and planting, with a generator and site containers on the paved area to the west of the building. Access was gained to the basement which was used as a recreational space, general storage and a washing and laundry room (in the north).	
Building uses	
	
The buildings predominantly comprised residential apartments from the ground floor except for the basement and ground floor of Rye House and Bucknill House. Commercial uses included small commercial premises comprising: office space (property services, Ebury Regeneration Base), take-away and café, retail (newsagent, pharmacist, salon, interiors) and a small ‘dry cleaners’ (shown in the photo above) in Bucknill House.	

Electricity substations





Two electricity substations were located adjacent to the eastern boundary of the site; in the south eastern corner immediately south of Doneraile House, and next to Dalton House. The substations were housed within secure masonry structures over a concrete slab. There was no evidence of damage or forced entry and externally the buildings appeared to be in good condition.

External areas



The externals included asphalt surfaced roadways and car parking areas. Lock-up style garages were located in the centre of the site to the north of Hillesdon House. The garages were single-storey masonry structures with a concrete slab. They appeared to be secure and well-maintained, there was no evidence of fuel spillage or staining of the ground externally. The garages were not accessed.

Below ground plant rooms	
	
<p>Two small below ground plant rooms were located adjacent to the main entrance to Victoria and Westbourne Houses. The spaces were of masonry construction with an access hatch in the roof, approximately 1m above external ground level. It was not possible to enter the spaces, but from hatch level the space appeared to contain electrical cupboards, and possibly a pump (there was a slight odour of lubricating oil), no tanks, chemical or fuel storage were observed at the time of the walkover. The flooring comprised a concrete slab.</p>	
Grosvenor Canal	
	
<p>A retaining wall supporting Ebury Bridge formed the northern boundary of the site. An infilled archway was present which is understood to be a remnant feature showing the alignment of the former Grosvenor Canal which was historically in the east of the site (north to south orientation).</p> <p>Details of the canal have been investigated from archive sources. Based on historical mapping the canal is approximately 24m wide in the north and 14m wide in the south of the site. Based on records to the south of site the canal was approximately 7.8m wide and the basin is approximately -0.5mOD. The base slab is approximately 0.6m thick; i.e. the excavation level is approximately -1.1mOD.</p>	

<p>The site is generally level, ranging from 4.1m to 4.5m Ordnance Datum (OD). A retaining wall forming the approach to Ebury Bridge which is at approximately 6mOD adjacent to the northern boundary of the site.</p> <p>At the time of the walkover, it was not possible to access the underground plant rooms near Victoria and Westbourne Houses. Additionally, access was not gained to the dry cleaners and therefore the onsite operations or the storage of any solvents or chemicals, including any incidents of spillages. Building surveys will be carried out prior to demolition and these will be reviewed to inform the subsequent assessments.</p> <h3>2.3 Surrounding area</h3> <p>The surrounding area comprises a combination of residential and commercial uses to the north, west and south. The site is bounded in the east by Network Rail land. The key features within the immediate vicinity of the site are summarised in Table 3.</p> <p>Table 3: Photos of the offsite fuel station taken during the Arup site walkover</p>	
Description	Photo
<p>To the east the railway lines that service London Victoria station along with the British Transport Police (BTP) building exist at a similar level than site. Beyond the railway lines, there are further residential and commercial premises.</p> <p>The photo is of the access road along the eastern boundary of site and the railway lines from Ebury Bridge (looking south).</p>	
<p>Across Ebury Bridge to the north of the site, a three-storey high electricity substation is located, in part of a former steel engineering works building. It was converted to a substation by the 1991 historical mapping and remains in operation.</p>	

Description	Photo
Belgravia Garage, is located approximately 15m to the west of the site. The garage was used as a fuel filling station from 1955 to 2003. Since 2003 the site was used for car cleaning and miscellaneous vehicle maintenance activities. The canopy of the fuel station remains insitu and the forecourt appears to have been undisturbed. Based on observations from street level it is unlikely that the underground tanks and infrastructure, such as pipes or fuel tanks, have been removed.	

2.4 Proposed development

The proposed development comprises demolishing the existing buildings and the construction of 10 new residential buildings with some ground floor units intended for commercial use. The buildings are proposed to be between eight and 19 storeys. The buildings will be surrounded by a mixture of soft and hard landscaping comprising lawns, roads and pavements.

The six higher blocks, between 13 and 18 storeys, are intended to run along the east of site adjacent to the Network Rail land. The four lower blocks are proposed adjacent to Ebury Bridge Road. The structures are to be constructed on piled foundations terminating in the London Clay. It is proposed that Building B01, B06, B07, B09 and B09 have a single level basement predominantly for plant.

The site will be subject to phased demolition and development commencing with Phase 1. Phase 1 comprises the demolition of Edgson House, Hillersdon House, Wellesley House, Wainwright House, and Dalton House and construction of B07 and B08. It is proposed that access to the Phase 1 development area will be from Ebury Bridge Road (in the west).

3 Site history and industrial land-use

- This section describes the historical development of the site based on the following data sources:
- Groundsure Location Intelligence (2019) *Groundsure insight Report GS6014872 (dated 09-05-2019)* (reproduced as Appendix B) [2].
 - Westminster City Council (2019) *Environmental Search report (dated 21st May 2019*. Ref: 19/19221/EE1CL (Appendix C) [3].
 - White Young Green (2018) Edgson House Demolition, Geo-Environmental Assessment Report. Ref: A0111383 [5].
 - Capita (2014) Ebury Bridge Estate, Westminster. Phase 1 Desk Study Report. Ref: CS/071088/Phase 1 [7].
 - Google Inc (2019) *Google Earth*. Accessed 17th May 2019 [13].
 - Grace’s Guide to British Industrial History (2015) *National Gauge Factories*. Accessed 12th July 2019. URL: https://www.gracesguide.co.uk/National_Gauge_Factories [12].

3.1 Site history

A description of the site history, detailing the contaminative land uses identified on the site is presented in Table 4. The configuration of site during the key stages of development are shown in Figure 1.

The Grosvenor Canal was the first development that occurred on the site. The Grosvenor Canal was built by the Chelsea Water Company in 1823 up to the Victoria bus terminus to provide water supply for the company’s reservoirs. The canal was initially dug as a navigable tidal inlet in 1725 to provide waterborne access from the Thames to their works.

Table 4 Site history and contamination potential (onsite features)


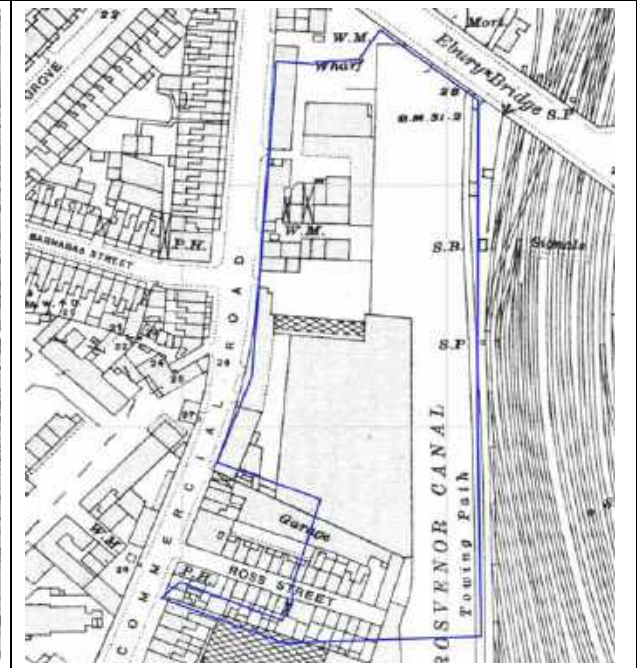
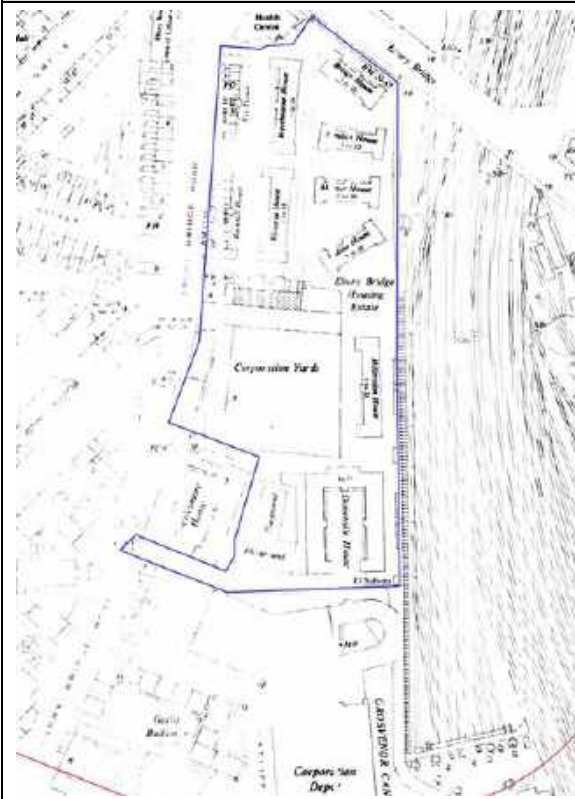
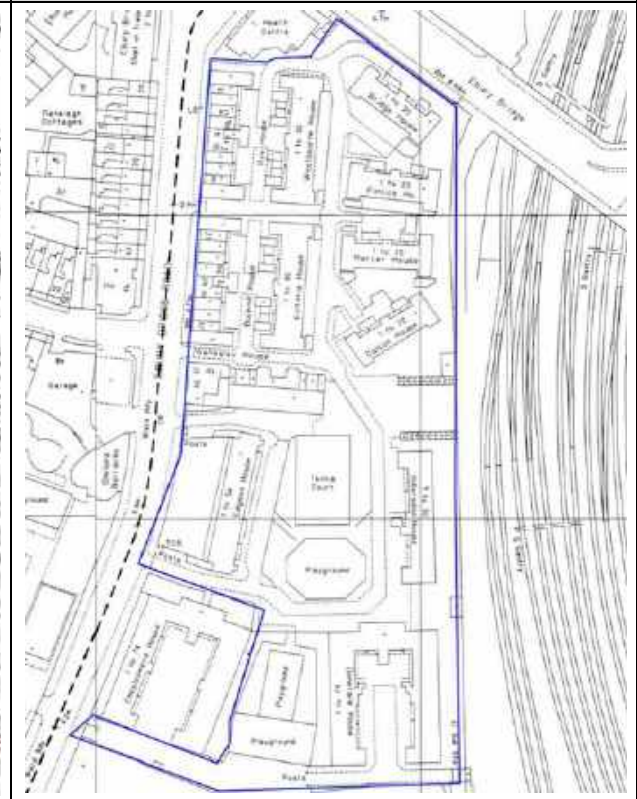
Date	Onsite feature	Contaminative land use
1700s	The Grosvenor Canal was initially dug as a tidal inlet in 1725 to provide access from the Thames to the Victoria Bus terminus. The 1746 Rocque map shows several cuts and creeks in the north of the site along with ‘Chelsea Bridge’ which is now known as Ebury Bridge and shown as market garden ground on the 1800 Milne map.	None identified
1823 – 1929	Construction of the canal was undertaken in 1823. It was between 14m and 24m wide and covered much of the eastern half of site. Following the 1813 Horwood map, the western section of the site had several industrial buildings associate with the canal. These included saw mills with a crane, pump and weighing machine and a large building annotated at ‘stable and fodder’. Paint, coal and timber stores are also shown. The southern section of the site shows residential properties. A detailed description of building uses from the 1901 Goad map of the site are summarised below:	Infilled cuttings and waterways Saw mill Railway land Demolished former structures Paint and coal stores Ancillary activities such as fuel and oil storage

Date	Onsite feature	Contaminative land use
	<ul style="list-style-type: none">• In the north of site: St George’s Wharves occupied by offices, dwelling, stables, fodder storage, stores, smithy, timber stores, paint shop and coal store.• In the middle of the site: Geo Smith & Co Ltd Saw Mills occupied by offices, timber store and workshops, saw mill, timber shed for oven drying and travelling cranes.• In the south of the site: Occupied by dwellings, London General Omnibus Co Ltd Stables and Girls refuge home	
1916 - 1949	From 1916 a motor works was shown in broadly the same footprint of the former saw mills, but with a different building configuration. It was owned by Wolseley Motors and latterly Austin Motor Company. It was one of the National Gauge Factories during the second world war, used to manufacture parts for vehicles. The canal was partially backfilled between 1928 and 1929 prior to the construction of some of the existing onsite residential properties. Sections of the canal to the south still exist, but only as a water feature that is separated from the Thames by a series of locks and not as a shipping canal. It is unknown what material was used to backfill the canal. It is possible that the canal lining remains in-situ.	Infilled canal Motor manufacturing works Demolished former structures Infilled canal Ancillary activities such as fuel and oil storage
1949 - 1957	The motor works was demolished in by 1949 and replaced with a corporation yard. The corporation yard Associated depots are located immediately south of the site boundary. All the residential properties that exist today, except for Edgson House, are all constructed by this time.	Corporation yard works depot. Vehicle washing and storage. Fuel refilling
1953 - present	The corporation yard is no longer mapped from 1951 and has been replaced by Edgson House. The configuration of the buildings has remained the same to date. Different businesses have occupied the shops along Ebury Bride Road, such as the current dry cleaners.	Dry cleaning operations using solvents and other chemicals Fuel, tanks

- In summary the site has historically been subject to at least four phases of development, comprising:
- Grosvenor Canal and associates factories and mills (1823 to 1929).
 - Wolseley motor works (1916 to 1949).
 - Corporation yard (1949 to 1957).
 - Residential development comprising the contemporary Ebury Bridge Estate. The buildings were constructed in three phases: Phase 1 1929 to 1931; Phase 2 1934 to 1938; and Phase 3 1953 to 1955.

Map extracts covering the four key stages of site redevelopment are presented in Figure 2.

Figure 2 Extracts from mapping

1746 Rocque map	1916 OS map
	
This shows the site before any development (taken from Arup archives).	This shows Grosvenor Canal just prior to its closure and backfilling taken from Groundsure mapping
Extract from 1950-51 OS map	Extract from 1990-91 OS map
	
This map shows the Corporation Yard and Depot immediately south	This shows the site following the development of Edgson House taken from Groundsure mapping

3.2 Offsite history

A description of the history of the surrounding area detailing the contaminative land uses identified within 250m of the site boundary is presented in Table 5.

Table 5 History of the surrounding area (within 250m)

Date	Surrounding area	Activities linked to contamination
1746 to 1866	The surrounding area is shown as predominantly marshland with some properties and managed agricultural land in Rocque mapping from 1746. The next mapping in 1866 shows the surrounding area as having significant residential development. A timber yard is shown towards the River Thames.	Extensive development of the surrounding area resulting in industrial practices such including industrial and residential buildings.
1866 to 2008	Chelsea Barracks, an operational army barracks, is located across Ebury Bridge Road. These were closed in 2008 and remediation for residential development began in 2014.	Operational army barracks with associated fuel storage
1949 to present	A sheet metal engineering works was constructed and shown north of the site immediately adjacent to Ebury Bridge from 1949 to 1991. Following this an electrical substation is shown.	Sheet metal engineering works Electricity substation
1957 to present	A filling station on the opposite side of Ebury Bridge Road. Whilst the filling station is no longer in operation, this site is now used as a carwash and appears to have not changed significantly in configuration.	Fuel spillages Underground tanks and pipes
2008 to present	Chelsea Barracks were closed in 2008 and remediation began in 2014.	Remediation of the Chelsea Barracks site is underway, including the removal of tanks. The development comprises a large basement removing all sources from that site.

3.3 Regulator information

A contaminated land search request was made to Westminster City Council. In addition, a review was undertaken of the readily available online Local Authority records, including recent planning records and relevant regulatory information contained within the Groundsure report (Appendix A).

A copy of the Westminster City Council environmental search report is included in Appendix C) [3]. The pertinent information comprises historical map extracts dating from 1870 to 1970 (and reviewed to inform the assessment of site history, see Section 3.1). The key information provided s summarised below:

- There are no ‘special sites’ registered under the Environmental Protection Act 1990 and no notices have been served under Part 2A Section 78 in Westminster. It is noted that the Council has not yet produced a schedule of land that will require further assessment under the Environmental Protection Act 1990, Part 2A.
- Two historical use designations have been assigned to the site, comprising: Industrial Unspecified (in the north of the site) associated with the former factories and mills (1823

- to 1929); and Engineering works (in the south east of the site) associated with the motor works (1916 to 1949) and Corporation yard (1949 to 1957).
- Offsite sources are shown, comprising railway land (to the east); engineering works (to the north) and defence land (former Chelsea Barracks to the south west).
 - The sources of information listed by Westminster City Council comprise: Westminster Archives, London Metropolitan Archives, Petroleum Officers (London Fire and Emergency Planning Authority) and Environment Agency.

3.3.1 Online planning records

A planning application pertaining to a development on site was submitted and decided upon in 2016. Details of this are summarised in Table 6. A geoenvironmental desk study produced by Capita [7] was submitted in support of this planning application and information contained within this report has been considered in this study. No other relevant planning records for the site are available on the Westminster City Council planning portal.

Table 6 Online planning applications

Year	Planning Application	Description of Works
2016	14/01295/COFUL	Demolition of eight existing buildings and construction of four residential properties. The site boundary is the same as the proposed development, but the demolition and construction plans vary from current proposals.
2019	18/08372/COFUL	Demolition of Edgson House; backfilling of basement, regrading of the site and laying out of portacabins for use for a temporary period of up to three years for a variety of social and community uses.

The reports associated with the onsite planning applications have been reviewed to inform the relevant sections of this report. The information is predominantly desk-based. The site has not been subject to site wide ground investigation.

The planning records do not indicate any recent applications for potentially contaminative or land uses or permitted activities.

4 Geological and environmental setting

4.1 Introduction

This section describes the mapped geology and anticipated ground conditions beneath the site. Reference has been made to the following data sources:

- British Geological Survey viewers and borehole logs [8][9];
- Groundsure GeoInsight historical OS maps and historical data report, including geological maps Plans[2];
- WYG Edgson House demolition, geoenvironmental report containing a desk study and details of a shallow ground investigation round Edgson House [5];
- Arup Chelsea Barracks ground investigation report [14] and
- Arup Grosvenor Waterside geotechnical interpretive report [15].

Records, including nearby boreholes, indicate that the site is underlain by Alluvium (between 1m to 3m thickness) and River Terrace Deposits (RTD) up to 10m thick over London Clay bedrock. The Lambeth group, Thanet Sands and Lewes Nodular Chalk exist at depth beneath the London Clay.

Table 7 Anticipated stratigraphic sequence for the site

Strata	Description	Estimated top of stratum (mOD)		Thickness (m)
		Undisturbed	Infilled canal	
Made Ground	Hardstanding or topsoil overlying variable Made Ground comprising gravelly sand. Gravel of brick, concrete, sandstone, slate and granite with boulder sized mortared brick work and concrete encountered during the WYG ground investigation [5].	Ground level (approximately 4.4mOD)		2.4
Infilled canal	Hardstanding or topsoil overlying variable Made Ground. No ground investigation is available in this area, so little is known about the composition of the material.	Ground level (approximately 4.4mOD)		6.4
Alluvium (if present)	Soft to firm compressible silty clay with layers of silt, sand, peat and basal gravel.	2.0	-	1
RTD (if present)	Sand and gravel with lenses of silt, clay and peat.	2.0	-2	3-6
London Clay	Blue-grey or grey brown, silty clay and clayey silt with some sandy clay layers.	-5.5		37
Lambeth Group	Silty, sandy clay with some layers of sand and gravel	-44		18
Thanet Sand	Pale yellow-brown fine-grained sand, sometimes clayey with a flint base from nearby BGS boreholes.	-61		11
Chalk	Chalk with occasional flints.	-73		Unknown

4.1.1 Made ground

Made Ground will be present at varying thicknesses across the site. It is likely that there will be a difference in composition between the materials used to infill the canal and the rest of site. The canal is shown as being infilled at a similar time to the demolition of the surrounding buildings. As such material arising from these demolition activities may have been used to infill the canal which was a common practice at the time.

4.1.2 Superficial geology

Alluvium overlying RTD is likely to be present beneath the Made Ground in the undisturbed section of the site. The Alluvium is likely to have been removed during the construction of the canal.

4.1.3 Bedrock geology

The London Clay Formation is the bedrock geology at the site. It underlies the superficial deposits and is likely to be present at between 8m and 10m below ground level (bgl). The London Clay Formation consists of low permeable, silty clay soil and information from BGS boreholes [8][9] indicates it is likely to be around 40m thick beneath the site.

The London Clay is underlain in sequence by the Lambeth Group, the Thanet Formation and the Chalk at depth.

4.1.4 Soil and groundwater quality

A brief shallow ground investigation was carried out near Edgson House in 2016 by White Young Green (WYG).

The shallow ground conditions were investigated from six trial pits (four hand-excavated and two machine dug trial pits). Based on the description in the report the ground conditions comprised Made Ground (which was not fully penetrated), typically soft to firm sandy gravelly clay (in the east of the site) and clayey, gravelly sand (in the east) with inclusions of brick and concrete. No groundwater was encountered by the investigation which extended to a depth of 1.5m.

13 soils samples from the shallow soils (0.07m to 0.8m) were analysed for a suite of determinands including: metals, metalloids and general inorganics; asbestos; petroleum hydrocarbons (>C₁₀ to C₄₀); benzene, toluene, ethylbenzene and xylenes (BTEX); and speciated polycyclic aromatic hydrocarbons (PAH).

Levels of chemical determinands in the shallow soils were low. WYG noted that concentrations of lead in five of the soil samples was detected above generic assessment criteria (GAC) derived for a residential land use with consumption of homegrown produce in the range of 217mg/kg to 325mg/kg. All concentrations of determinands were below GAC for commercial or public open space land uses. Asbestos was detected at low concentrations under microscopic analysis in four samples, at concentrations of typically <0.001% and 0.0072%w/w in one sample. All other determinands were below residential GAC.

The risk to the human health to construction workers and future site users associated with the meanwhile use was assessed by WYG to be low.

4.2 Hydrogeology and hydrology

The ground conditions are expected to comprise a layer of Made Ground over Alluvium, RTD and London Clay. The Lambeth Group, and Chalk are present at depth.

The Alluvium is classified as a secondary (undifferentiated) aquifer, and the RTD is a Secondary A aquifer. The upper aquifer is underlain by a significant thickness of London Clay which is classified as unproductive strata and effectively forms an aquiclude, separating the upper aquifer from the lower principal aquifer (Chalk and basal sands) at depth beneath the site.

The London Clay and the clayey portions of the Lambeth Group formations act as an aquiclude, impeding flow between the two aquifers. However, it is likely that much of this stratum will have been removed during the construction of the canal and is therefore no longer present in much of the site.

Given the distance to the River Thames, no tidal variation of the groundwater at site is expected. Regionally, groundwater is assumed to flow towards the River Thames.

From the early 18th century, abstraction of groundwater in the London basin caused the groundwater level in the lower aquifer to be artificially depressed. This trend continued until the 20th century, when industrial demand for water started to dwindle. From about 1965, as the rate of abstraction of water needed by industry continued to fall, the groundwater level in the lower aquifer in London began to rise. In principle, if left unchecked, the rising groundwater in London could regain its pre-industrial levels.

Since the late 1990s, a long-term programme of dewatering (undertaken by Thames Water Ltd in association with the Environment Agency under the GARDIT programme) has started to arrest and reverse the increase in groundwater levels in London.

Environment Agency data issued in June 2017 for the London basin indicate that the groundwater level in the lower aquifer (Chalk) in the general vicinity of the site is approximately -20mOD. This level is expected to recover to 0mOD in the long term.

The nearest groundwater abstraction is 283m south for horticultural watering. The nearest discharge point is 243m west for the release of process water. The site is not located with a groundwater source protection zone (SPZ).

The nearest surface water to the site is the Grosvenor Canal which is approximately 100m to the south of the site. The River Thames, approximately 300m south of the site. The nearest surface water abstraction is 302m south, providing navigation top up water. The nearest surface water discharge is for trade effluent 286m south of the site.

There are no recorded pollution incidents to controlled water listed within 250m of the site.

4.3 Ground gas and vapours

The composition of the Made Ground placed in the canal as backfill is currently unknown but is likely to be more than 4m thick. If there is significant organic or putrescible material it poses the potential source of ground gas generation.

4.4 Radon

The site is within a lower probability radon area where less than 1% of homes are estimated to be at or above the Action Level (200Bq/m³). The published guidance indicates that no radon protection measures are necessary in the construction of new dwellings or extensions for this type of classification.

4.5 Sensitive environmental land-uses

There are no sensitive environmental land uses such as nature reserves, sites of special scientific interest (SSSI), or world heritage sites recorded in the Groundsure report [2] within 500m of the site.

5 Preliminary risk assessment

5.1 Risk classification methodology

The method for risk evaluation has been based on a qualitative assessment taking into consideration the magnitude of the potential severity of the risk as well as the probability of the risk occurring. The definition of risk and risk characterisations are summarised in Appendix A1 which sets out the risk assessment methodology.

5.2 Potential sources

Potential current and historical sources of contamination have been identified and are presented in Table 8 and Table 9. Drawing 2 shows the location of the potential sources.

Table 8 Potential onsite sources of contamination

Source	Contaminants of Concern	Comments	Ref
Infill to Grosvenor Canal (1929)	Metals and metalloids, sulphates, hydrocarbons (TPH and PAH), asbestos. Other potentially unknown contaminants Ground gases and vapour	Unknown infill to canal (Made Ground), which could include wastes from local industries and demolition of historical surrounding buildings.	S1
Existing dry cleaners shop along Ebury Bridge road	Volatile and semi volatile organic compounds (VOCs and SVOCs) specifically chlorinated solvents	The main cause of ground contamination from dry cleaners is generally from spills and uncontrolled disposal to drains. There is a potential for associated contamination in soils and groundwater (perched and upper aquifer).	S2
Saw mills, tanks and coal, paint and timber stores, located in the centre of the site (1872-1916)	Metals and metalloids, various types of hydrocarbons and VOCs, asbestos	Potential for leaks and spills from fuel/oil storage. Asbestos may be present from any uncontrolled demolition of structures. There is a potential for associated contamination in soils (primarily Made Ground) and groundwater (perched and upper aquifer).	S3
Motorcar works, and cooperation depot (mapped 1916-1958)	Metals and metalloids, hydrocarbons, asbestos and VOCs (solvents and degreasers)	The area may have been used for servicing vehicles, including fuel and oil storage. There is a potential for associated contamination in soils and groundwater (perched and upper aquifer). Asbestos may be present in Made Ground from any uncontrolled demolition of structures.	S4
Alluvium	Ground gas	Underlying Alluvium soils are a potential source of methane due to naturally occurring organic matter. The Ground Gas Handbook [20] states that gas in peat is ‘historically generated’ and is generally trapped or adsorbed in the soil so that actual emission rate will be low. The risk from lateral migration is negligible.	S5

Table 9 Potential offsite sources of contamination

Source	Contaminants of Concern	Comments	Ref
Fuel station (15m west, closed)	Petroleum hydrocarbons Vapours	Leaks and spills of fuel from filling and tanks may have affected local groundwater quality in the upper aquifer. Hydrocarbons are a potential source of ground vapours.	S6
Railway lines/sidings (adjacent to the east from 1879)	Metals and metalloids, asbestos, hydrocarbons	The railway sidings and associated activities may have affected local groundwater quality in the upper aquifer.	S7

5.3 Potential receptors

Based on the findings of the desk study review, the potential receptors associated with the site are summarised in Table 10.

Table 10 Summary of potential receptors

Potential receptor	Sensitivity	Ref
Human health		
Groundworkers and site visitors during construction	Moderate: workers will come into direct contact with the soil and without mitigation, dust could affect site visitors.	R1a
Neighbours during construction	Low: commercial and residential users which could be impacted during construction from dust and nuisance odours.	R1b
Site residents, workers and visitors during operation	Moderate: the proposed residential development comprises apartments and managed external soft landscaping. There is a potential for contact with residual soils in landscaping.	R2
Maintenance workers during operation	Moderate: the proposed development contains areas of new and existing soft landscaping which will require ongoing maintenance.	R3
Controlled waters		
River Terrace Deposits (RTD) [upper] secondary A aquifer	Moderate: the RTD (secondary A aquifer) is anticipated at shallow depth beneath the site. Groundwater quality may be impacted by historical industrial uses on the site and surrounding area.	R4
Chalk [lower] principal aquifer	Moderate: The site is not located in a groundwater source protection zone (SPZ). The closest abstraction to site is 220m to the west. The Chalk is beneath a significant thickness of the London Clay which is of negligible permeability and regarded as an aquiclude.	R5
Surface waters	Low: The closest surface water receptor is the Grosvenor Canal which is approximately 100m south of the site. The River Thames, approximately 300m to the south.	R6
Building materials		
Onsite buildings, materials and services	Low: building materials and services will come into direct contact with soils and there is potential for these to be affected by contamination. However, design can be used to mitigate the effects of any contamination	R7

Potential receptor	Sensitivity	Ref
Ecological receptors	No designed ecological receptors The development contains areas of new and existing soft landscaping and plants could be affected by phytotoxic determinands.	R8

5.4 Potential pathways

Based on the findings of the desk study review, the potential contaminant pathways associated with the site are summarised in Table 11.

Table 11 Summary of potential contaminant pathways

Potential contaminant pathway	Efficiency of pathway	Ref
Ingestion of soil or dust Inhalation of dust or fibres Dermal contact with soil or dust	During construction: especially during bulk earthworks and excavation, including stockpiling and material movement. During operation: limited to areas of soft landscaping or associated with works involving ground disturbance.	P1
Migration of hazardous gas and vapours to confined spaces Inhalation of ground gases or vapours	Migration, including along any preferential pathways (such as utility trenches) and accumulation in confined spaces, such as excavations (during construction) or future buildings.	P2
Plant uptake from soil and human consumption of home-grown produce	The development does not include private gardens. The pathway is only relevant to areas of productive garden, growing fruit and vegetables for human consumption. There is limited potential for this to occur, but some produce may be grown in communal gardens.	P3
Vertical and lateral migration of free phase product (such as petroleum hydrocarbons)	Associated with point sources of contamination such as the dry cleaners, or historical uses such as the motorcar works.	P4
Leaching of contaminants from the soil	Limited to areas of soft landscaping, permeable paving or soakaway drainage, where precipitation and surface water run-off can percolate through Made Ground.	P5
Vertical and lateral migration of dissolved phase contamination	Associated with perched groundwater and upper aquifer. Potential for mobile contamination to laterally migrate both on and offsite.	P6
Creation of preferential pathways during construction	Piled foundations are proposed, however, the piles will terminate within the London Clay and so this is not considered to be a viable pathway to the lower aquifer. Drainage and other service trenches could aid the lateral migration of contamination on and offsite.	P7
Direct contact with construction materials and services	Materials such as below ground concrete and potable water supply pipes will be in direct contact with underlying soils.	P8
Plant uptake	Residual soils may include phytotoxic elements. This can be managed through specification of appropriate new planting medium for landscaped areas	P9

5.5 Initial conceptual site model (CSM)

Based on the potential sources, pathways and receptors identified above, an initial CSM for the site has been produced as Table 12, which includes a risk assessment of the potential pollutant linkages.

Table 12: Initial CSM and assessment of potentially unacceptable risks

Potential Pollutant Linkage				Classification / Risk Estimation			Assessment of potentially unacceptable risks
Ref.	Source	Pathway	Receptor	Probability	Consequence	Risk	
Risk to human health during construction							
PPL1	Contamination of the soil and groundwater associated with: S1 – infilled canal S2 – dry cleaners S3 – Saw mills, tanks and coal, paint and timber stores	P1 – Dermal contact and ingestion of soil and dust. P2 – migration and inhalation of ground gases or vapours	R1a – groundworkers and site visitors during construction	Likely	Medium	Moderate	The PPL could present an unacceptable risk without mitigation, which should be further assessed as part of the proposed ground investigation. Potential mitigation is likely to include industry good practice and environmental controls such as, appropriate personal protection equipment (PPE) and good site hygiene (site workers), occupational air monitoring prior to, and during entry of confined spaces, and dust suppression.
PPL2	S4 – Motorcar works	P1 – Inhalation of dust	R1b – neighbours during construction	Low likelihood	Medium	Low to moderate	Appropriate pollution prevention measures and environmental management, to include active dust suppression, will be required during construction.
Risk to human health during operation of the development							
PPL3	S1 – infilled canal S2 – dry cleaners S3 – Saw mills, tanks and coal, paint and timber stores S4 – Motorcar works S5 – Alluvium S6 – Offsite petrol filling station	P1 – Dermal contact and ingestion of soil and dust. Inhalation of dust	R2 – future site users (residents, workers and site visitors)	Likely	Medium	Moderate	The PPL could present an unacceptable risk without mitigation, which should be further assessed as part of the proposed ground investigation. Potential mitigation may include measures such the placement of clean cover layers in soft landscaped areas.
		P2 – migration and inhalation of ground gases or vapours		Likely	Medium	Moderate	There is a potential for sources of ground gases (and possibly vapours) to be present at the site. This will be assessed by ground investigation to allow characterisation of the gas regime and requirement for gas protection measures to be adopted in new buildings.
		P3 – consumption of home-grown produce		Unlikely	Medium	Low	There are no proposed private gardens onsite and productive gardens are not anticipated onsite. If productive beds are proposed potential mitigation may include measures such as the placement of clean cover layers.
PPL4	Any residual contamination in shallow soils (Made Ground)	P1 – Dermal contact and ingestion of soil and dust. Inhalation of dust	R3 – maintenance workers during operation	Unlikely	Medium	Low	The PPL will be further assessed as part of the proposed ground investigation. Any works are likely to be infrequent and for short duration and should be controlled through appropriate good practices and PPE.
Risk of pollution to controlled waters							
PPL5	S1 – infilled canal S2 – dry cleaners S3 – Saw mills, tanks and coal, paint and timber stores S4 – Motorcar works S6 – Offsite petrol filling station S7 – offsite railway	P4 – migration of free phase contamination P5 – leaching of contaminants P6 – migration of dissolved phase contamination	R4 – RTD [upper] secondary A aquifer	Likely	Medium	Moderate	The PPL could present an unacceptable risk without mitigation, which should be further assessed as part of the proposed ground investigation. The principal aquifer is not considered to be a sensitive receptor due to the thickness of the London Clay present in the area. There are no sensitive surface water receptors that are close enough to be impacted from potential contamination originating on the site.
-	-	No pathway	R5 – Chalk [lower] principal aquifer	-	-	-	The Chalk is beneath a significant thickness of the London Clay. There are no known wells onsite connecting the Chalk to surface. The development includes piled foundations which are anticipated to terminate in the London Clay.
PPL6	Any residual contamination in the RTD [upper] aquifer	P4 – migration of free phase contamination P6 – migration of dissolved phase contamination	R6 – surface waters	Unlikely	Mild	Very low	The PPL will be further assessed as part of the proposed ground investigation through characterisation of groundwater quality in the RTD.
Risk to building materials and services							

Potential Pollutant Linkage				Classification / Risk Estimation			Assessment of potentially unacceptable risks
Ref.	Source	Pathway	Receptor	Probability	Consequence	Risk	
PPL7		P8 – direct contact with construction materials and services	R7 – onsite buildings, materials and services	Likely	Mild	Moderate to low	PPL may present an unacceptable risk without mitigation. This will be further assessed as part of the proposed ground investigation and is normally mitigated by appropriate design, including selection of construction material.
Risk to ecological receptors							
-	-	-	There are no designated ecological receptors				N/A
PPL8	Residual potentially contaminated soils after development	P9 - Root uptake	R8 - New planting	Unlikely	Mild	Very low	It is expected that new landscaping will be in imported soils. This can be further managed through specification of appropriate additional thickness of clean soils or barriers for landscaped areas

6 Conclusions and recommendations

6.1 Conclusions

This report has assessed the latest desk-based information from environmental database searches, planning applications, localised ground investigation, and an environmental reconnaissance survey. This data reviewed is robust and has been used to inform the conceptual site model, preliminary risk assessment and design a ground investigation.

The site has a varied history consisting of predominantly industrial use from 1823 up until the 1920s prior to the backfilling of the Grosvenor Canal which occupied the eastern half of the site. Industrial uses including a saw mill with associated coal and paint stores were adjacent to the canal in the west of the site. The majority of the Ebury Bridge Estate was constructed in 1930s. A motor works and later a corporation yard was located on in the area of Edgson House prior to its construction in the 1950s.

Overall the site is considered to have a moderate potential for ground contamination to be present based on the historical and contemporary land uses. However, the site has not been subject to site-wide ground investigation to characterise the ground contamination condition.

The site is anticipated to be underlain by the River Terrace Deposits, which is classified by the Environment Agency as a secondary A aquifer. The principal Chalk aquifer lies at depth beneath the site, however this is protected by a thick layer of London Clay (aquitard). The site is not located within a groundwater source protection zone; the closest abstraction is over 200m from site and the nearest surface water (Grosvenor Canal) is 100m south of site. The environmental sensitivity of the site is assessed to be low.

The preliminary risk assessment and initial conceptual site model have identified several potential pollutant linkages (PPLs) associated with the site and the proposed development. A summary of the PPLs is presented in Table 13.

Table 13: Summary of preliminary risk assessment

Item	Risk characterisation (without mitigation)
Site sensitivity	Low
Potential for significant contamination to be present	Moderate
Risk of harm to human health during construction	Moderate
Risk of harm to human health during operation	Moderate
Risk of pollution to groundwater in the [upper] secondary A aquifer	Moderate
Risk of pollution to groundwater in the [lower] principal aquifer	No pollutant linkage identified
Risk of pollution to surface water courses	Very low
Risk of harm to building materials and services	Moderate to low
Risk of harm to ecological receptors	Very low

6.2 Recommendations

6.2.1 Ground investigation

The risk assessment has identified potential plausible pollutant linkages which have been assessed to pose a low to moderate risk to receptors associated with the site and proposed development. A ground investigation is required to characterise the contamination condition of the site and form the basis of a contaminated land risk assessment. The broad details of this are outlined in Table 11. The assessment will be carried out in accordance with CLR11 Model Procedures for the Management of Land Contamination [16]. Further advice can be sought from CIRIA 552; Contaminated land risk assessment, a guide to good practice [17] and NHBC; guidance for the safe development of housing on land affected by contamination[18]. At this stage it is recommended that generic risk assessments for human health, water and gas and vapour are carried out. The need for detailed qualitative risk assessment should be reviewed with the initial findings of the ground investigation.

The risk assessments will consider the proposed development to assess risks during the construction and operation phases. The outcome of the risk assessments will inform the remediation strategy for the development.

Table 14: Summary of recommended ground investigation

Type of investigation	Rationale
Exploratory holes	
36 boreholes (26 shallow and 10 deep) with standpipes in selected boreholes (gas and groundwater monitoring) and eight trenches covering the site. The placement is based on the current layout, proposed development and historical features.	To investigate the nature and occurrence of the soils existing beneath the site and obtain representative samples to carry out chemical testing.
Soil sampling and testing	
Chemical analysis of the soils recovered from the boreholes. Analysis to include metals, hydrocarbons, PAH, BTEX, phenols, PCBs, asbestos, VOC (including chlorinated solvents) and various other inorganic compounds.	To allow risk assessment of soil contamination existing on site.
Groundwater monitoring and sampling	
Shallow aquifer monitoring to include metals and non-aqueous phase liquids (NAPL). Three rounds of sampling to be taken from six locations. Analysis to include the rounds of samples from boreholes testing for metals, hydrocarbons, VOC (including chlorinated solvents), phenols and various other inorganic compounds.	To establish presence, nature and concentrations of potential contaminants within groundwater and enable risk assessment.
Gas monitoring and sampling	
Shallow ground gas monitoring. Analysis to include eight rounds of in situ monitoring of 11 locations. Measured parameters to include methane, carbon dioxide, carbon monoxide, hydrogen sulphide, oxygen, and VOCs.	To identify the presence, nature and concentrations of any ground gases, and enable assessment of the potential influence they may have on any future development.

6.2.2 Further assessment

It is anticipated that a staged contaminated land planning condition will be placed on the future consent for development, which will include a requirement for ground investigation, risk assessment, remediation (based on the outcome of the assessment) and verification.

The scope of the ground investigation will be based on the outcome of this preliminary risk assessment. The objectives of the ground investigation will be to characterise the ground conditions and to enable quantitative risk assessment (QRA) of the potential pollutant linkages identified in the conceptual model and preliminary risk assessment taking into consideration the future use of the site.

Based on the findings of the QRA, if required, mitigation measures will be recommended with respect to contamination which will be presented in a remediation strategy and a remediation method statement (RMS) where necessary.

After construction and implementation of the remediation measures verification of the works, via documentation and supervision will be required. Any unexpected contamination discovered during the remediation will need to be recorded and for the authority to be notified.

6.3 Assessment and remediation

6.3.1 Approach to development

The preliminary assessment and conceptual model will be updated based on the findings of the ground investigations. A remediation strategy will be developed based on the findings of the ground investigation. Some outline recommendations for the development phase are provided below with more detailed descriptions in subsequent sections.

- Where contaminants are identified an appropriate remediation, strategy will be developed. If contamination of groundwater is identified, then specific clean up may be required depending on the quantitative risk assessment.
- Where asbestos in soils are identified on the Site then the requirements described in the Control of Asbestos Regulations CAR 2012 [21], CIRIA C733 [22] and CAR-SOIL [23] should be adhered to where they apply. An occupational risk assessment should be undertaken by a competent assessor (asbestos specialist) in accordance with CAR 2012 and the associated code of practice to determine the likely exposure resulting from the works and the level of protection and management required by CAR 2012, this will also identify if the works with asbestos will be licensed, notifiable non-licensed work or non-licensed work and what notifications and health surveillance is required.
- Air monitoring should be undertaken during the works to confirm the absence of respirable fibres above the CAR 2012 action levels. A lower detection limit (than used for occupational monitoring), i.e. 0.00001 f/ml, for air monitoring at the boundary, may be appropriate (this is a recommendation from CIRIA C733).
- If significant contamination is identified there are a wide range of potential remediation technologies and options available and the selection process will depend on the type of contamination present, the ground conditions and development. To ensure remediation is based on sustainable principles it will be necessary to use a framework that incorporates sustainable concepts through the decision-making process (concept design, risk

assessment and options appraisal) while still providing protection of health and the environment and achieving public and regulatory acceptance within a reasonable budget.

- The UK Sustainable Remediation Forum (SuRF-UK) has published a framework [24] (via CL:AIRE) for assessing sustainable remediation; describing how it links with the relevant regulatory guidance; the factors to be considered and describing sustainability appraisal tools to evaluate the wider benefits and impacts of remediation. There is great benefit in early consideration of developing sustainable solutions in remediation options during the project. Remediation in its widest definition includes actions to assess potentially contaminated sites or break a source-pathway-receptor linkage and as such includes a wide range of risk management techniques. This approach complements the use of risk assessment and risk management in decision making for contaminated land management.
- Surplus soils arising from the excavations requiring disposal should be disposed of in accordance with the current waste management regulations and guidance or sent to off-site treatment/recycling centres. It is necessary to carry out waste classification and compliance testing in line with current regulations prior to export from site. It is now a legal requirement to treat wastes before disposal. Treatment may occur on site or alternatively off-site treatment facilities may be utilised. This may also minimise the amount of hazardous waste and maximise the quality of inert waste for disposal or re-use.
- Topsoil, subsoil and engineered fill imported for use at the site (or generated from site-won soils) would be certified as chemically suitable for purpose. Samples of imported topsoil and secondary aggregates would be taken in-situ and scheduled for laboratory testing to verify certification. All supplier and verification chemical results would be collated by the contractor for inclusion in the remediation verification report.
- A watching brief should be maintained with regards to the ground conditions during the development works. The watching brief should be recorded and reported in the verification report. More details are provided below.
- A verification report will be required on completion. Further details are provided in Section 6.4.
- The water supply company should be consulted regarding the pipe material specification of potable water supply pipes. Further details are provided in Section 6.3.6.
- A foundation works risk assessment should be completed if foundations will fully penetrate the London Clay. Mitigation arising out of this assessment should be followed to minimise risks of pollution of controlled waters from piling activities and should be recorded and reported in the verification report.
- Monitoring wells installed on the site during the ground investigation should be decommissioned prior to development. Where required these boreholes would be decommissioned in line with the EA guidance [25] to ensure that no preferential flow pathways, from the surface and Made Ground to the underlying aquifers, are created during the development works. This should be undertaken before any significant ground works take place.

6.3.2 Regulator liaison

The contaminated land officers (CLO) at the Westminster City Council will be consulted on the outcome of the findings of the investigation and risk assessment. The remediation strategy will be agreed with the CLO.

The CLO will be notified prior to the start of each phase of ground investigation, remediation and/or enabling works. They will be consulted on the findings of this report and the updated

risk assessment and remediation strategy will be submitted and agreed in accordance with the planning conditions.

Each phase of ground investigation (and remediation if necessary) requires agreement with the local authority prior to commencement.

6.3.3 Watching brief

A watching brief should be maintained through the works. The procedure for dealing with any previously unidentified significant contamination should be set out within the remediation strategy. The watching brief should be documented, reported on during progress meetings and compiled in a verification report. The watching brief should not necessarily involve specialist personnel (dependant on the findings of the ground investigation and further assessment), but it will be defined on site, communicated to staff involved in the ground works (toolbox talks etc.) and reported on.

If any unidentified areas of significantly contaminated soils are encountered during the development, the CLO should be informed and the methodology for dealing with such material agreed in writing.

6.3.4 Protection of construction workers and neighbours

There is potential that materials contained within the Made Ground may pose a risk to construction workers in the short term. In addition, unidentified contamination may exist which may pose a risk. During the redevelopment of the site it will be necessary to implement measures to protect construction workers, users of the adjacent public realm and properties and neighbours in adjacent housing from exposure to any contaminated material which is encountered.

Appropriate measures to protect construction workers may include training in and enforcement of hygiene procedures, use of personnel protective equipment (PPE), the implementation of dust control measures and a health and safety risk assessment.

Mitigation measures that should be used to counter the identified potential impacts of construction should be incorporated into the Contractor's Method Statements and Health and Safety Plans and include:

- procedures and protocols to prevent construction workers, visitors and neighbours from being exposed to contaminated materials;
- monitoring of excavation works to identify unforeseen areas of contamination;
- gas monitoring of confined spaces, together with appropriate supervision and Confined Space Entry (CSE) training for site personnel;
- systems to record and monitor the movement and deposition of waste materials leaving or being transported to other parts of the site; and
- limiting dust generation during excavation and handling of potentially contaminated materials.

To ensure that they do not come into contact with contaminated soil and groundwater, construction workers and site visitors should wear adequate PPE where appropriate.

6.3.5 Dust control

Given the proximity of the public realm and residential receptors, control of fugitive dust will be a priority. As a minimum it is anticipated the works will be undertaken in accordance with BRE The Control of Dust and Emissions from Construction and Demolition, Best Practice Guidance [26] and the following mitigation measures will be introduced to assist with control of dust generation:

- access roads and stockpiles will be regularly damped down with water;
- all vehicles entering and leaving the Site during the construction period will pass through a wheel washing facility;
- vehicles used to transport materials and aggregates will be enclosed or tarpaulined;
- local roads will be regularly cleaned;
- vehicle movements will be kept to a minimum and vehicle speeds within the Site will be limited;
- dust generating equipment e.g. mobile crushing and screening equipment will be located to minimise potential nuisance impacts to receptors, as far as practicable;
- handling areas will be kept as clean as practicable to avoid nuisance from dust;
- dusty materials will be dampened down using water sprays in dry weather and liquids will be bunded and stored away from controlled waters to avoid surface water pollution;
- dust complaints will be investigated at the earliest opportunity and appropriate action taken to control the source or remedy the effect as appropriate; and
- additional measures may be specified dependant on the results of the ground investigation, especially if asbestos is identified in soils.

6.3.6 Soil materials for service trenches

The UK Water Industry Research Ltd (UKWIR) has published a series of Booklets regarding pipe selection on brownfield sites [27]. In addition, to the guidance written in the published booklets, a computer database has been developed that details the identity, likely combinations, effects and trigger levels for pipeline protection from contaminants found on brownfield development sites.

Thames Water should be consulted regarding the pipe material specification of potable water supply pipes. It is possible that they will require precautions associated with the contaminants identified on Site.

6.3.7 Waste management

Prior to works commencing on site the Contractor should develop a Site Waste Management Plan (SWMP) for the removal, transportation and disposal of all waste materials resulting from excavations. The Contractor should investigate opportunities to maximise the recycling potential of demolition and construction materials. Recyclable materials such as metals, timber and cardboard should be segregated and stored separately.

All residual waste shall be removed from Site by permitted carriers to suitable permitted disposal sites. Further waste classification testing and waste acceptance criteria testing may be required by the Contractor to allow materials to be suitably classified and disposed.

6.4 Verification strategy

A verification report will be required following completion of remediation and/or development works. Typically, a verification report may include the following items:

- details of works carried out and contamination encountered during investigation;
- details and justification of any changes from the original remediation strategy;
- lines of evidence to demonstrate the success of specific remediation (if required)
- demonstration of compliance and description of validation methods;
- laboratory and in-situ results;
- monitoring results for groundwater and gases;
- summary data plots and tables relating to clean up criteria;
- plans showing treatment areas and details of any differences from the original remediation strategy;
- photographic and other media records;
- waste management details and records;
- on-going environmental monitoring or works to be carried out;
- details of any unexpected contamination and how it was dealt with;
- details of any onward long-term monitoring methodology (where required) in accordance with the relevant planning conditions;
- confirmation that remediation objectives have been met; and
- description of final Site conditions.

All relevant documentation should be included within the Site Health and Safety File in accordance with the Construction Design and Management (CDM) Regulations.

Sampling data should be compiled during the site works and maintained, to include sample locations and logs. The Contractor should maintain a photographic record of sampling operations, and the excavation, placement and validation of the earthworks materials. An accurate record of all waste soils leaving the site should be maintained along with the basic characterisation data required to satisfy the waste management regulations including the Duty of Care. Analytical test results and justification of sampling densities and the analytical suite used should be included.

All the information should be retained by the Contractor for inclusion within the validation report. Upon completion of the works a validation report will be submitted to Local Authorities for approval. The report should describe the works that have been undertaken on the Site, report the chemical analysis for waste streams and materials used within the works, and outline the changes to ground conditions as a result of the remediation works. This will form part of an Operating & Maintenance Manual to be forwarded to the future Site operator, to allow them to address any residual risks.

The report should include a post construction environmental risk assessment undertaken by an appropriately qualified environmental consultant demonstrating that the site does not pose unacceptable risks to controlled waters, human health or other receptors. It is recommended

that the contaminated land specialist is involved with the production of this report, to give additional verification that it provides a true and accurate representation of the site works.

Any deviation from the remediation strategy, including any unexpected ground conditions, should be documented within the validation report. On completion a set of as built drawings should be produced along with all relevant information to show that the Site is suitable for its intended use.

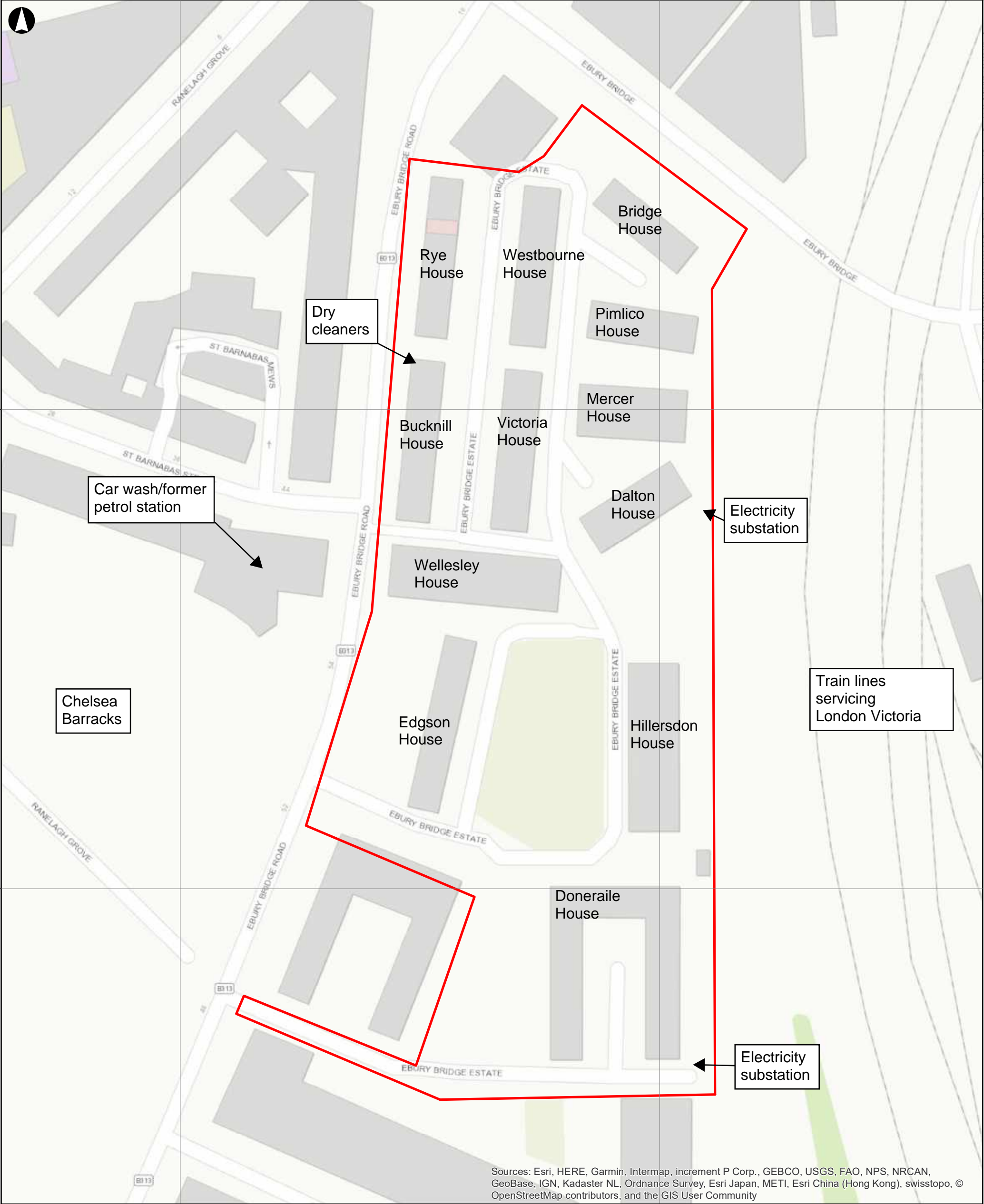
The local authority should confirm whether additional information requirements are necessary for the validation report prior to the commencement of the site works.

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Drawings

- Drawing 1 Site layout
- Drawing 2 Potential sources of contamination
- Drawing 3 Proposed exploratory hole location plan



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Key

Site Boundary

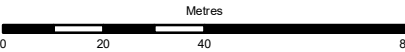
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Issue	Date	By	Chkd	Appd

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www.arup.com

Client
Westminster City Council

Project Title
Ebury Bridge Estate

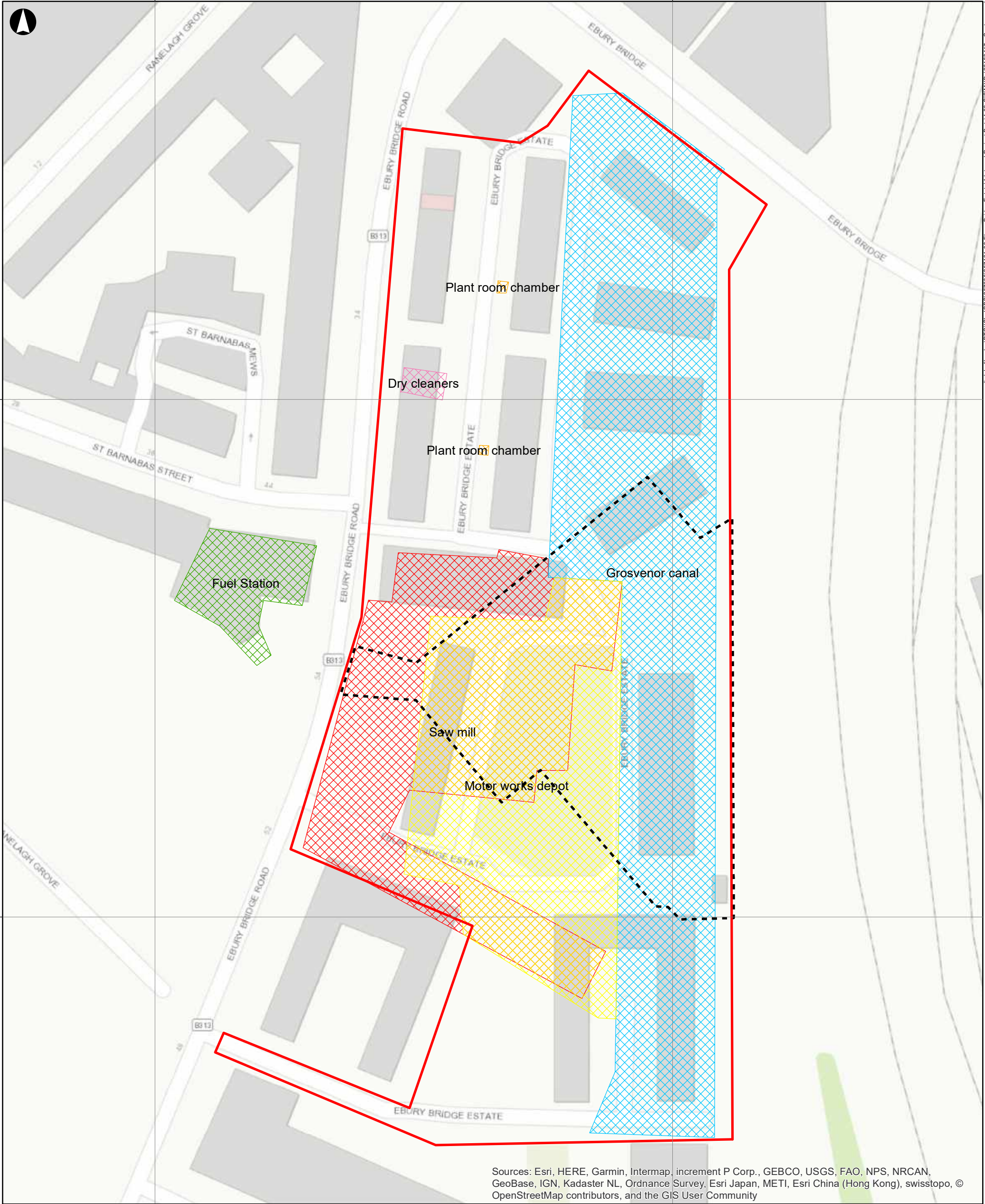


Drawing Title
Ebury Bridge Estate

Scale at A3
1:1,500

Arup Job No 257461	Suitability For Issue
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Name D1	Rev F1
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Key

- Site Boundary
- Phase1 Boundary

Potential Sources

Name

- Grosvenor canal
- Saw mill
- Plant room chamber
- Motor works depot
- Fuel Station
- Dry cleaners

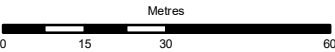
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Project Title
Ebury Bridge Estate



Drawing Title
Identified potential contamination sources

Scale at A3
1:1,387

Arup Job No
257461

Suitability
For Issue


Name
D2




Rev
F1



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Key

 Site Boundary **Proposed GI Hole type**

-  Dynamic sampling
-  Cable percussion
-  Trial trench

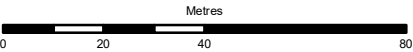
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Issue	Date	By	Chkd	Appd

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Client
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Project Title
Ebury Bridge Estate



Drawing Title
Proposed Ground investigation

Scale at A3
1:1,500

Arup Job No 257461	Suitability Preliminary
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Name D3	Rev F1
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Appendix A

Risk assessment methodology

A1 Risk assessment methodology

The potential risks to human health and environmental receptors have been considered in accordance with the current UK approach to contaminated land assessment taking into consideration the available information on the construction and operational phases of the development.

The method for risk evaluation takes into consideration the magnitude of the potential severity of the risk as well as the probability of the risk occurring. The risk characterisations have been assessed based on the qualitative method of interpretation set out in CIRIA guidance C552 [17] and NHBC/EA/CIEH risk classification methodology [18].

The method for risk evaluation involves the classification of the:

- magnitude of the potential consequence (severity) of the risk occurring (refer to Table A1-1); and
- magnitude of the probability (likelihood) of the risk occurring (refer to Table A1-2).

Table A1-1 Classification of consequence

Classification	Definition
Severe	Short-term (acute) risk to human health likely to result in ‘significant harm’ as defined by the Environmental Protection Act 1990, Part IIA. Short-term risk of pollution of a sensitive water resource. Catastrophic damage to buildings or property. A short-term risk to an ecosystem, or organism forming part of such ecosystem.
Medium	Chronic damage to human health. Pollution of a sensitive water resource. A significant change to an ecosystem, or organism forming part of such ecosystem.
Mild	Pollution of a non-sensitive water resource, such as non-classified groundwater. Damage to buildings, structures and services.
Minor	Harm, which may result in a financial loss, or expenditure to resolve. Non-permanent effects to human health, which could easily be prevented by means such as personal protective clothing. Easily repairable effects of damage to buildings, structures and services.

Table A1-2 Classification of probability

Classification	Definition
High likelihood	There is a pollution linkage and an event that either appears very likely in the short term and almost inevitable over the long-term, or there is evidence at the receptor of harm or pollution.
Likely	There is a pollution linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible over the short term and likely over the long term.
Low likelihood	There is a pollution linkage and circumstances are possible under which an event could occur. However, it is not certain that such an event would take place.
Unlikely	There is a pollution linkage, but circumstances are such that it is improbable that an event would occur even in the very long term.

Table A1-3 presents the risk assessment matrix and Table A1-4 defines the risk classifications.

Table A1-3 Comparison of consequence against probability

		Consequence			
		Severe	Medium	Mild	Minor
Probability	High likelihood	Very high risk	High risk	Moderate risk	Moderate / low risk
	Likely	High risk	Moderate risk	Moderate / low risk	Low risk
	Low likelihood	Moderate risk	Moderate / low risk	Low risk	Very low risk
	Unlikely	Moderate / low risk	Low risk	Very low risk	Very low risk

Table A1-4 Risk classifications

Risk classification	Description of risk
Very high	<p>There is a high probability that severe harm could arise to a designated receptor from an identified pollutant linkage at the site without appropriate remediation action.</p> <p>OR there is evidence that severe harm to a designated receptor is currently happening.</p> <p>The risk, if realised, is likely to result in substantial liability.</p>
High	<p>Harm is likely to arise to a designated receptor from an identified pollutant linkage at the site without appropriate remediation action.</p> <p>Realisation of the risk is likely to present a substantial liability.</p>
Moderate	<p>It is possible that without appropriate remediation action harm could arise to a designated receptor from an identified pollutant linkage. It is relatively unlikely that any such harm would be severe, and if any harm were to occur it is more likely that such harm would be relatively mild.</p>
Low	<p>It is possible that harm could arise to a designated receptor from an identified pollutant linkage.</p> <p>It is likely that if any harm was realised, at worst any effects would be mild.</p>
Very low	<p>The presence of an identified pollutant linkage does not give rise to the potential to cause harm to a designated receptor.</p>

Appendix B

Groundsure environmental
search report



Ove Arup & Partners International Ltd
Share Service Centre, Central Square, Forth
Street,
Newcastle Upon Tyne, NE1 3PL

Groundsure Reference: GS-6014872

Your Reference: 257461

Report Date 9 May 2019

Report Delivery Method: Email - pdf

Enviro Insight

Address: STREET RECORD, EBURY BRIDGE ESTATE, LONDON, SW1W 8QX

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

Address: STREET RECORD, EBURY BRIDGE ESTATE, LONDON, SW1W 8QX

Date: 9 May 2019

Reference: GS-6014872

Client: Ove Arup & Partners International Ltd

NW

N

NE

W

E



SW

S

SE

Aerial Photograph Capture date: 30-Jun-2015

Grid Reference: 528571,178337

Site Size: 1.9397ha

Report Reference: GS-6014872

Client Reference: 257461

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8.12 Records of Nitrate Sensitive Areas within 2000m of the study site:.....	76
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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	17	20	52	83
1.2 Additional Information – Historical Tank Database	0	0	24	16
1.3 Additional Information – Historical Energy Features Database	5	1	12	18
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	1	8	9	30
1.6 Historical military sites	1	0	0	0
1.7 Potentially Infilled Land	7	5	15	17
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	0	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	0
2.1.5 Records of List 2 Dangerous Substances Inventory sites	0	0	0	0
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	1	1	2	2
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
2.1.8 Records of Licensed Discharge Consents	0	0	2	4
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	0	0	0
2.2 Records of COMAH and NIHHS sites	0	0	0	0
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	0	0	0	19
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/Natural Resources Wales Registered Landfill Sites	0	0	0	0	0	Not searched
3.1.2 Environment Agency/Natural Resources Wales Historic Landfill Sites	0	0	0	0	1	0
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	0
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	0	0	0	0	0
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	1	0	Not searched	Not searched
3.2.2 Environment Agency/Natural Resources Wales Licensed Waste Sites	0	0	0	0	1	3

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	2	4	24	Not searched
4.2 Records of Petrol and Fuel Sites	0	1	1	1
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 Records of Artificial Ground and Made Ground present beneath the study site	Identified					
5.2 Records of Superficial Ground and Drift Geology present beneath the study site	Identified					
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 Records of Strata Classification in the Superficial Geology within 500m of the study site				Identified		
6.2 Records of Strata Classification in the Bedrock Geology within 500m of the study site				Identified		
	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	6	29	72
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	15	22
6.6 Source Protection Zones (within 500m of the study site)	0	0	1	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)	1	0	0	0	Not searched	Not searched

Section 6: Hydrogeology and Hydrology

0-500m

	On-site	0-50m	51-250	251-500	501-1000	1000-1500
6.9 Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site	No	No	No	No	No	No
6.10 Ordnance Survey MasterMap Water Network entries within 500m of the site	0	0	6	4	Not searched	Not searched
6.11 Surface water features within 250m of the study site	No	No	Yes	Not searched	Not searched	Not searched

Section 7: Flooding

7.1 Environment Agency Zone 2 floodplains within 250m of the study site	Identified					
7.2 Environment Agency/Natural Resources Wales Zone 3 floodplains within 250m of the study site	Identified					
7.3 Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site	Very Low					
7.4 Flood Defences within 250m of the study site	Identified					
7.5 Areas benefiting from Flood Defences within 250m of the study site	Identified					
7.6 Areas used for Flood Storage within 250m of the study site	None identified					
7.7 Maximum BGS Groundwater Flooding susceptibility within 50m of the study site	Potential at Surface					
7.8 BGS confidence rating for the Groundwater Flooding susceptibility areas	Moderate					

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	0
8.7 Records of Local Nature Reserves (LNR)	0	0	0	0	2	1
8.8 Records of World Heritage Sites	0	0	0	0	0	1
8.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0

Section 8: Designated Environmentally Sensitive Sites	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	0	0
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	0	0	0	0	0	0
8.14 Records of Green Belt land	0	0	0	0	0	0

Section 9: Natural Hazards	
9.1 Maximum risk of natural ground subsidence	High
9.1.1 Maximum Shrink-Swell hazard rating identified on the study site	Low
9.1.2 Maximum Landslides hazard rating identified on the study site	Very Low
9.1.3 Maximum Soluble Rocks hazard rating identified on the study site	Negligible
9.1.4 Maximum Compressible Ground hazard rating identified on the study site	High
9.1.5 Maximum Collapsible Rocks hazard rating identified on the study site	Negligible
9.1.6 Maximum Running Sand hazard rating identified on the study site	Low
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 site 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 Coal mining areas within 75m of the study site	None identified
10.2 Non-Coal Mining areas within 50m of the study site boundary	None identified
10.3 Brine affected areas within 75m of the study site	None identified

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 licences, 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.

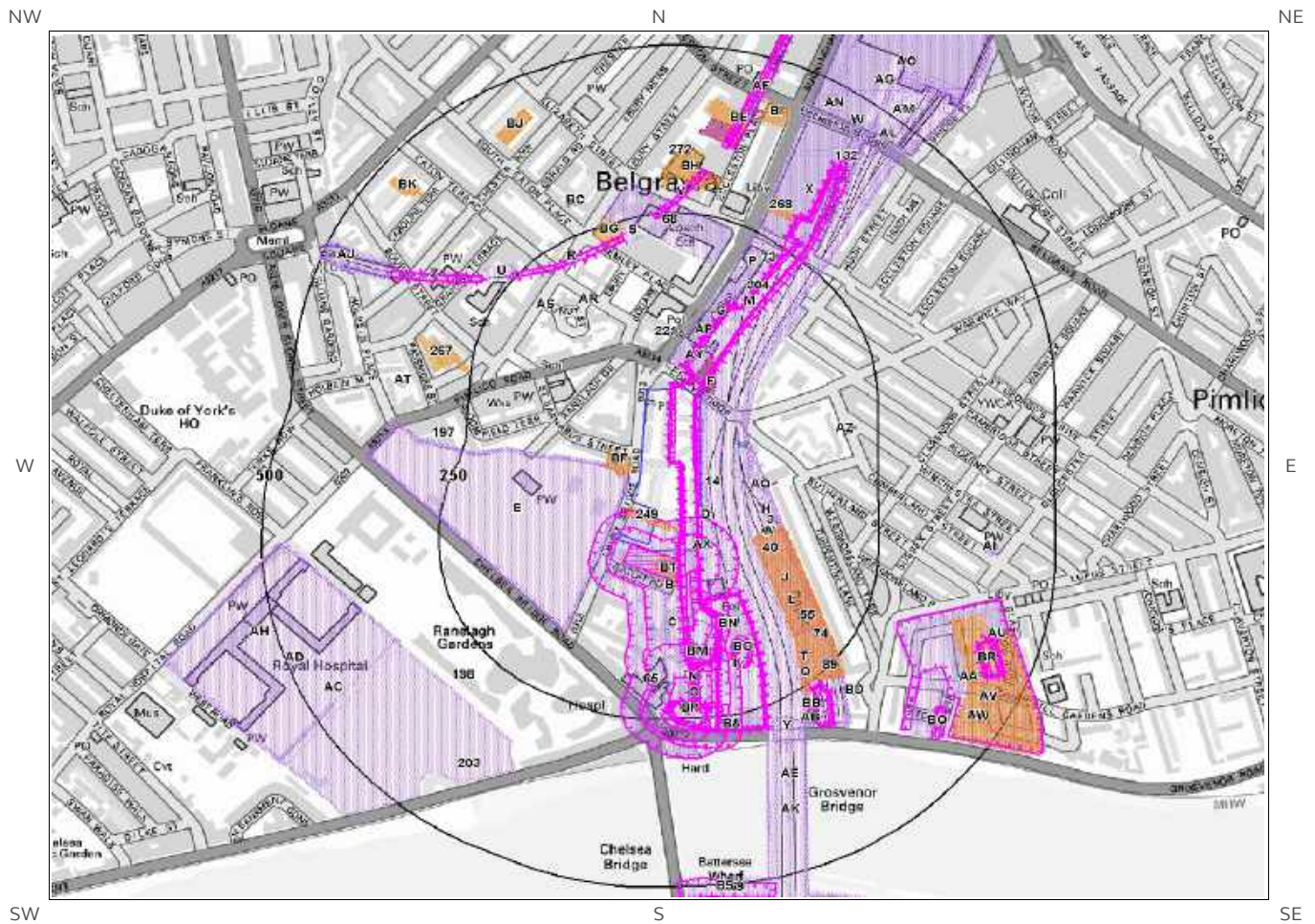
Note: Maps

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).

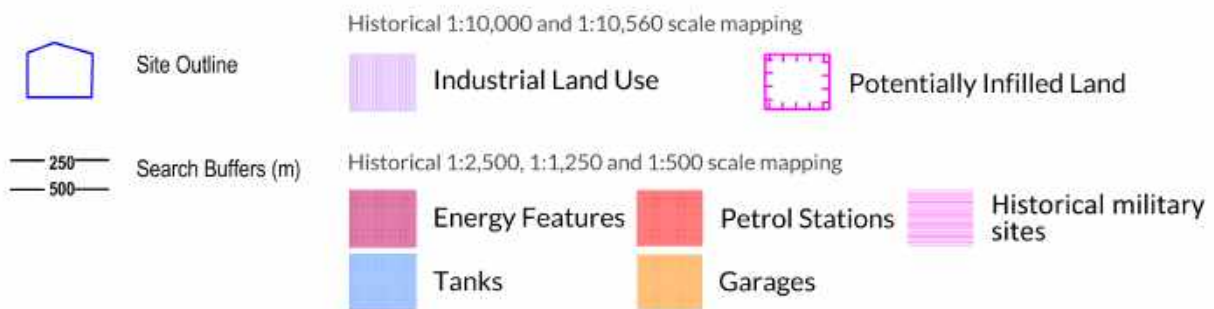
Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as "Not Shown".

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



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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: 172

ID	Distance [m]	Direction	Use	Date
1A	0	On Site	Railway Sidings	1938
2A	0	On Site	Railway Sidings	1920
3	0	On Site	Railway Sidings	1871
4H	0	On Site	Railway Sidings	1895
5C	0	On Site	Dock	1973
6	0	On Site	Railway Sidings	1894
7B	0	On Site	Unspecified Depot	1985
8B	0	On Site	Unspecified Depot	1973
9C	0	On Site	Dock	1967
10C	0	On Site	Dock	1955
11D	0	On Site	Railway Sidings	1967
12D	0	On Site	Railway Sidings	1955
13D	0	On Site	Railway Sidings	1948
14	0	On Site	Railway Sidings	1973
15	0	On Site	Railway Sidings	1985
16C	0	On Site	Timber Yard	1871
17B	0	S	Unspecified Depot	1967
18	1	E	Railway Sidings	1898
19	3	E	Railway Sidings	1894
20E	11	NW	Infantry Barracks	1871
21E	12	W	Barracks	1894
22E	14	W	Barracks	1898
23E	15	W	Barracks	1967
24E	15	W	Barracks	1985
25E	15	W	Barracks	1955
26E	15	W	Barracks	1973
27E	15	W	Barracks	1948
28E	16	W	Barracks	1894
29E	16	W	Barracks	1895
30E	17	W	Barracks	1938
31E	17	W	Barracks	1920
32F	18	NE	Railway Building	1894
33AY	21	NE	Unspecified Works	1967
34F	23	NE	Railway Building	1898

35G	24	NE	Coach Station	1985
36G	24	NE	Coach Station	1973
37H	46	E	Railway Sidings	1894
38I	52	E	Railway Buildings	1938
39I	52	E	Railway Buildings	1920
40	53	E	Railway Sidings	1898
41L	53	E	Unspecified Commercial/Industrial	1898
42J	70	E	Railway Building	1894
43J	72	E	Railway Building	1895
44J	73	E	Railway Building	1894
45K	74	S	Sewage Works	1894
46K	75	S	Sewage Works	1895
47K	75	S	Sewage Works	1898
48J	75	E	Carriage Shed	1871
49L	75	E	Carriage Cleaning Shed	1967
50L	75	E	Carriage Cleaning Shed	1973
51L	75	E	Unspecified Depot	1985
52L	75	E	Carriage Cleaning Shed	1955
53K	77	S	Sewage Works	1894
54G	95	NE	Air Terminal	1967
55	96	E	Railway Building	1948
56O	137	S	Dock	1920
57N	147	S	Unspecified Dock	1894
58M	147	NE	Railway Building	1938
59M	147	NE	Railway Building	1920
60M	147	NE	Railway Building	1948
61M	147	NE	Railway Building	1955
62W	150	NE	Railway Station	1955
63N	156	S	Unspecified Dock	1898
64P	158	NE	Coach Station	1967
65	161	S	Hospital	1985
66O	166	S	Unspecified Dock	1898
67O	181	S	Dock	1895
68	181	N	Coach Station	1955
69T	182	SE	Railway Sidings	1894
70P	185	NE	Railway Buildings	1938
71P	185	NE	Railway Buildings	1920
72O	189	S	Dock	1894
73	199	NE	Railway Building	1948
74	207	SE	Railway Building	1895
75Q	211	SE	Railway Building	1948
76Q	212	SE	Railway Building	1938
77Q	212	SE	Railway Building	1920
78Q	214	SE	Railway Building	1895
79R	214	NW	Tunnel	1894

80R	214	NW	Tunnel	1895
81S	216	N	Railway Sidings	1973
82S	216	N	Railway Sidings	1985
83T	217	SE	Railway Building	1894
84BP	222	S	Dock	1985
85V	241	N	Tunnel	1894
86U	242	NW	Railway Sidings	1985
87U	242	NW	Railway Sidings	1973
88V	243	N	Tunnel	1895
89	246	SE	Railway Building	1895
90W	260	NE	Railway Station	1985
91W	260	NE	Railway Station	1967
92W	260	NE	Railway Station	1973
93X	262	NE	Railway Station	1938
94X	262	NE	Railway Station	1920
95W	263	NE	Railway Station	1948
96Y	271	SE	Railway Station	1894
97Y	272	SE	Railway Station	1898
98Y	273	SE	Railway Station	1895
99Y	274	SE	Railway Buildings	1938
100Y	274	SE	Railway Buildings	1920
101Y	274	SE	Railway Building	1948
102Y	276	S	Railway Station	1894
103Z	283	NW	Tunnel	1895
104Z	283	NW	Tunnel	1894
105Y	284	SE	Railway Building	1938
106Y	284	SE	Railway Building	1920
107AB	288	SE	Railway Station	1871
108AA	292	E	Unspecified Commercial/Industrial	1894
109AA	293	E	Garage	1938
110AA	293	E	Garage	1920
111AA	297	E	Dock	1955
112AA	298	E	Garage	1948
113AB	298	SE	Railway Buildings	1973
114AB	298	SE	Railway Buildings	1985
115AC	320	SW	Army Pensioners Hospital	1898
116AC	324	SW	Hospital	1894
117AL	329	NE	Railway Sidings	1895
118AD	340	SW	Hospital	1871
119AD	342	SW	Hospital	1967
120AD	342	SW	Hospital	1948
121AD	342	SW	Hospital	1973
122AD	342	SW	Hospital	1985
123AD	342	SW	Hospital	1955
124AD	347	SW	Hospital	1938

125AD	347	SW	Hospital	1920
126AE	347	S	Railway Building	1948
127AE	348	S	Railway Buildings	1938
128AE	348	S	Railway Buildings	1920
129BE	354	N	Tunnel	1895
130AF	354	N	Tunnel	1882
131AF	361	N	Tunnel	1895
132	366	NE	Railway Sidings	1898
133AG	374	NE	Railway Station	1920
134AG	374	NE	Railway Station	1938
135AH	379	W	Army Pensioners Hospital	1894
136AH	380	W	Hospital	1895
137AJ	395	NW	Unspecified Station	1955
138AI	396	E	Hospital	1895
139AI	396	E	Hospital	1894
140AJ	396	NW	Unspecified Station	1967
141AJ	396	NW	Unspecified Station	1985
142AJ	396	NW	Unspecified Station	1973
143AJ	398	NW	Unspecified Station	1948
144AJ	398	NW	Railway Station	1898
145AJ	398	NW	Railway Station	1895
146AJ	399	NW	Railway Station	1894
147AJ	400	NW	Railway Station	1894
148AK	400	S	Railway Building	1948
149AJ	400	NW	Unspecified Station	1920
150AJ	400	NW	Unspecified Station	1938
151AK	402	S	Railway Building	1938
152AK	402	S	Railway Building	1920
153AI	402	E	Hospital	1894
154AL	417	NE	Railway Sidings	1882
155AM	423	NE	Railway Sidings	1895
156AA	442	SE	Unspecified Tank	1895
157AA	446	SE	Unspecified Tanks	1894
158AV	450	SE	Unspecified Tanks	1895
159W	450	NE	Railway Station	1898
160AM	452	NE	Railway Station	1895
161AN	452	NE	Railway Station	1898
162AN	452	NE	Railway Station	1895
163AM	455	NE	Railway Sidings	1920
164AM	455	NE	Railway Sidings	1938
165AG	457	NE	Railway Station	1882
166AO	463	NE	Railway Station	1895
167AM	472	NE	Railway Building	1895
168BS	488	S	Unspecified Wharf	1895
169	489	S	Goods Depot	1948
170AO	489	NE	Railway Station	1895

171AO	490	NE	Railway Station	1898
172AM	490	NE	Railway Sidings	1882

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:

40

ID	Distance (m)	Direction	Use	Date
173I	55	E	Unspecified Tank	1951
174I	56	E	Unspecified Tank	1966
175I	56	E	Unspecified Tank	1949
176I	56	E	Unspecified Tank	1957
177AP	79	NE	Unspecified Tank	1949
178AP	80	NE	Unspecified Tank	1951
179AQ	83	E	Unspecified Tank	1951
180AQ	85	E	Unspecified Tank	1949
181C	107	S	Unspecified Tank	1991
182C	107	S	Unspecified Tank	1988
183AR	152	NW	Unspecified Tank	1973
184AR	152	NW	Unspecified Tank	1953
185AR	153	NW	Unspecified Tank	1960
186K	159	S	Tanks	1951
187AR	162	NW	Unspecified Tank	1973
188AR	162	NW	Unspecified Tank	1953
189AR	163	NW	Unspecified Tank	1960
190K	164	S	Tanks	1949
191K	164	S	Unspecified Tank	1988
192K	164	S	Unspecified Tank	1971
193AS	188	NW	Unspecified Tank	1973
194AS	188	NW	Unspecified Tank	1953
195AS	188	NW	Unspecified Tank	1960
196AS	189	NW	Unspecified Tank	1960
197	280	W	Unspecified Tank	1875
198	297	SW	Unspecified Tank	1875
199AT	339	W	Unspecified Tank	1987
200AT	339	W	Unspecified Tank	1985
201AT	339	W	Unspecified Tank	1987
202AT	339	W	Unspecified Tank	1991
203	396	SW	Unspecified Tank	1916
204AA	418	SE	Tanks	1896
205AU	435	E	Unspecified Tank	1949

206AU	435	E	Unspecified Tank	1952
207AA	445	SE	Unspecified Tank	1896
208AA	450	SE	Unspecified Tank	1875
209AV	453	SE	Tanks	1896
210AV	453	SE	Tanks	1875
211AW	461	SE	Unspecified Tank	1896
212AW	461	SE	Unspecified Tank	1875

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:

36

ID	Distance (m)	Direction	Use	Date
213AX	0	On Site	Electricity Substation	1988
214AX	0	On Site	Electricity Substation	1971
215AX	0	On Site	Electricity Substation	1951
216AX	0	On Site	Electricity Substation	1991
217AX	0	On Site	Electricity Substation	1949
218F	20	NE	Electricity Substation	1991
219AY	58	NE	Electricity Substation	1990
220AY	58	NE	Electricity Substation	1990
221	67	N	Electricity Substation	1994
222AQ	100	E	Electricity Substation	1971
223AQ	100	E	Electricity Substation	1988
224AQ	100	E	Electricity Substation	1991
225BN	119	S	Electricity Substation	1991
226AZ	199	E	Electricity Substation	1951
227AZ	200	E	Electricity Substation	1949
228R	206	NW	Electricity Substation	1953
229R	207	NW	Electricity Substation	1991
230R	207	NW	Electricity Substation	1985
231BA	266	S	Electricity Substation	1949
232BA	266	S	Electricity Substation	1950
233BA	266	S	Electricity Substation	1952
234BB	269	SE	Electricity Substation	1950
235BB	269	SE	Electricity Substation	1952
236BB	269	SE	Electricity Substation	1949
237BC	292	N	Electricity Substation	1949
238BC	292	N	Electricity Substation	1953
239BC	292	N	Electricity Substation	1973
240BC	294	N	Electricity Substation	1991

241BC	298	N	Electricity Substation	1985
242BD	301	SE	Electricity Substation	1972
243BD	301	SE	Electricity Substation	1991
244BD	301	SE	Electricity Substation	1971
245BD	302	SE	Electricity Substation	1988
246BD	302	SE	Electricity Substation	1991
247BE	358	N	Electricity Substation	1949
248BE	359	N	Electricity Substation	1951

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: 48

ID	Distance (m)	Direction	Use	Date
249	0	On Site	Garage	1916
250BT	5	S	Motor Car Depot	1916
251BF	16	W	Garage	1966
252BF	16	W	Garage	1957
253BF	16	W	Garage	1971
254BF	26	W	Garage	1991
255BF	26	W	Garage	1987
256BF	26	W	Garage	1987
257BF	27	W	Garage	1963
258L	73	E	Carriage Cleaning Shed	1951
259L	74	E	Carriage Cleaning Shed	1957
260L	74	E	Carriage Cleaning Shed	1949
261L	74	E	Carriage Cleaning Shed	1971
262J	74	E	Carriage Shed	1896
263J	74	E	Carriage Shed	1875
264L	75	E	Carriage Cleaning Shed	1966
265BG	217	NW	Garage	1991
266BG	223	N	Garage	1973

267	253	W	Garage	1916
268	286	NE	Coach Works	1875
269BH	288	N	Garage	1949
270BH	288	N	Garage	1916
271BH	310	N	Garage	1916
272	335	N	Garage	1916
273AV	367	E	Garage	1916
274BE	386	N	Garage	1949
275BI	407	N	Garage	1966
276BI	407	N	Garage	1949
277BI	407	N	Garage	1965
278BJ	414	NW	Garage	1949
279BJ	414	NW	Garage	1973
280BJ	414	NW	Garage	1953
281BJ	414	NW	Garage	1960
282BJ	415	NW	Garage	1966
283BJ	415	NW	Garage	1985
284BJ	415	NW	Garage	1991
285BJ	415	NW	Garage	1916
286BK	426	NW	Garage	1966
287BK	437	NW	Garage	1973
288BK	437	NW	Garage	1949
289BK	437	NW	Garage	1960
290BK	437	NW	Garage	1953
291BK	438	NW	Garage	1991
292BK	438	NW	Garage	1985
293AV	446	SE	Garage	1949
294AV	446	SE	Garage	1951
295AW	447	SE	Garage	1949
296AW	464	SE	Garage	1951

1.6 Historical military sites

Certain military installations were not noted on historic mapping for security reasons. Whilst not all military land is necessarily of concern, Groundsure has researched and digitised a number of Ordnance Factories and other military industrial features (e.g. Ordnance Depots, Munitions Testing Grounds) which may be of contaminative concern. This research was drawn from a number of different sources, and should not be regarded as a definitive or exhaustive database of potentially contaminative military installations. The boundaries of sites within this database have been estimated from the best evidence available to Groundsure at the time of compilation.

Records of historical military sites within 500m of the search boundary:

1

ID	Distance (m)	Direction	Site Name	Date of operation	Activities
34 1B T	0	On Site	Pimlico	circa WWI	National Gauge Factory Gauges -

1.7 Potentially Infilled Land

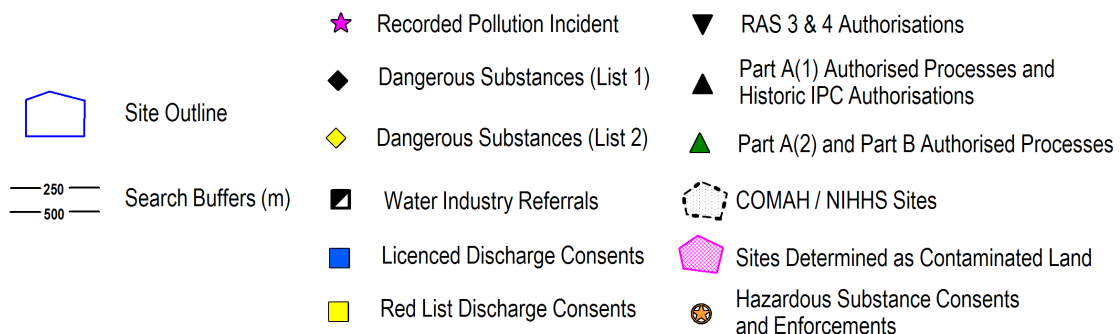
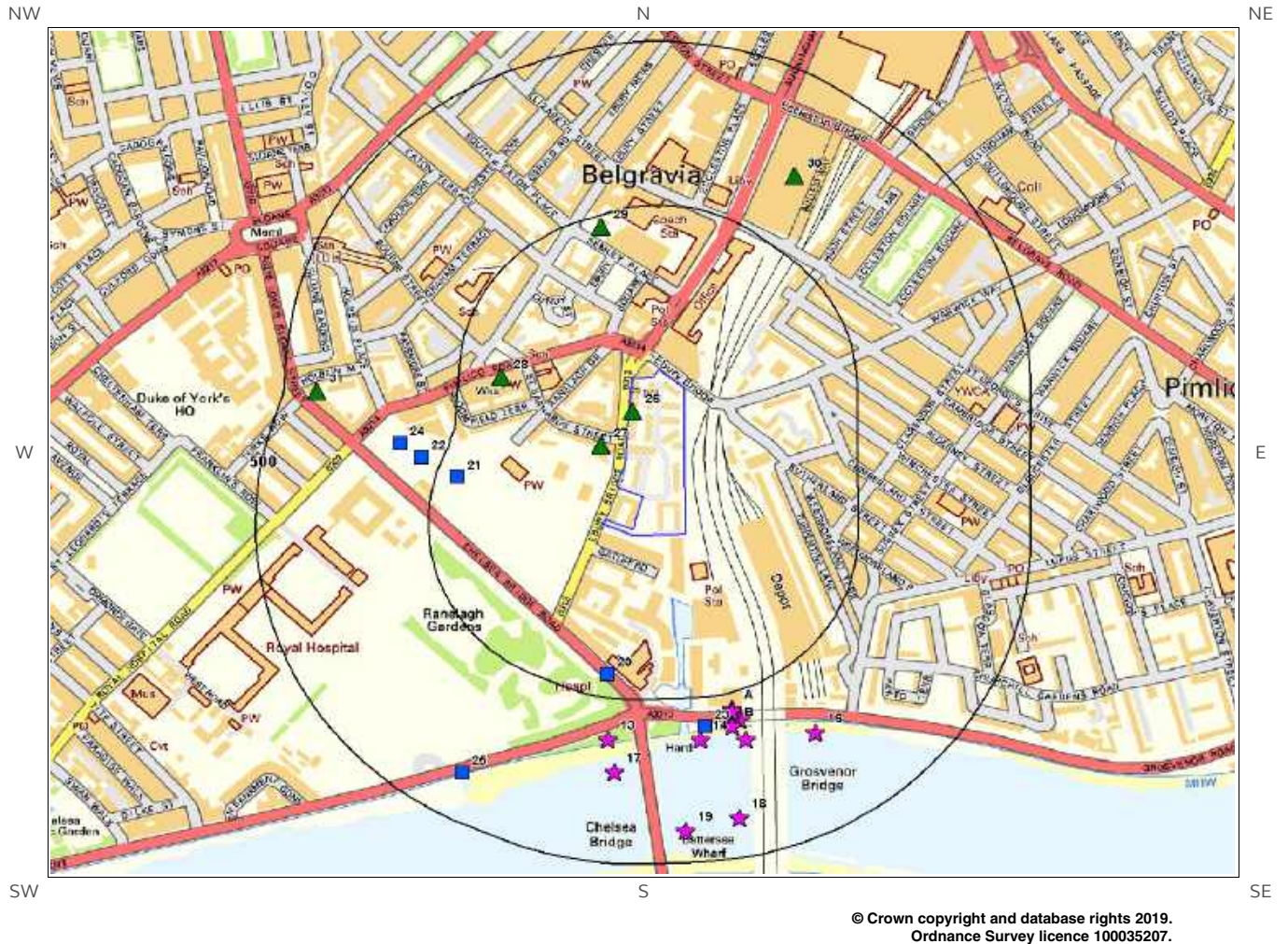
Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 44

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

ID	Distance(m)	Direction	Use	Date
297BL	0	On Site	Canal	1871
298BL	0	On Site	Canal	1894
299BL	0	On Site	Canal	1895
300	0	On Site	Canal	1898
301C	0	On Site	Dock	1973
302C	0	On Site	Dock	1967
303C	0	On Site	Dock	1955
304	15	NE	Canal	1894
305BM	31	S	Canal	1967
306BM	31	S	Canal	1955
307BN	31	S	Canal	1985
308BM	31	S	Canal	1973
309K	74	S	Sewage Works	1894
310K	75	S	Sewage Works	1895
311K	75	S	Sewage Works	1898
312K	77	S	Sewage Works	1894
313O	137	S	Dock	1920
314BO	137	S	Pond	1955
315BO	141	S	Pond	1895
316BO	144	S	Pond	1894
317N	181	S	Dock	1895
318O	189	S	Dock	1894
319R	214	NW	Tunnel	1894
320R	214	NW	Tunnel	1895
321BP	222	S	Dock	1985
322V	241	N	Tunnel	1894
323V	243	N	Tunnel	1895
324BB	257	SE	Pond	1895
325BB	258	SE	Pond	1898
326BB	261	SE	Pond	1894
327BB	263	SE	Pond	1871
328Z	283	NW	Tunnel	1895
329Z	283	NW	Tunnel	1894
330AA	297	E	Dock	1955
331BE	354	N	Tunnel	1895
332AF	354	N	Tunnel	1882
333AF	361	N	Tunnel	1895
334BQ	405	SE	Pond	1895

335BQ	408	SE	Pond	1894
336BR	412	E	Pond	1895
337BR	413	E	Pond	1898
338BR	416	E	Pond	1894
339BR	420	E	Pond	1871
340BS	488	S	Unspecified Wharf	1895

2. Environmental Permits, Incidents and Registers Map



2. Environmental Permits, Incidents and Registers

2.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency/Natural Resources Wales 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:

0

Database searched and no data found.

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:

0

Database searched and no data found.

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

0

Database searched and no data found.

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

6

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	0	On Site	528536 178397	Address: Choice Specialist Dry Cleaners, 21 Ebury Bridge Road, London, SW1W 8QX Process: Dry Cleaning Status: Current Permit Permit Type: Part B Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified
27	37	W	528491 178345	Address: Star, Ebury, Bridge Rd, Buckingham Palace Road, Pimlico, London, SW1W 8QF Process: Petrol Vapour Recovery Status: Historical Permit Permit Type: Part B Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified
28	189	W	528346 178450	Address: Mr Buttercup, 49 Pimlico Road, SW1W 8NE Process: Dry Cleaning Status: Historical Permit Permit Type: Part B Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified
29	230	N	528491 178679	Address: Shell, Victoria Filling Station, 1 Ebury Street, London, SW1 9QJ Process: Unloading of Petrol into Storage at Service Stations Status: Current Permit Permit Type: Part B Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified
30	351	NE	528770 178756	Address: Knights Dry Cleaners, 123 Buckingham Palace Road, London, SW1W 9SH Process: Dry Cleaning Status: Current Permit Permit Type: Part B Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified
31	453	W	528080 178429	Address: Sloane Cleaners, 71 Lower Sloane Street, SW1 8DA Process: Dry Cleaning Status: Historical 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:

0

Database searched and no data found.

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
20	214	S	528500 178000	<p>Address: DEPOT AT GATLIFF ROAD, LONDON, SW1, DEPOT AT GATLIFF ROAD, LONDON, S, W1</p> <p>Effluent Type: MISCELLANEOUS DISCHARGES - UNSPECIFIED</p> <p>Permit Number: CPLR.0142</p> <p>Permit Version: 1</p> <p>Receiving Water: GROSVENOR CANAL</p> <p>Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995)</p> <p>Issue date: 07/12/1973</p> <p>Effective Date: 07-Dec-1973</p> <p>Revocation Date: 01/02/2005</p>
21	221	W	528283 178300	<p>Address: FORMER CHELSEA BARRACKS, CHELSEA BRIDGE ROAD, CHELSEA, ,, LONDON</p> <p>Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - NOT WATER COMPANY</p> <p>Permit Number: EPREB3096EX</p> <p>Permit Version: 1</p> <p>Receiving Water: GROUNDWATER</p> <p>Status: NEW ISSUED UNDER EPR 2010</p> <p>Issue date: 08/12/2016</p> <p>Effective Date: 08-Dec-2016</p> <p>Revocation Date: -</p>
22	280	W	528231 178330	<p>Address: FORMER CHELSEA BARRACKS, CHELSEA BRIDGE ROAD, CHELSEA, ,, LONDON</p> <p>Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - NOT WATER COMPANY</p> <p>Permit Number: EPREB3096EX</p> <p>Permit Version: 1</p> <p>Receiving Water: GROUNDWATER</p> <p>Status: NEW ISSUED UNDER EPR 2010</p> <p>Issue date: 08/12/2016</p> <p>Effective Date: 08-Dec-2016</p> <p>Revocation Date: -</p>
23	294	S	528640 177920	<p>Address: WESTERN PS LOW LEVEL SEWER, LONDON, WESTERN PS LOW LEVEL SEWER, LOND, ON</p> <p>Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY</p> <p>Permit Number: CSAB.0538</p> <p>Permit Version: 1</p> <p>Receiving Water: R.THAMES (TIDAL)</p> <p>Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY)</p> <p>Issue date: 05/10/1987</p> <p>Effective Date: 05-Oct-1987</p> <p>Revocation Date: -</p>
24	317	NW	528200 178352	<p>Address: FORMER CHELSEA BARRACKS, CHELSEA BRIDGE ROAD, CHELSEA, ,, LONDON</p> <p>Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - NOT WATER COMPANY</p> <p>Permit Number: EPREB3096EX</p> <p>Permit Version: 1</p> <p>Receiving Water: GROUNDWATER</p> <p>Status: NEW ISSUED UNDER EPR 2010</p> <p>Issue date: 08/12/2016</p> <p>Effective Date: 08-Dec-2016</p> <p>Revocation Date: -</p>
25	429	SW	528290 177850	<p>Address: SLOANE STREET, RANELAGH GDNS, LONDO, SLOANE STREET, RANELAGH GDNS, LO, NDON</p> <p>Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY</p> <p>Permit Number: CSAB.0577</p> <p>Permit Version: 1</p> <p>Receiving Water: R.THAMES (TIDAL)</p> <p>Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY)</p> <p>Issue date: 05/10/1987</p> <p>Effective Date: 05-Oct-1987</p> <p>Revocation Date: -</p>

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:

0

Database searched and no data found.

2.2 Dangerous or Hazardous Sites

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

0

Database searched and no data found.

2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents

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

19

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	275	S	528679.0 177946.0	Incident Date: 26-Apr-2002 Incident Identification: 74962.0 Pollutant: Sewage Materials Pollutant Description: Storm Sewage Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
2A	278	S	528680.0 177943.0	Incident Date: 09-Jul-2002 Incident Identification: 90222.0 Pollutant: Sewage Materials Pollutant Description: Storm Sewage Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
3A	281	S	528680.0 177940.0	Incident Date: 21-Aug-2002 Incident Identification: 101968.0 Pollutant: Sewage Materials Pollutant Description: Storm Sewage Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
4A	281	S	528680.0 177940.0	Incident Date: 23-Jun-2004 Incident Identification: 246449.0 Pollutant: Sewage Materials Pollutant Description: Storm Sewage Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
5A	281	S	528680.0 177940.0	Incident Date: 15-Oct-2002 Incident Identification: 114901.0 Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact)

ID	Distance (m)	Direction	NGR	Details	
				Pollutant: Sewage Materials Pollutant Description: Storm Sewage	Air Impact: Category 4 (No Impact)
6A	281	S	528680.0 177940.0	Incident Date: 12-Oct-2005 Incident Identification: 353053.0 Pollutant: Sewage Materials Pollutant Description: Storm Sewage	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
7A	281	S	528680.0 177940.0	Incident Date: 10-Aug-2004 Incident Identification: 257919.0 Pollutant: Sewage Materials Pollutant Description: Storm Sewage	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
8A	281	S	528680.0 177940.0	Incident Date: 28-Aug-2003 Incident Identification: 186502.0 Pollutant: Sewage Materials Pollutant Description: Storm Sewage	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
9A	281	S	528680.0 177940.0	Incident Date: 09-Sep-2002 Incident Identification: 106535.0 Pollutant: Sewage Materials Pollutant Description: Storm Sewage	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
10A	285	S	528681.0 177936.0	Incident Date: 31-Oct-2003 Incident Identification: 199162.0 Pollutant: Sewage Materials Pollutant Description: Storm Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
11A	293	S	528690.0 177930.0	Incident Date: 10-Jun-2002 Incident Identification: 83958.0 Pollutant: Sewage Materials Pollutant Description: Storm Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
12B	301	S	528680.0 177920.0	Incident Date: 02-Nov-2002 Incident Identification: 118387.0 Pollutant: Sewage Materials Pollutant Description: Storm Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
13	313	S	528500.0 177900.0	Incident Date: 27-Jun-2009 Incident Identification: 691978.0 Pollutant: Sewage Materials Pollutant Description: Storm Sewage	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
14	314	S	528634.0 177900.0	Incident Date: 24-Jul-2015 Incident Identification: 1358253.0 Pollutant: Sewage Materials Pollutant Description: Storm Sewage	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
15B	325	S	528700.0 177900.0	Incident Date: 07-Oct-2001 Incident Identification: 35181.0 Pollutant: Sewage Materials Pollutant Description: Storm Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
16	356	SE	528800.0 177910.0	Incident Date: 22-Aug-2001 Incident Identification: 26018.0 Pollutant: Sewage Materials Pollutant Description: Storm Sewage	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
17	362	S	528510.0 177850.0	Incident Date: 21-Nov-2003 Incident Identification: 204174.0 Pollutant: Sewage Materials Pollutant Description: Storm Sewage	Water Impact: Category 1 (Major) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
18	440	S	528690.0 177780.0	Incident Date: 26-Aug-2015 Incident Identification: 1368161.0 Pollutant: Sewage Materials Pollutant Description: Storm Sewage	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
19	453	S	528612.0 177760.0	Incident Date: 25-Aug-2011 Incident Identification: 917029.0 Pollutant: Sewage Materials Pollutant Description: Storm Sewage	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

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

0

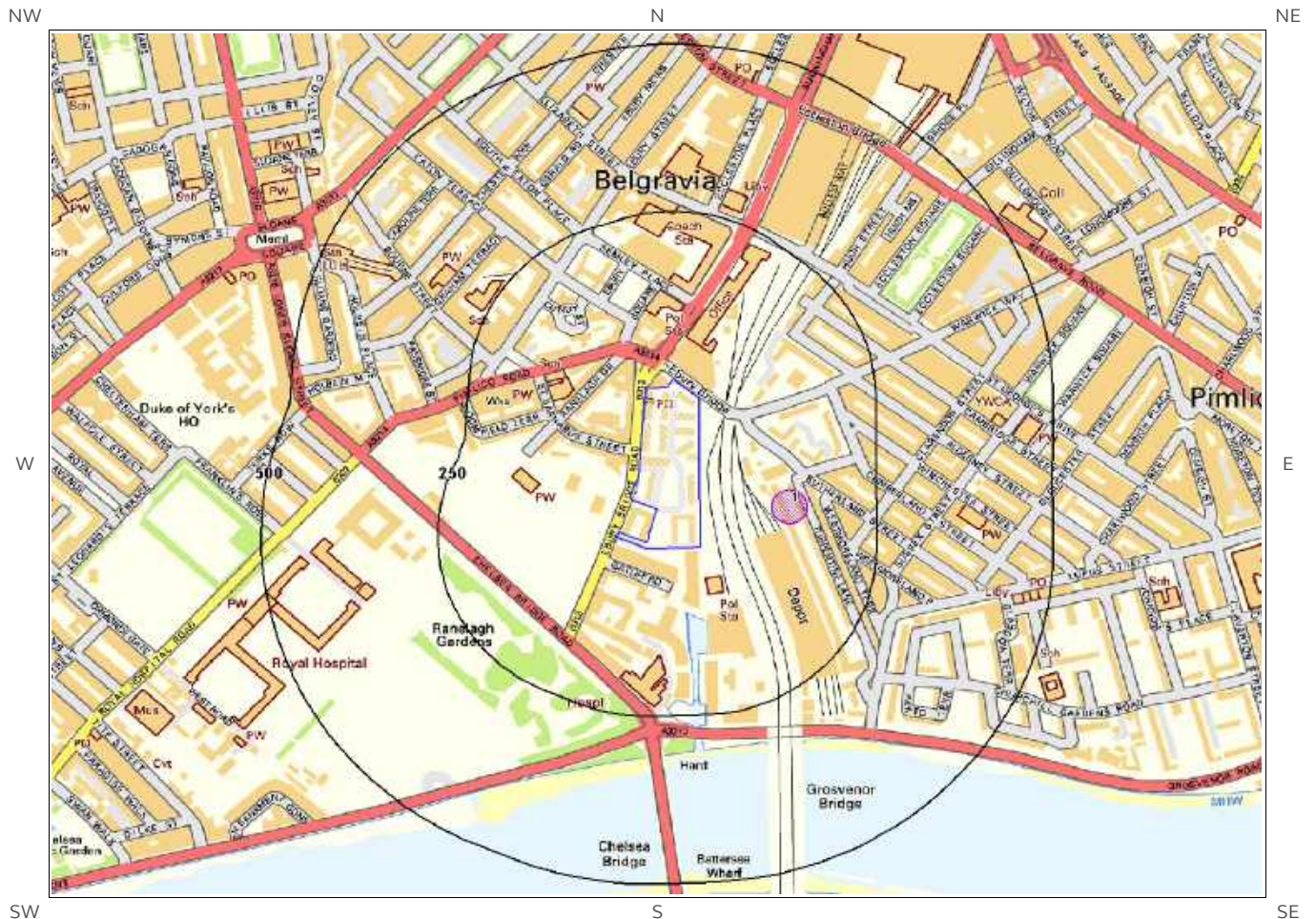
Database searched and no data found.

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

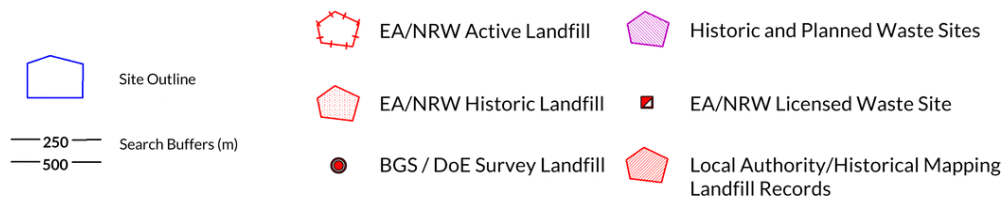
Records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site 0

Database searched and no data found.

3. Landfill and Other Waste Sites Map



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3. Landfill and Other Waste Sites

3.1 Landfill Sites

3.1.1 Records from Environment Agency/Natural Resources Wales landfill data within 1000m of the study site:

0

Database searched and no data found.

3.1.2 Records of Environment Agency/Natural Resources Wales historic landfill sites within 1500m of the study site:

1

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
Not shown	755	SE		Site Address: Cringle Wharf, Cringle Street, Battersea, London Waste Licence: - Site Reference: WES077 Waste Type: - 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:

0

Database searched and no data found.

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

0

Database searched and no data found.

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
1	103	E	528739 178273	<p>Type of Site: Waste Storage</p> <p>Site Address: Pimlico Estate, Peabody Avenue, LONDON, Central London, SW1V 4AR</p> <p>Planning Application Reference: 11/01788/FULL Date: 30/08/2011</p> <p>Further Details: Scheme comprises Installation of black metal caged enclosure for the storage of waste located at northern end of the Peabody Estate adjacent to electrical substation. An application (ref: 11/01788/FULL) for detailed planning permission was granted by Westminster L.B. A detailed planning application has been granted. Data Source: Historic Planning Application Data Type: Point</p>

3.2.2 Records of Environment Agency/Natural Resources Wales licensed waste sites within 1500m of the study site:

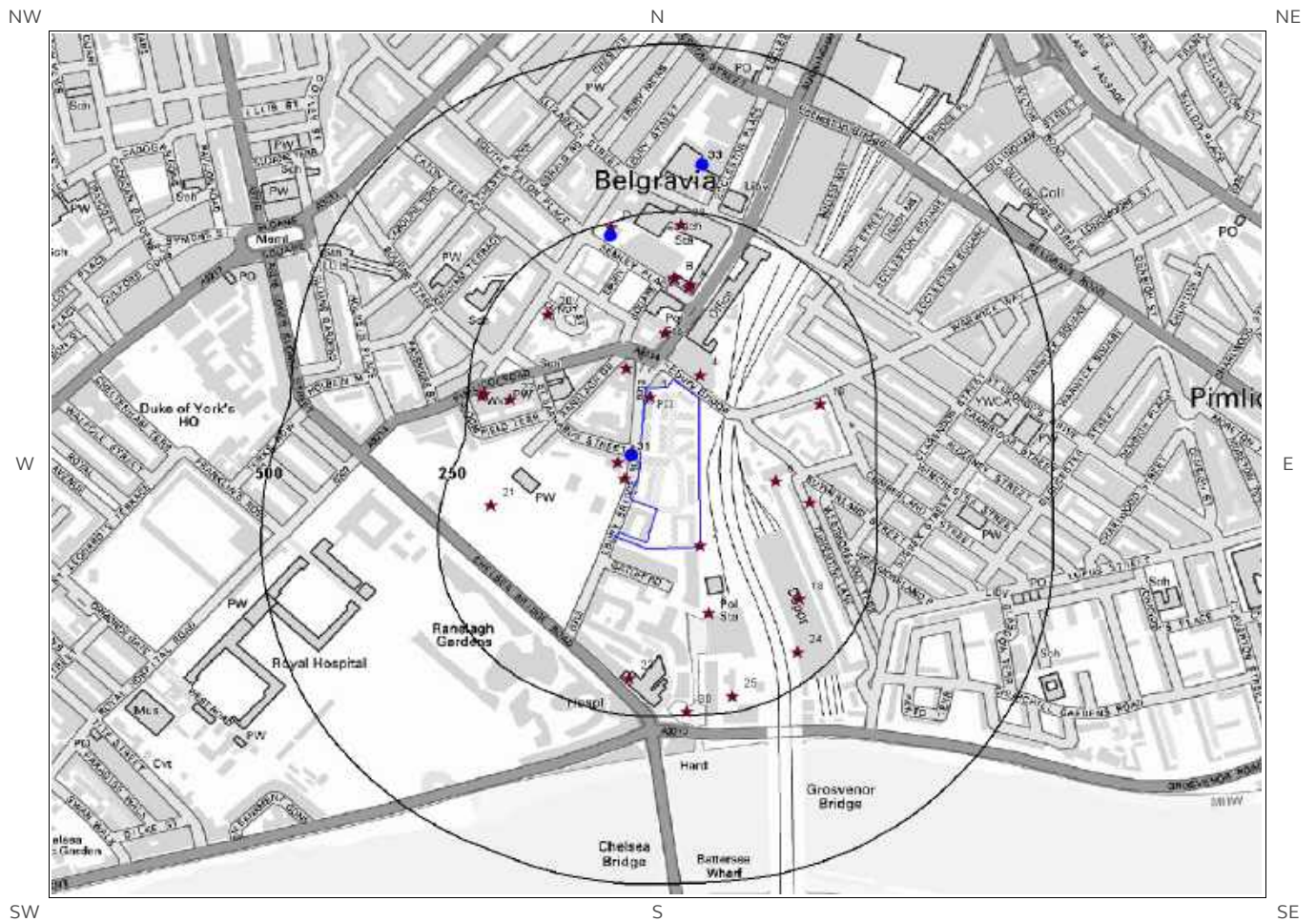
4

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
Not shown	850	SE	529155 177558	<p>Site Address: Cleanaway Ltd, Cringle Dock S W T S, Cringle Street, Battersea, London, SW11 8BX</p> <p>Type: Household, Commercial & Industrial Waste T Stn</p> <p>Size: >= 75000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: CLE008</p> <p>EPR reference: EA/EPR/GP3790EN/T008</p> <p>Operator: Cory Environmental Ltd</p> <p>Waste Management licence No: 83275</p> <p>Annual Tonnage: 300000.0</p> <p>Issue Date: 23/10/1991 Effective Date: 04/10/2002 Modified: 27/03/1997 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: Cringle Dock Ts Correspondence Address: -</p>
Not shown	1056	SE	529191 177329	<p>Site Address: Battersea Station Project Offices, Battersea Park Road, London, SW8 4BZ</p> <p>Type: Inert & Excavation WTS</p> <p>Size: < 25000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: LOI001</p> <p>EPR reference: EA/EPR/DB3804MV/S002</p> <p>Operator: Laing O Rourke Infrastructure Limited</p> <p>Issue Date: 25/07/2016 Effective Date: - Modified: - Surrendered Date: Aug 24 2018 12:00AM Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Northern Line Extension Project Correspondence Address: -</p>

ID	Distance (m)	Direction	NGR	Details	
Not shown	1260	N	528453 179718	Waste Management licence No: 403036 Annual Tonnage: 0.0	
				Site Address: Buckingham Palace, London, SW1A 1AA Type: Composting Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: ROY065 EPR reference: EA/EPR/GB3236AS/A001 Operator: Royal Household Property Section Waste Management licence No: 104088 Annual Tonnage: 1000.0	Issue Date: 13/06/2012 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Buckingham Palace Correspondence Address: -
Not shown	1399	W	527102 178073	Site Address: Imperial College London, Emmanuel Kaye Building, 1b, Manresa Road, London, SW3 6NA Type: Clinical Waste Transfer Station + treatment Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: PYR005 EPR reference: EA/EPR/AB3303LP/S003 Operator: Pyropure Limited Waste Management licence No: 400514 Annual Tonnage: 0.0	
				Issue Date: 06/08/2013 Effective Date: - Modified: 23/03/2016 Surrendered Date: Feb 28 2017 12:00AM Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Imperial College London, Emmanuel Kaye Buidling Correspondence Address: -	

4. Current Land Use Map



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4. Current Land Uses

4.1 Current Industrial Data

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

30

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	London Coach Hire Company	528541 178438	5, Ebury Bridge Road, London, Greater London, SW1W 8QX	Vehicle Hire and Rental	Hire Services
2	0	E	Electricity Sub Station	528613 178216	Greater London, SW1W	Electrical Features	Infrastructure and Facilities
3	17	W	Barracks Chelsea	528506 178316	Greater London, SW1W	Armed Services	Central and Local Government
4	29	NE	Electricity Sub Station	528613 178471	Greater London, SW1W	Electrical Features	Infrastructure and Facilities
5	32	W	Belgravia Garage	528495 178340	48-56, Ebury Bridge Road, London, Greater London, SW1W 8QF	Vehicle Repair, Testing and Servicing	Repair and Servicing
6	40	NW	E N I	528508 178481	E N I House 10, Ebury Bridge Road, London, Greater London, SW1W 8PZ	Special Purpose Machinery and Equipment	Industrial Products
7	70	N	Electricity Sub Station	528563 178533	Greater London, SW1W	Electrical Features	Infrastructure and Facilities
8	98	S	Slipway	528625 178116	Greater London, SW1W	Moorings and Unloading Facilities	Water
9	107	E	Electricity Sub Station	528719 178312	Greater London, SW1V	Electrical Features	Infrastructure and Facilities
10A	140	N	Hertz Car Hire	528597 178602	200a, Buckingham Palace Road, London, Greater London, SW1W 9TJ	Vehicle Hire and Rental	Hire Services
11A	144	N	Left Luggage	528599 178606	164, Buckingham Palace Road, London, Greater London, SW1W 9TP	Container and Storage	Transport, Storage and Delivery
12B	150	N	Alamo Rent A Car	528576 178614	12, Semley Place, London, Greater London, SW1W 9QL	Vehicle Hire and Rental	Hire Services
13B	150	N	National Car Rentals Ltd	528576 178614	12, Semley Place, London, Greater London, SW1W 9QL	Vehicle Hire and Rental	Hire Services
14B	150	N	Europcar	528576 178614	12, Semley Place, London, Greater London, SW1W 9QL	Vehicle Hire and Rental	Hire Services
15B	151	N	Budget Rent A Car	528577 178615	12, Semley Place, London, Greater London, SW1W 9QL	Vehicle Hire and Rental	Hire Services
16B	151	N	Avis Rent A	528577	12, Semley Place, London,	Vehicle Hire and Rental	Hire Services

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
			Car	178615	Greater London, SW1W 9QL		
17	156	E	Origen Communicati on Ltd	528768 178281	5, Westmoreland Terrace, London, Greater London, SW1V 4AG	Medical Equipment, Supplies and Pharmaceuticals	Industrial Products
18	159	SE	Depot	528753 178137	Greater London, SW1V	Container and Storage	Transport, Storage and Delivery
19	171	E	3D Space Storage	528783 178427	Warwick Way, London, Greater London, SW1V 4JQ	Container and Storage	Transport, Storage and Delivery
20	177	NW	Excess Baggage Company	528397 178562	Flat 20 Kylestrome House, Cundy Street, London, Greater London, SW1W 9JT	Container and Storage	Transport, Storage and Delivery
21	181	W	Chelsea Barracks	528317 178277	Greater London, SW1W	Armed Services	Central and Local Government
22	190	W	Works	528344 178434	Greater London, SW1W	Unspecified Works Or Factories	Industrial Features
23	194	S	The Lister Hospital	528512 178018	Chelsea Bridge Road, London, Greater London, SW1W 8RH	Hospitals	Health Practitioners and Establishments
24	208	SE	Chimney	528751 178057	Greater London, SW1V	Chimneys	Industrial Features
25	226	S	Chimney	528658 177992	Greater London, SW1V	Chimneys	Industrial Features
26C	226	W	Thomas Jewellers	528307 178442	65, Pimlico Road, London, Greater London, SW1W 8NE	Jewellery, Gems, Clocks and Watches	Consumer Products
27C	231	W	Zuber	528303 178440	67, Pimlico Road, London, Greater London, SW1W 8NE	Wood Products Including Charcoal, Paper, Card and Board	Industrial Products
28	231	N	Victoria Coach Station	528586 178695	Greater London, SW1W	Bus and Coach Stations, Depots and Companies	Public Transport, Stations and Infrastructure
29D	243	N	Shell Victoria	528487 178691	Ebury Street, Semley Place, London, Greater London, SW1W 9QJ	Petrol and Fuel Stations	Road and Rail
30	244	S	Dock	528594 177968	Greater London, SW1W	Marine Equipment Including Boats and Ships	Industrial Products

4.2 Petrol and Fuel Sites

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

3

The following petrol or fuel site records provided by Catalist are represented as points on the Current Land Use map:

ID	Distance (m)	Direction	NGR	Company	Address	LPG	Status
31	14	W	528515 178350	JET	48-56, Ebury Bridge Road, St Barnabos Street, Chelsea, London, Inner London, SW1W 8QF	Not Applicable	Obsolete

ID	Distance (m)	Direction	NGR	Company	Address	LPG	Status
32D	231	NW	528485 178678	SHELL	163-173, Ebury Street, Semley Place, Belgravia, London, Inner London, SW1W 9QJ	Yes	Open
33	322	N	528615 178784	UNBRANDED	3, Eccleston Place, B310, Victoria, Victoria Coach Station, London, Inner London, SW1W 9NF	No	Non-Retail

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

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

Lex Code	Description	Rock Type
MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

5.2 Superficial Ground and Drift Geology

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

Lex Code	Description	Rock Type
ALV-XCZSP	ALLUVIUM	CLAY, SILT, SAND AND PEAT

5.3 Bedrock and Solid Geology

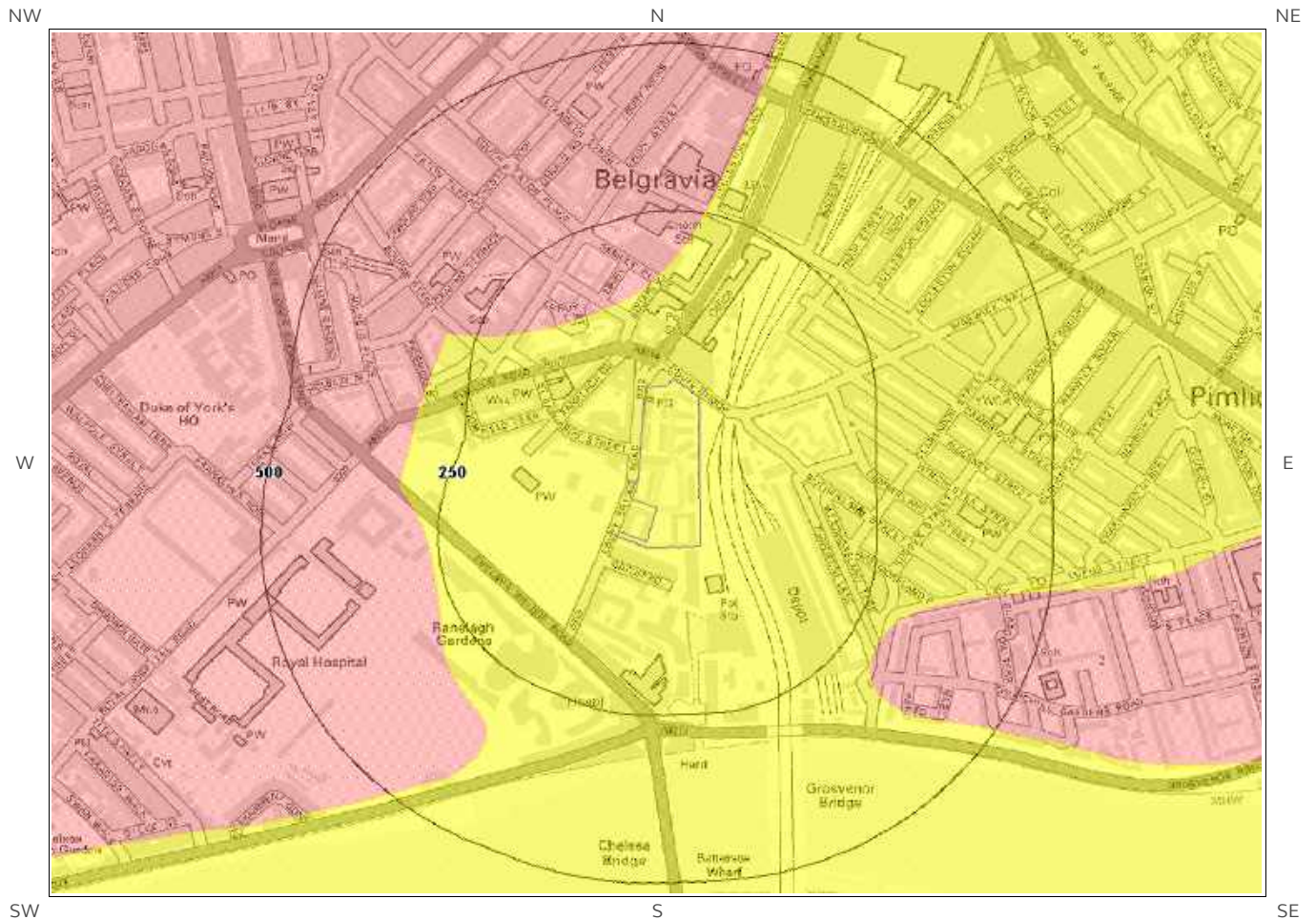
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
LC-XCZ	LONDON CLAY FORMATION	CLAY AND SILT

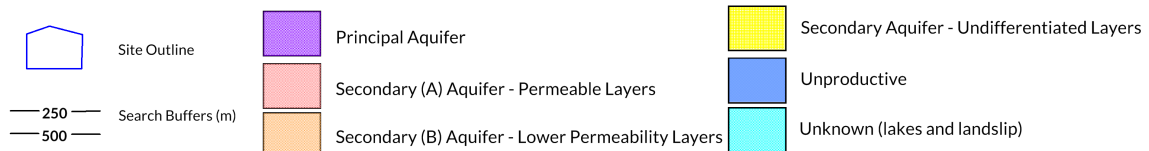
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

6 Hydrogeology and Hydrology

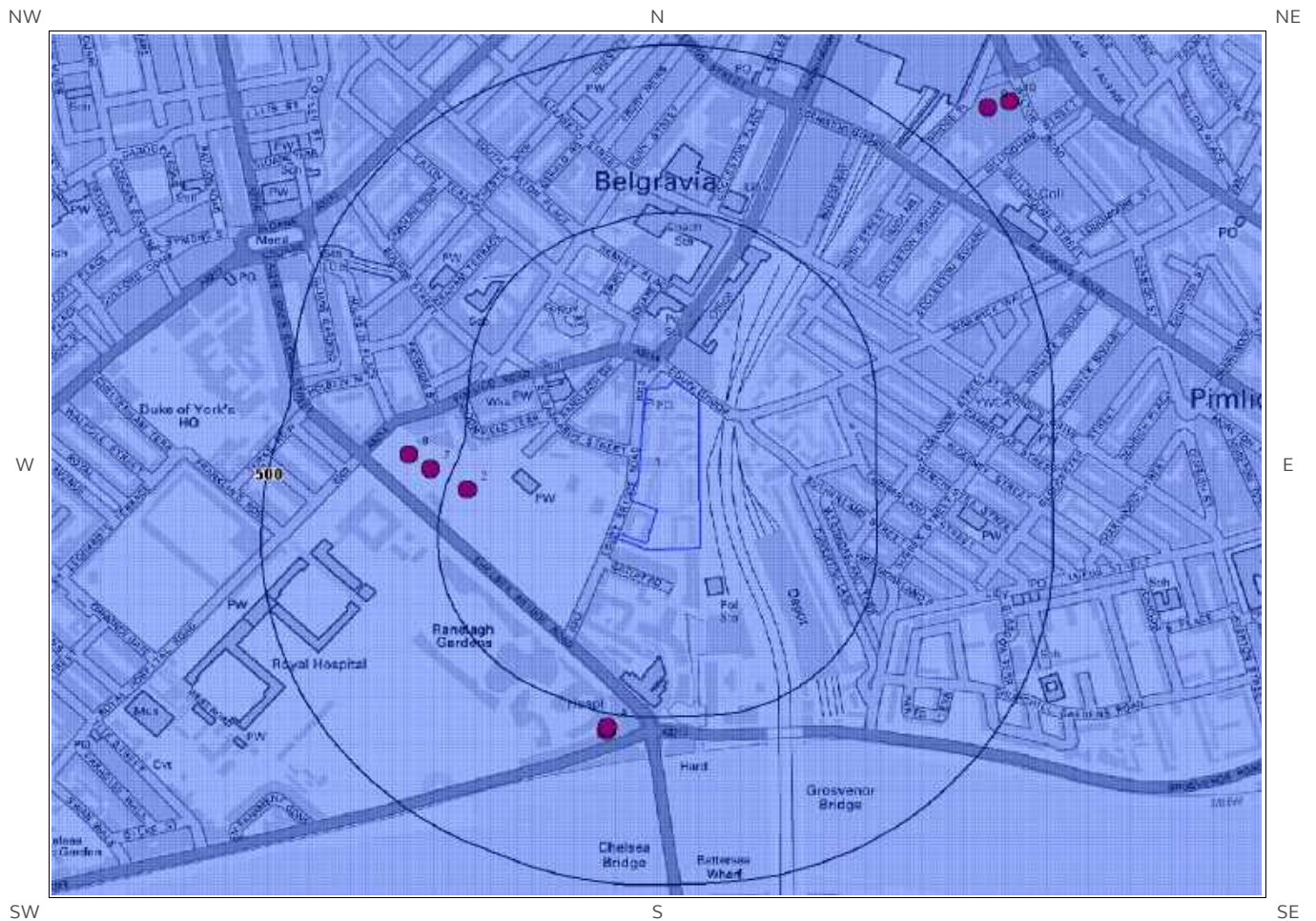
6a. Aquifer Within Superficial Geology



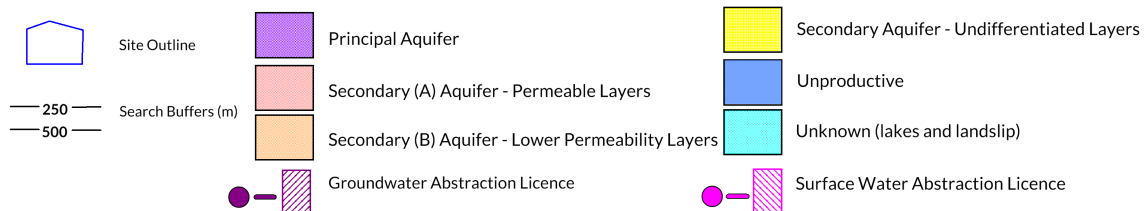
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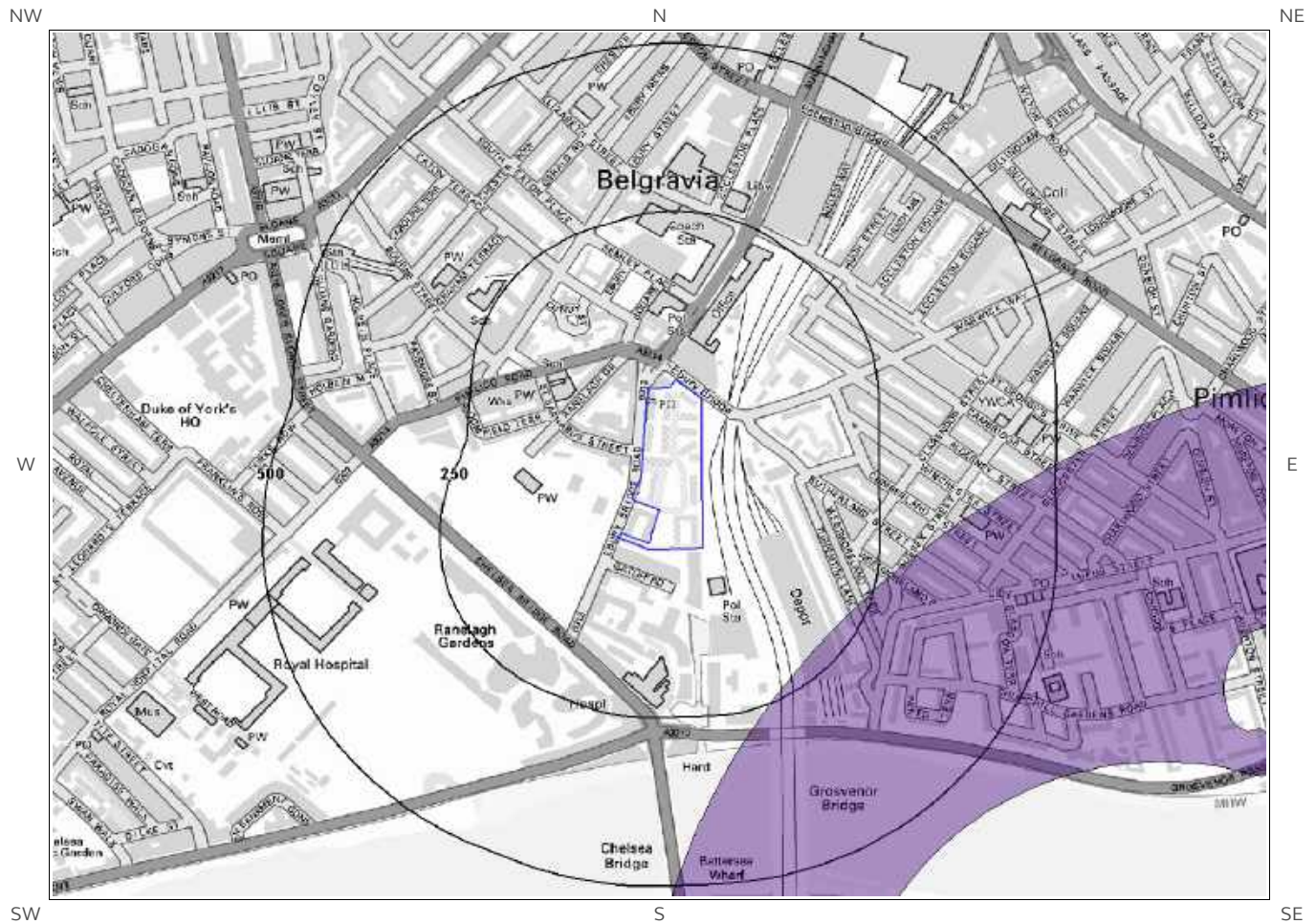
6b. Aquifer Within Bedrock Geology and Abstraction Licences



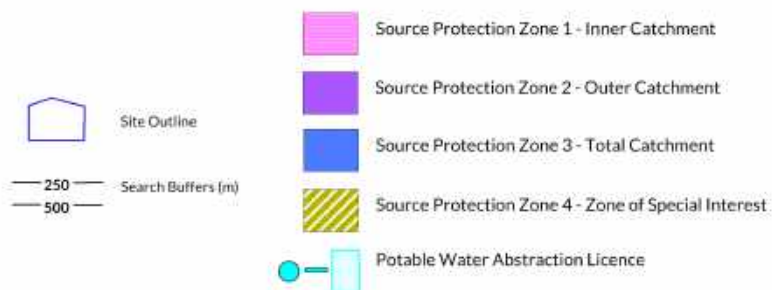
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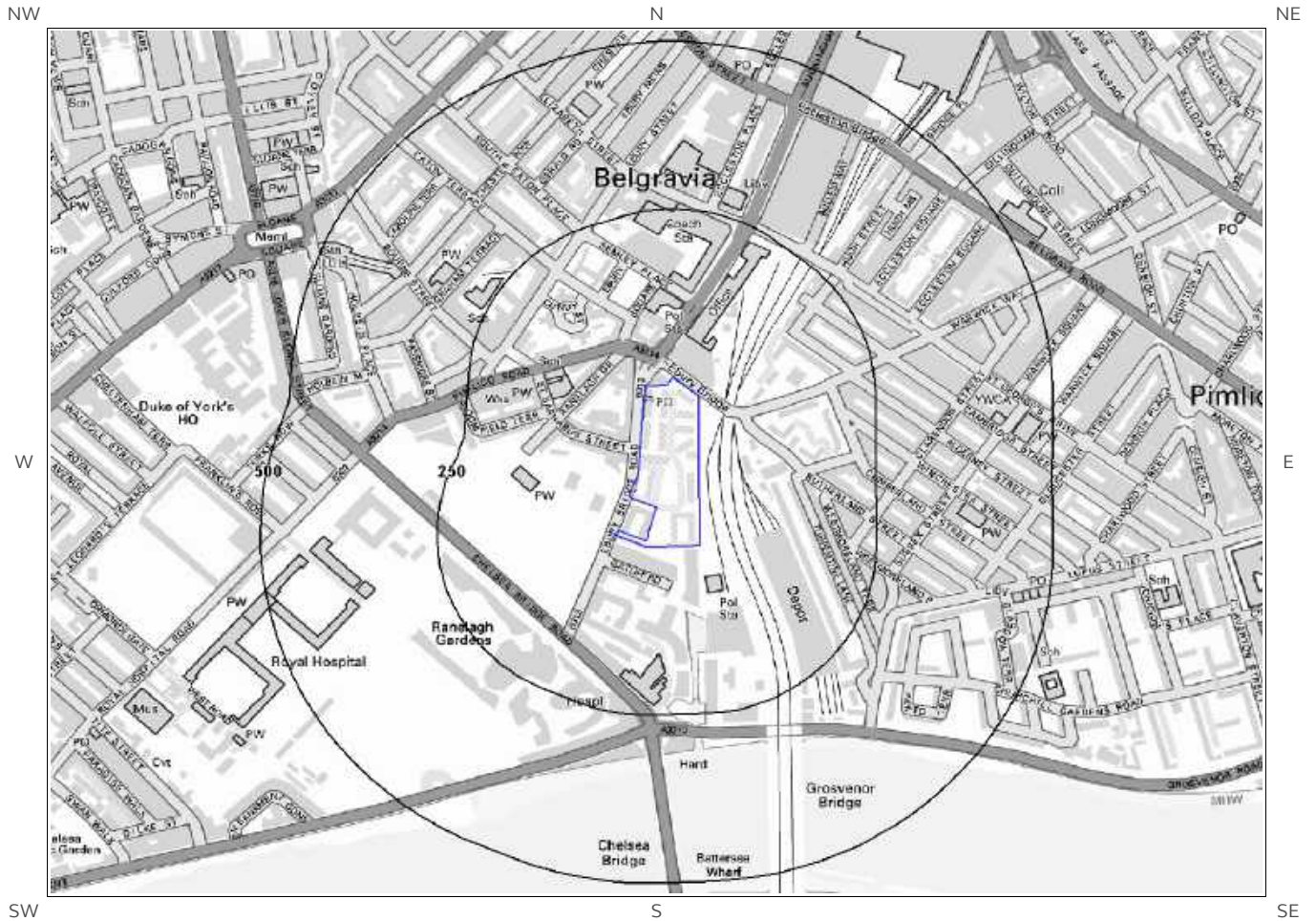
6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licences



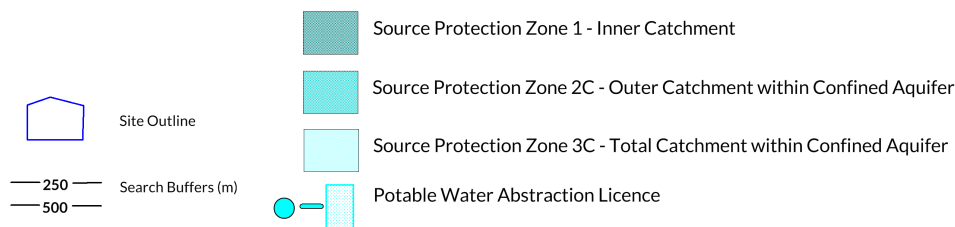
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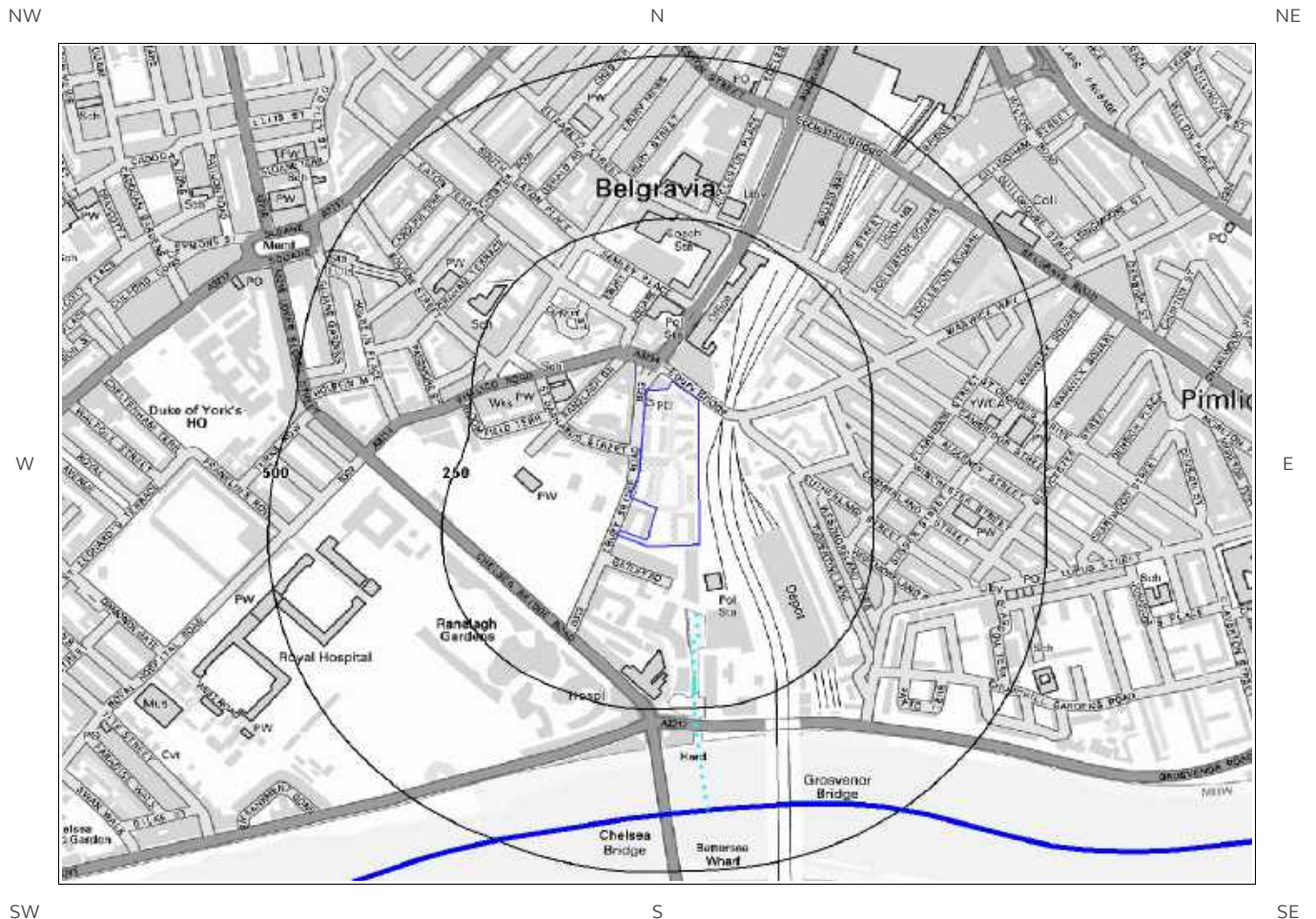
6d. Hydrogeology – Source Protection Zones within confined aquifer



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6e. Hydrology – Watercourse Network and River Quality



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6. Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

Records of strata classification within the superficial geology at or in proximity to the property Yes

From 1 April 2010, the Environment Agency/Natural Resources Wales'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
5	0	On Site	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
1	129	NW	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
2	290	SE	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

Records of strata classification within the bedrock geology at or in proximity to the property Yes

From 1 April 2010, the Environment Agency/Natural Resources Wales'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
1	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

6.3 Groundwater Abstraction Licences

Groundwater Abstraction Licences within 2000m of the study site

Identified

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
2	221	W	528283 178300	<p>Status: Active Licence No: TH/039/0039/114 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: CHELSEA BARRACKS BOREHOLE C Data Type: Point Name: Project Blue Limited</p> <p>Annual Volume (m³): 250000 Max Daily Volume (m³): 1000 Original Application No: - Original Start Date: 08/12/2016 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 08/12/2016 Version End Date:</p>
3A	272	S	528481 177945	<p>Status: Active Licence No: TH/039/0039/074 Details: Horticultural Watering Direct Source: THAMES GROUNDWATER Point: RANELAGH GARDENS- BOREHOLE Data Type: Point Name: ROYAL HORTICULTURAL SOCIETY</p> <p>Annual Volume (m³): 7000 Max Daily Volume (m³): 40 Original Application No: - Original Start Date: 30/05/2013 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 30/05/2013 Version End Date:</p>
4A	272	S	528481 177945	<p>Status: Active Licence No: TH/039/0039/074 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: RANELAGH GARDENS- BOREHOLE Data Type: Point Name: ROYAL HORTICULTURAL SOCIETY</p> <p>Annual Volume (m³): 7000 Max Daily Volume (m³): 40 Original Application No: - Original Start Date: 30/05/2013 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 30/05/2013 Version End Date:</p>
5A	277	S	528480 177940	<p>Status: Historical Licence No: 28/39/39/0225 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: RANELAGH GARDENS- BOREHOLE Data Type: Point Name: ROYAL HORTICULTURAL SOCIETY</p> <p>Annual Volume (m³): 7000 Max Daily Volume (m³): 40 Original Application No: - Original Start Date: 21/12/2006 Expiry Date: 31/03/2013 Issue No: 1 Version Start Date: 01/04/2008 Version End Date:</p>
6A	277	S	528480 177940	<p>Status: Historical Licence No: 28/39/39/0225 Details: Horticultural Watering Direct Source: THAMES GROUNDWATER Point: RANELAGH GARDENS- BOREHOLE Data Type: Point Name: ROYAL HORTICULTURAL SOCIETY</p> <p>Annual Volume (m³): 7000 Max Daily Volume (m³): 40 Original Application No: - Original Start Date: 21/12/2006 Expiry Date: 31/03/2013 Issue No: 1 Version Start Date: 01/04/2008 Version End Date:</p>
7	280	W	528231 178330	<p>Status: Active Licence No: TH/039/0039/114 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: CHELSEA BARRACKS BOREHOLE B Data Type: Point Name: Project Blue Limited</p> <p>Annual Volume (m³): 250000 Max Daily Volume (m³): 1000 Original Application No: - Original Start Date: 08/12/2016 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 08/12/2016 Version End Date:</p>

ID	Distance (m)	Direction	NGR	Details	
8	317	NW	528200 178352	Status: Active Licence No: TH/039/0039/114 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: CHELSEA BARRACKS BOREHOLE A Data Type: Point Name: Project Blue Limited	Annual Volume (m³): 250000 Max Daily Volume (m³): 1000 Original Application No: - Original Start Date: 08/12/2016 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 08/12/2016 Version End Date:
9	596	NE	529020 178870	Status: Active Licence No: 28/39/39/0232 Details: Non-Evaporative Cooling Direct Source: THAMES GROUNDWATER Point: DAVIS HOUSE, LONDON-BOREHOLE A Data Type: Point Name: ECF London Office SARL	Annual Volume (m³): 280000 Max Daily Volume (m³): 1166 Original Application No: - Original Start Date: 13/08/2007 Expiry Date: 31/03/2025 Issue No: 2 Version Start Date: 07/03/2011 Version End Date:
10	624	NE	529050 178880	Status: Active Licence No: 28/39/39/0232 Details: Non-Evaporative Cooling Direct Source: THAMES GROUNDWATER Point: DAVIS HOUSE, LONDON-BOREHOLE B Data Type: Point Name: ECF London Office SARL	Annual Volume (m³): 280000 Max Daily Volume (m³): 1166 Original Application No: - Original Start Date: 13/08/2007 Expiry Date: 31/03/2025 Issue No: 2 Version Start Date: 07/03/2011 Version End Date:
Not shown	660	SE	528940 177640	Status: Historical Licence No: 28/39/42/0074 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BATTERSEA POWER STATION , BATTERSEA, LONDON - BOREHOLE Data Type: Point Name: Battersea Project Land Company Limited	Annual Volume (m³): 438000 Max Daily Volume (m³): 1200 Original Application No: - Original Start Date: 13/11/2007 Expiry Date: 31/03/2013 Issue No: 2 Version Start Date: 09/11/2012 Version End Date:
Not shown	660	SE	528940 177640	Status: Historical Licence No: 28/39/42/0066 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BATTERSEA POWER STATION , BATTERSEA, LONDON - BOREHOLE Data Type: Point Name: PARKVIEW INTERNATIONAL LONDON PLC	Annual Volume (m³): 438000 Max Daily Volume (m³): 1200 Original Application No: - Original Start Date: 30/04/2004 Expiry Date: 31/03/2007 Issue No: 1 Version Start Date: 30/04/2004 Version End Date:
Not shown	682	SE	529020 177666	Status: Active Licence No: TH/039/0042/020 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE AT BATTERSEA POWER STATION Data Type: Point Name: Battersea Project Land Company Limited	Annual Volume (m³): 438000 Max Daily Volume (m³): 1200 Original Application No: - Original Start Date: 03/05/2013 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 27/02/2017 Version End Date:
Not shown	730	N	528500 179190	Status: Historical Licence No: 28/39/39/0238 Details: Non-Evaporative Cooling Direct Source: THAMES GROUNDWATER Point: EATON SQUARE, LONDON, SW1W - BOREHOLE Data Type: Point Name: GROSVENOR LIMITED	Annual Volume (m³): 186885 Max Daily Volume (m³): 864 Original Application No: - Original Start Date: 21/10/2008 Expiry Date: 31/03/2013 Issue No: 1 Version Start Date: 21/10/2008 Version End Date:

ID	Distance (m)	Direction	NGR	Details		
Not shown	730	N	528500 179190	Status: Historical Licence No: 28/39/39/0238 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: EATON SQUARE, LONDON, SW1W - BOREHOLE Data Type: Point Name: GROSVENOR LIMITED	Annual Volume (m³): 186885 Max Daily Volume (m³): 864 Original Application No: - Original Start Date: 21/10/2008 Expiry Date: 31/03/2013 Issue No: 1 Version Start Date: 21/10/2008 Version End Date:	
Not shown	744	NE	529009 179068	Status: Historical Licence No: TH/039/0039/004 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: BOREHOLE AT WILTON ROAD, LONDON Data Type: Point Name: The Trustees of The Abford House Unit Trust	Annual Volume (m³): 200000 Max Daily Volume (m³): 972 Original Application No: - Original Start Date: 02/02/2010 Expiry Date: 31/03/2019 Issue No: 1 Version Start Date: 02/02/2010 Version End Date:	
Not shown	744	NE	529009 179068	Status: Active Licence No: TH/039/0039/004 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: WILTON ROAD, LONDON Data Type: Point Name: The Trustees of The Abford House Unit Trust	Annual Volume (m³): 200000 Max Daily Volume (m³): 972 Original Application No: - Original Start Date: 02/02/2010 Expiry Date: 31/03/2019 Issue No: 4 Version Start Date: 20/01/2017 Version End Date:	
Not shown	748	NW	528193 179116	Status: Active Licence No: TH/039/0039/069 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: EATON PLACE, LONDON- BOREHOLE Data Type: Point Name: Trapani	Annual Volume (m³): 11612 Max Daily Volume (m³): 51.8 Original Application No: - Original Start Date: 17/05/2013 Expiry Date: 31/03/2019 Issue No: 2 Version Start Date: 10/07/2014 Version End Date:	
Not shown	753	NW	528190 179120	Status: Historical Licence No: 28/39/39/0226 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: THAMES GROUNDWATER Point: EATON PLACE, LONDON- BOREHOLE Data Type: Point Name: GOLDSTEIN	Annual Volume (m³): 11612 Max Daily Volume (m³): 51.8 Original Application No: - Original Start Date: 09/03/2007 Expiry Date: 31/03/2013 Issue No: 1 Version Start Date: 01/04/2008 Version End Date:	
Not shown	754	NE	528980 179100	Status: Active Licence No: TH/039/0039/046 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: VICTORIA UNDERGROUND STATION WILTON PLACE SW1- DRIFT DEPOSIT Data Type: Point Name: LONDON UNDERGROUND LTD	Annual Volume (m³): 189216 Max Daily Volume (m³): 519 Original Application No: - Original Start Date: 01/01/2012 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 01/01/2012 Version End Date:	
Not shown	754	NE	528980 179100	Status: Historical Licence No: 28/39/39/0223 Details: Non-Evaporative Cooling Direct Source: THAMES GROUNDWATER Point: VICTORIA UNDERGROUND STATION WILTON PLACE SW1- DRIFT DEPOSIT Data Type: Point Name: LONDON UNDERGROUND LTD	Annual Volume (m³): 189216 Max Daily Volume (m³): 518.4 Original Application No: - Original Start Date: 02/06/2006 Expiry Date: 31/12/2011 Issue No: 1 Version Start Date: 02/06/2006 Version End Date:	
Not shown	761	N	528303 179176	Status: Active Licence No: TH/039/0039/051 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: ABSTRACTION BOREHOLE A - EATON PLACE Data Type: Point Name: FIL Administration Ltd	Annual Volume (m³): 12000 Max Daily Volume (m³): 112 Original Application No: - Original Start Date: 30/05/2014 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 30/05/2014 Version End Date:	

ID	Distance (m)	Direction	NGR	Details	
Not shown	773	N	528532 179236	Status: Active Licence No: TH/039/0039/062 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: EATON SQUARE, LONDON, SW1W - BOREHOLE Data Type: Point Name: GROSVENOR LIMITED	Annual Volume (m³): 186885 Max Daily Volume (m³): 864 Original Application No: - Original Start Date: 01/04/2013 Expiry Date: 31/03/2019 Issue No: 1 Version Start Date: 01/04/2013 Version End Date:
Not shown	773	N	528532 179236	Status: Active Licence No: TH/039/0039/062 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: EATON SQUARE, LONDON, SW1W - BOREHOLE Data Type: Point Name: GROSVENOR LIMITED	Annual Volume (m³): 186885 Max Daily Volume (m³): 864 Original Application No: - Original Start Date: 01/04/2013 Expiry Date: 31/03/2019 Issue No: 1 Version Start Date: 01/04/2013 Version End Date:
Not shown	881	E	529460 177970	Status: Active Licence No: 28/39/39/0141 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: DOLPHIN SQUARE- BOREHOLE C Data Type: Point Name: Dolphin Square Limited	Annual Volume (m³): 258967 Max Daily Volume (m³): 763.7 Original Application No: - Original Start Date: 11/02/1974 Expiry Date: - Issue No: 104 Version Start Date: 09/01/2015 Version End Date:
Not shown	896	E	529490 178030	Status: Active Licence No: 28/39/39/0141 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: DOLPHIN SQUARE- BOREHOLE E Data Type: Point Name: Dolphin Square Limited	Annual Volume (m³): 258967 Max Daily Volume (m³): 763.7 Original Application No: - Original Start Date: 11/02/1974 Expiry Date: - Issue No: 104 Version Start Date: 09/01/2015 Version End Date:
Not shown	912	E	529500 178000	Status: Historical Licence No: 28/39/39/0141 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'A' AT DOLPHIN SQUARE, LONDON SW1 Data Type: Point Name: DOLPHIN SQUARE TRUST LTD	Annual Volume (m³): 258967 Max Daily Volume (m³): 763.7 Original Application No: - Original Start Date: 11/02/1974 Expiry Date: - Issue No: 100 Version Start Date: 11/02/1974 Version End Date:
Not shown	912	E	529500 178000	Status: Historical Licence No: 28/39/39/0141 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'B' AT DOLPHIN SQUARE, LONDON SW1 Data Type: Point Name: DOLPHIN SQUARE TRUST LTD	Annual Volume (m³): 258967 Max Daily Volume (m³): 763.7 Original Application No: - Original Start Date: 11/02/1974 Expiry Date: - Issue No: 100 Version Start Date: 11/02/1974 Version End Date:
Not shown	912	E	529500 178000	Status: Historical Licence No: 28/39/39/0141 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'C' AT DOLPHIN SQUARE, LONDON SW1 Data Type: Point Name: DOLPHIN SQUARE TRUST LTD	Annual Volume (m³): 258967 Max Daily Volume (m³): 763.7 Original Application No: - Original Start Date: 11/02/1974 Expiry Date: - Issue No: 100 Version Start Date: 11/02/1974 Version End Date:

ID	Distance (m)	Direction	NGR	Details
Not shown	912	E	529500 178000	<p>Status: Historical Licence No: 28/39/39/0141 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'D' AT DOLPHIN SQUARE, LONDON SW1 Data Type: Point Name: DOLPHIN SQUARE TRUST LTD</p> <p>Annual Volume (m³): 258967 Max Daily Volume (m³): 763.7 Original Application No: - Original Start Date: 11/02/1974 Expiry Date: - Issue No: 100 Version Start Date: 11/02/1974 Version End Date:</p>
Not shown	912	E	529500 178000	<p>Status: Historical Licence No: 28/39/39/0141 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'E' AT DPOLPHIN SQUARE, LONDON SW1 Data Type: Point Name: DOLPHIN SQUARE TRUST LTD</p> <p>Annual Volume (m³): 258967 Max Daily Volume (m³): 763.7 Original Application No: - Original Start Date: 11/02/1974 Expiry Date: - Issue No: 100 Version Start Date: 11/02/1974 Version End Date:</p>
Not shown	914	E	529520 178100	<p>Status: Active Licence No: 28/39/39/0141 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: DOLPHIN SQUARE- BOREHOLE A Data Type: Point Name: Dolphin Square Limited</p> <p>Annual Volume (m³): 258967 Max Daily Volume (m³): 763.7 Original Application No: - Original Start Date: 11/02/1974 Expiry Date: - Issue No: 104 Version Start Date: 09/01/2015 Version End Date:</p>
Not shown	940	SE	529331 177607	<p>Status: Active Licence No: TH/039/0042/007 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: POINT A AT ST JAMES: RIVERLIGHT Data Type: Point Name: SSE Heat Networks Limited</p> <p>Annual Volume (m³): 480000 Max Daily Volume (m³): 1400 Original Application No: - Original Start Date: 08/03/2017 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 08/03/2017 Version End Date:</p>
Not shown	943	SE	529180 177460	<p>Status: Historical Licence No: 28/39/42/0072 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: BATTERSEA PUMPING STATION - BOREHOLE Data Type: Point Name: THAMES WATER UTILITIES LTD</p> <p>Annual Volume (m³): 2.555e+006 Max Daily Volume (m³): 7500 Original Application No: - Original Start Date: 22/03/2007 Expiry Date: 31/03/2013 Issue No: 1 Version Start Date: 01/04/2007 Version End Date:</p>
Not shown	943	SE	529180 177460	<p>Status: Historical Licence No: 28/39/42/0061 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: BATTERSEA PUMPING STATION - BOREHOLE Data Type: Point Name: THAMES WATER UTILITIES LTD</p> <p>Annual Volume (m³): 2555000 Max Daily Volume (m³): 7500 Original Application No: - Original Start Date: 05/09/2002 Expiry Date: 31/03/2007 Issue No: 1 Version Start Date: 05/09/2002 Version End Date:</p>
Not shown	948	SE	529344 177609	<p>Status: Active Licence No: TH/039/0042/007 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: POINT B AT ST JAMES: RIVERLIGHT Data Type: Point Name: SSE Heat Networks Limited</p> <p>Annual Volume (m³): 480000 Max Daily Volume (m³): 1400 Original Application No: - Original Start Date: 08/03/2017 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 08/03/2017 Version End Date:</p>

ID	Distance (m)	Direction	NGR	Details	
Not shown	961	E	529550 178000	Status: Active Licence No: 28/39/39/0141 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: DOLPHIN SQUARE- BOREHOLE B Data Type: Point Name: Dolphin Square Limited	Annual Volume (m³): 258967 Max Daily Volume (m³): 763.7 Original Application No: - Original Start Date: 11/02/1974 Expiry Date: - Issue No: 104 Version Start Date: 09/01/2015 Version End Date:
Not shown	1003	SE	529348 177531	Status: Active Licence No: TH/039/0042/007 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: POINT E AT ST JAMES: RIVERLIGHT Data Type: Point Name: SSE Heat Networks Limited	Annual Volume (m³): 480000 Max Daily Volume (m³): 1400 Original Application No: - Original Start Date: 08/03/2017 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 08/03/2017 Version End Date:
Not shown	1011	N	528400 179460	Status: Historical Licence No: 28/39/39/0217 Details: General Use Relating To Secondary Category (Low Loss) Direct Source: THAMES GROUNDWATER Point: BELGRAVE SQUARE, LONDON- BOREHOLE A Data Type: Point Name: GRENADIER PROPERTIES LLC & 28A CHAPEL STREET LLC	Annual Volume (m³): 189216 Max Daily Volume (m³): 518.4 Original Application No: - Original Start Date: 30/08/2005 Expiry Date: 31/12/2007 Issue No: 1 Version Start Date: 30/08/2005 Version End Date:
Not shown	1011	N	528400 179460	Status: Historical Licence No: 28/39/39/0233 Details: General Use Relating To Secondary Category (Low Loss) Direct Source: THAMES GROUNDWATER Point: BELGRAVE SQUARE, LONDON- BOREHOLE A Data Type: Point Name: GRENADIER PROPERTIES LLC & 28A CHAPEL STREET LLC	Annual Volume (m³): 189216 Max Daily Volume (m³): 518.4 Original Application No: - Original Start Date: 01/01/2008 Expiry Date: 31/03/2013 Issue No: 1 Version Start Date: 01/01/2008 Version End Date:
Not shown	1012	SE	529347 177517	Status: Active Licence No: TH/039/0042/007 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: POINT F AT ST JAMES: RIVERLIGHT Data Type: Point Name: SSE Heat Networks Limited	Annual Volume (m³): 480000 Max Daily Volume (m³): 1400 Original Application No: - Original Start Date: 08/03/2017 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 08/03/2017 Version End Date:
Not shown	1016	N	528430 179470	Status: Historical Licence No: 28/39/39/0233 Details: General Use Relating To Secondary Category (Low Loss) Direct Source: THAMES GROUNDWATER Point: BELGRAVE SQUARE, LONDON- BOREHOLE B Data Type: Point Name: GRENADIER PROPERTIES LLC & 28A CHAPEL STREET LLC	Annual Volume (m³): 189216 Max Daily Volume (m³): 518.4 Original Application No: - Original Start Date: 01/01/2008 Expiry Date: 31/03/2013 Issue No: 1 Version Start Date: 01/01/2008 Version End Date:
Not shown	1016	N	528430 179470	Status: Historical Licence No: 28/39/39/0217 Details: General Use Relating To Secondary Category (Low Loss) Direct Source: THAMES GROUNDWATER Point: BELGRAVE SQUARE, LONDON- BOREHOLE B Data Type: Point Name: GRENADIER PROPERTIES LLC & 28A CHAPEL STREET LLC	Annual Volume (m³): 189216 Max Daily Volume (m³): 518.4 Original Application No: - Original Start Date: 30/08/2005 Expiry Date: 31/12/2007 Issue No: 1 Version Start Date: 30/08/2005 Version End Date:

ID	Distance (m)	Direction	NGR	Details		
Not shown	1017	N	528376 179462	Status: Historical Licence No: TH/039/0039/086 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: BELGRAVE SQUARE, LONDON-BOREHOLE A Data Type: Point Name: Kimanda Property Services Limited	Annual Volume (m³): 151366 Max Daily Volume (m³): 414.7 Original Application No: - Original Start Date: 11/11/2013 Expiry Date: 31/03/2019 Issue No: 1 Version Start Date: 11/11/2013 Version End Date:	
Not shown	1017	N	528376 179462	Status: Active Licence No: TH/039/0039/086 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: BELGRAVE SQUARE, LONDON-BOREHOLE A Data Type: Point Name: Kimanda Property Services Limited	Annual Volume (m³): 151366 Max Daily Volume (m³): 414.7 Original Application No: - Original Start Date: 11/11/2013 Expiry Date: 31/03/2019 Issue No: 2 Version Start Date: 09/02/2018 Version End Date:	
Not shown	1023	N	528401 179472	Status: Active Licence No: TH/039/0039/086 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: BELGRAVE SQUARE, LONDON-BOREHOLE B Data Type: Point Name: Kimanda Property Services Limited	Annual Volume (m³): 151366 Max Daily Volume (m³): 414.7 Original Application No: - Original Start Date: 11/11/2013 Expiry Date: 31/03/2019 Issue No: 2 Version Start Date: 09/02/2018 Version End Date:	
Not shown	1023	N	528401 179472	Status: Historical Licence No: TH/039/0039/086 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: BELGRAVE SQUARE, LONDON-BOREHOLE B Data Type: Point Name: Kimanda Property Services Limited	Annual Volume (m³): 151366 Max Daily Volume (m³): 414.7 Original Application No: - Original Start Date: 11/11/2013 Expiry Date: 31/03/2019 Issue No: 1 Version Start Date: 11/11/2013 Version End Date:	
Not shown	1058	SE	529491 177623	Status: Active Licence No: TH/039/0042/007 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: POINT G AT ST JAMES: RIVERLIGHT Data Type: Point Name: SSE Heat Networks Limited	Annual Volume (m³): 480000 Max Daily Volume (m³): 1400 Original Application No: - Original Start Date: 08/03/2017 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 08/03/2017 Version End Date:	
Not shown	1063	SE	529500 177627	Status: Active Licence No: TH/039/0042/007 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: POINT H AT ST JAMES: RIVERLIGHT Data Type: Point Name: SSE Heat Networks Limited	Annual Volume (m³): 480000 Max Daily Volume (m³): 1400 Original Application No: - Original Start Date: 08/03/2017 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 08/03/2017 Version End Date:	
Not shown	1073	SE	529416 177502	Status: Active Licence No: TH/039/0042/007 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: POINT C AT ST JAMES: RIVERLIGHT Data Type: Point Name: SSE Heat Networks Limited	Annual Volume (m³): 480000 Max Daily Volume (m³): 1400 Original Application No: - Original Start Date: 08/03/2017 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 08/03/2017 Version End Date:	
Not shown	1075	SE	529429 177513	Status: Active Licence No: TH/039/0042/007 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: POINT D AT ST JAMES: RIVERLIGHT Data Type: Point Name: SSE Heat Networks Limited	Annual Volume (m³): 480000 Max Daily Volume (m³): 1400 Original Application No: - Original Start Date: 08/03/2017 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 08/03/2017 Version End Date:	

ID	Distance (m)	Direction	NGR	Details
Not shown	1162	N	528990 179550	<p>Status: Historical Licence No: 28/39/39/0196C Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: BOREHOLE AT BUCKINGHAM PALACE Data Type: Point Name: THE KEEPER OF THE PRIVY PURSE</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: - Expiry Date: 31/12/2009 Issue No: 1 Version Start Date: 08/11/2000 Version End Date:</p>
Not shown	1162	N	528990 179550	<p>Status: Historical Licence No: 28/39/39/0196C Details: Non-Evaporative Cooling Direct Source: THAMES GROUNDWATER Point: BOREHOLE AT BUCKINGHAM PALACE Data Type: Point Name: THE KEEPER OF THE PRIVY PURSE</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: - Expiry Date: 31/12/2009 Issue No: 1 Version Start Date: 08/11/2000 Version End Date:</p>
Not shown	1195	W	527305 178087	<p>Status: Historical Licence No: 28/39/39/0080 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: CHELSEA MANOR STREET, LONDON SW3-BOREHOLE Data Type: Point Name: GREENWICH LEISURE LIMITED</p> <p>Annual Volume (m³): 20313 Max Daily Volume (m³): 286.4 Original Application No: - Original Start Date: 13/06/1966 Expiry Date: - Issue No: 102 Version Start Date: 21/11/2012 Version End Date:</p>
Not shown	1199	W	527300 178100	<p>Status: Historical Licence No: 28/39/39/0080 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE AT CHELSEA MANOR STREET, LONDON SW3 Data Type: Point Name: ROYAL BOROUGH OF KENSINGTON AND CHELSEA</p> <p>Annual Volume (m³): 20313 Max Daily Volume (m³): 286.4 Original Application No: - Original Start Date: 13/06/1966 Expiry Date: - Issue No: 100 Version Start Date: 13/06/1966 Version End Date:</p>
Not shown	1199	W	527300 178100	<p>Status: Historical Licence No: 28/39/39/0080 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: CHELSEA MANOR STREET, LONDON SW3-BOREHOLE Data Type: Point Name: CANNONS HEALTH AND FITNESS LIMITED</p> <p>Annual Volume (m³): 20313 Max Daily Volume (m³): 286.4 Original Application No: - Original Start Date: 13/06/1966 Expiry Date: - Issue No: 101 Version Start Date: 21/07/2005 Version End Date:</p>
Not shown	1283	NW	527620 179350	<p>Status: Historical Licence No: 28/39/39/0038 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: HARRODS, KNIGHTSBRIDGE - BOREHOLE C Data Type: Point Name: HARRODS LTD</p> <p>Annual Volume (m³): 286000 Max Daily Volume (m³): 1091 Original Application No: - Original Start Date: 09/05/1966 Expiry Date: - Issue No: 101 Version Start Date: 12/11/2004 Version End Date:</p>

ID	Distance (m)	Direction	NGR	Details
Not shown	1286	NW	527629 179364	<p>Status: Active Licence No: 28/39/39/0038 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: HARRODS, KNIGHTSBRIDGE - BOREHOLE C Data Type: Point Name: HARRODS LTD</p> <p>Annual Volume (m³): 286000 Max Daily Volume (m³): 1091 Original Application No: - Original Start Date: 09/05/1966 Expiry Date: - Issue No: 102 Version Start Date: 08/03/2013 Version End Date:</p>
Not shown	1303	NW	527589 179347	<p>Status: Active Licence No: 28/39/39/0038 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: HARRODS, KNIGHTSBRIDGE - BOREHOLE B Data Type: Point Name: HARRODS LTD</p> <p>Annual Volume (m³): 286000 Max Daily Volume (m³): 1091 Original Application No: - Original Start Date: 09/05/1966 Expiry Date: - Issue No: 102 Version Start Date: 08/03/2013 Version End Date:</p>
Not shown	1304	NW	527610 179370	<p>Status: Historical Licence No: 28/39/39/0038 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: HARRODS, KNIGHTSBRIDGE - BOREHOLE A Data Type: Point Name: HARRODS LTD</p> <p>Annual Volume (m³): 286000 Max Daily Volume (m³): 1091 Original Application No: - Original Start Date: 09/05/1966 Expiry Date: - Issue No: 101 Version Start Date: 12/11/2004 Version End Date:</p>
Not shown	1305	NW	527617 179378	<p>Status: Active Licence No: 28/39/39/0038 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: HARRODS, KNIGHTSBRIDGE - BOREHOLE A Data Type: Point Name: HARRODS LTD</p> <p>Annual Volume (m³): 286000 Max Daily Volume (m³): 1091 Original Application No: - Original Start Date: 09/05/1966 Expiry Date: - Issue No: 102 Version Start Date: 08/03/2013 Version End Date:</p>
Not shown	1311	NW	527590 179360	<p>Status: Historical Licence No: 28/39/39/0038 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: HARRODS, KNIGHTSBRIDGE - BOREHOLE B Data Type: Point Name: HARRODS LTD</p> <p>Annual Volume (m³): 286000 Max Daily Volume (m³): 1091 Original Application No: - Original Start Date: 09/05/1966 Expiry Date: - Issue No: 101 Version Start Date: 12/11/2004 Version End Date:</p>
Not shown	1313	S	528030 177000	<p>Status: Historical Licence No: 28/39/42/0060 Details: Make-Up Or Top Up Water Direct Source: THAMES GROUNDWATER Point: BATTERSEA PARK, BATTERSEA-BOREHOLE Data Type: Point Name: WANDSWORTH BOROUGH COUNCIL</p> <p>Annual Volume (m³): 125000 Max Daily Volume (m³): 760 Original Application No: - Original Start Date: 09/02/2000 Expiry Date: 31/12/2009 Issue No: 3 Version Start Date: 21/09/2006 Version End Date:</p>

ID	Distance (m)	Direction	NGR	Details	
Not shown	1313	S	528030 177000	Status: Active Licence No: TH/039/0042/002 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: BATTERSEA PARK, BATTERSEA-BOREHOLE Data Type: Point Name: WANDSWORTH BOROUGH COUNCIL	Annual Volume (m³): 125000 Max Daily Volume (m³): 760 Original Application No: - Original Start Date: 01/01/2010 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 10/07/2014 Version End Date:
Not shown	1313	S	528030 177000	Status: Historical Licence No: 28/39/42/0060 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: BATTERSEA PARK, BATTERSEA, BOREHOLE 'A' Data Type: Point Name: WANDSWORTH BOROUGH COUNCIL	Annual Volume (m³): 125000 Max Daily Volume (m³): 760 Original Application No: - Original Start Date: 09/02/2000 Expiry Date: 31/12/2009 Issue No: 2 Version Start Date: 14/06/2001 Version End Date:
Not shown	1313	S	528030 177000	Status: Historical Licence No: 28/39/42/0060 Details: Spray Irrigation - Direct Direct Source: THAMES GROUNDWATER Point: BATTERSEA PARK, BATTERSEA-BOREHOLE Data Type: Point Name: WANDSWORTH BOROUGH COUNCIL	Annual Volume (m³): 125000 Max Daily Volume (m³): 760 Original Application No: - Original Start Date: 09/02/2000 Expiry Date: 31/12/2009 Issue No: 3 Version Start Date: 21/09/2006 Version End Date:
Not shown	1313	S	528030 177000	Status: Active Licence No: TH/039/0042/002 Details: Make-Up Or Top Up Water Direct Source: THAMES GROUNDWATER Point: BATTERSEA PARK, BATTERSEA-BOREHOLE Data Type: Point Name: WANDSWORTH BOROUGH COUNCIL	Annual Volume (m³): 125000 Max Daily Volume (m³): 760 Original Application No: - Original Start Date: 01/01/2010 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 10/07/2014 Version End Date:
Not shown	1313	S	528030 177000	Status: Historical Licence No: 28/39/42/0060 Details: Make-Up Or Top Up Water Direct Source: THAMES GROUNDWATER Point: BATTERSEA PARK, BATTERSEA, BOREHOLE 'A' Data Type: Point Name: WANDSWORTH BOROUGH COUNCIL	Annual Volume (m³): 125000 Max Daily Volume (m³): 760 Original Application No: - Original Start Date: 09/02/2000 Expiry Date: 31/12/2009 Issue No: 2 Version Start Date: 14/06/2001 Version End Date:
Not shown	1356	E	529968 178261	Status: Active Licence No: 28/39/39/0139 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: 152 GROSVENOR ROAD, BOREHOLE 'B' Data Type: Point Name: The Panoramic Management Company Limited	Annual Volume (m³): 125520 Max Daily Volume (m³): 1134 Original Application No: - Original Start Date: 09/10/1972 Expiry Date: - Issue No: 106 Version Start Date: 31/07/2013 Version End Date:
Not shown	1357	E	529970 178230	Status: Historical Licence No: 28/39/39/0139 Details: Non-Evaporative Cooling Direct Source: THAMES GROUNDWATER Point: 152 GROSVENOR ROAD- BOREHOLE C Data Type: Point Name: PANORAMIC MANAGEMENT CO LTD	Annual Volume (m³): 125520 Max Daily Volume (m³): 1134 Original Application No: - Original Start Date: 09/10/1972 Expiry Date: - Issue No: 105 Version Start Date: 30/05/2008 Version End Date:
Not shown	1357	E	529970 178230	Status: Historical Licence No: 28/39/39/0139 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: 152 GROSVENOR ROAD- BOREHOLE C Data Type: Point Name: PANORAMIC MANAGEMENT CO LTD	Annual Volume (m³): 125520 Max Daily Volume (m³): 442.8 Original Application No: - Original Start Date: 09/10/1972 Expiry Date: - Issue No: 104 Version Start Date: 21/02/2005 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1357	E	529970 178230	Status: Historical Licence No: 28/39/39/0139 Details: Non-Evaporative Cooling Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'C' AT 152 GROSVENOR ROAD Data Type: Point Name: BENCHMARK (RIVERMILL) LTD	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 09/10/1972 Expiry Date: - Issue No: 101 Version Start Date: 20/09/1999 Version End Date:
Not shown	1357	E	529970 178230	Status: Historical Licence No: 28/39/39/0139 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'C' AT 152 GROSVENOR ROAD Data Type: Point Name: BENCHMARK (RIVERMILL) LTD	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 09/10/1972 Expiry Date: - Issue No: 101 Version Start Date: 20/09/1999 Version End Date:
Not shown	1358	E	529970 178270	Status: Historical Licence No: 28/39/39/0139 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: 152 GROSVENOR ROAD, LONDON-BOREHOLE 'B' Data Type: Point Name: PANORAMIC MANAGEMENT CO LTD	Annual Volume (m³): 125520 Max Daily Volume (m³): 442.8 Original Application No: - Original Start Date: 09/10/1972 Expiry Date: - Issue No: 104 Version Start Date: 21/02/2005 Version End Date:
Not shown	1358	E	529970 178270	Status: Historical Licence No: 28/39/39/0139 Details: Non-Evaporative Cooling Direct Source: THAMES GROUNDWATER Point: 152 GROSVENOR ROAD, LONDON-BOREHOLE 'B' Data Type: Point Name: PANORAMIC MANAGEMENT CO LTD	Annual Volume (m³): 125520 Max Daily Volume (m³): 1134 Original Application No: - Original Start Date: 09/10/1972 Expiry Date: - Issue No: 105 Version Start Date: 30/05/2008 Version End Date:
Not shown	1358	E	529970 178270	Status: Historical Licence No: 28/39/39/0139 Details: Non-Evaporative Cooling Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'B' AT 152 GROSVENOR ROAD, LONDON Data Type: Point Name: BENCHMARK (RIVERMILL) LTD	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 09/10/1972 Expiry Date: - Issue No: 101 Version Start Date: 20/09/1999 Version End Date:
Not shown	1358	E	529970 178270	Status: Historical Licence No: 28/39/39/0139 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'B' AT 152 GROSVENOR ROAD, LONDON Data Type: Point Name: BENCHMARK (RIVERMILL) LTD	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 09/10/1972 Expiry Date: - Issue No: 101 Version Start Date: 20/09/1999 Version End Date:
Not shown	1360	E	529973 178230	Status: Active Licence No: 28/39/39/0139 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: 152 GROSVENOR ROAD, BOREHOLE 'C' Data Type: Point Name: The Panoramic Management Company Limited	Annual Volume (m³): 125520 Max Daily Volume (m³): 1134 Original Application No: - Original Start Date: 09/10/1972 Expiry Date: - Issue No: 106 Version Start Date: 31/07/2013 Version End Date:

ID	Distance (m)	Direction	NGR	Details
Not shown	1446	NW	527520 179480	<p>Status: Historical Licence No: 28/39/39/0008 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: THAMES GROUNDWATER Point: PRINCES COURT, LONDON- BOREHOLE Data Type: Point Name: GOLFRATE KNIGHTSBRIDGE LTD</p> <p>Annual Volume (m³): 28636 Max Daily Volume (m³): 91 Original Application No: - Original Start Date: 11/10/1965 Expiry Date: - Issue No: 101 Version Start Date: 25/12/2003 Version End Date:</p>
Not shown	1457	E	530030 178770	<p>Status: Historical Licence No: 28/39/39/0209 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: THAMES GROUNDWATER Point: MARSHAM STREET, LONDON - BOREHOLE Data Type: Point Name: WESTMINSTER GARDENS LIMITED</p> <p>Annual Volume (m³): 12810 Max Daily Volume (m³): 35 Original Application No: - Original Start Date: 18/07/2003 Expiry Date: 31/03/2013 Issue No: 2 Version Start Date: 01/04/2008 Version End Date:</p>
Not shown	1457	E	530030 178770	<p>Status: Active Licence No: TH/039/0039/072 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: THAMES GROUNDWATER Point: MARSHAM STREET, LONDON - BOREHOLE Data Type: Point Name: WESTMINSTER GARDENS LIMITED</p> <p>Annual Volume (m³): 20000 Max Daily Volume (m³): 105 Original Application No: - Original Start Date: 26/06/2013 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 26/06/2013 Version End Date:</p>
Not shown	1474	NW	527500 179500	<p>Status: Historical Licence No: 28/39/39/0008 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: THAMES GROUNDWATER Point: BOREHOLE AT PRINCES COURT, 78-94A BROMPTON ROAD, LONDON Data Type: Point Name: ITEMTRUMP LIMITED</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 11/10/1965 Expiry Date: - Issue No: 100 Version Start Date: 27/05/1992 Version End Date:</p>
Not shown	1482	E	530058 177886	<p>Status: Active Licence No: TH/039/0042/012 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: BOREHOLE B AT ST GEORGE WHARF SOUTH LONDON Data Type: Point Name: St George South London Limited</p> <p>Annual Volume (m³): 67300 Max Daily Volume (m³): 545 Original Application No: - Original Start Date: 15/07/2011 Expiry Date: 31/03/2019 Issue No: 1 Version Start Date: 01/04/2013 Version End Date:</p>
Not shown	1484	N	528794 179932	<p>Status: Active Licence No: TH/039/0039/011 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: GREEN PARK, WESTMINSTER, LONDON - BOREHOLE B Data Type: Point Name: LONDON UNDERGROUND LIMITED</p> <p>Annual Volume (m³): 788400 Max Daily Volume (m³): 2160 Original Application No: - Original Start Date: 24/12/2009 Expiry Date: 31/03/2019 Issue No: 1 Version Start Date: 24/12/2009 Version End Date:</p>
Not shown	1484	N	528794 179932	<p>Status: Historical Licence No: TH/039/0039/011 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: BOREHOLE AT GREEN PARK, WESTMINSTER Data Type: Point Name: LONDON UNDERGROUND LIMITED</p> <p>Annual Volume (m³): 788400 Max Daily Volume (m³): 2160 Original Application No: - Original Start Date: 24/12/2009 Expiry Date: 31/03/2019 Issue No: 1 Version Start Date: 24/12/2009 Version End Date:</p>

ID	Distance (m)	Direction	NGR	Details	
Not shown	1507	NE	529580 179590	Status: Historical Licence No: TH/039/0039/016 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: UNDERGROUND STRATA (CHALK) AT 36-38 QUEEN ANNE'S GATE Data Type: Point Name: 36 - 38 QAG LIMITED	Annual Volume (m³): 82368 Max Daily Volume (m³): 316.8 Original Application No: - Original Start Date: 18/01/2010 Expiry Date: 31/03/2019 Issue No: 1 Version Start Date: 18/01/2010 Version End Date:
Not shown	1507	NE	529580 179590	Status: Active Licence No: TH/039/0039/016 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: 36-38 QUEEN ANNE'S GATE, LONDON Data Type: Point Name: 36 - 38 QAG LIMITED	Annual Volume (m³): 82368 Max Daily Volume (m³): 316.8 Original Application No: - Original Start Date: 18/01/2010 Expiry Date: 31/03/2019 Issue No: 1 Version Start Date: 18/01/2010 Version End Date:
Not shown	1507	E	530089 177909	Status: Active Licence No: TH/039/0042/012 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: GSHP AT ST GEORGE SOUTH LONDON Data Type: Point Name: St George South London Limited	Annual Volume (m³): 67300 Max Daily Volume (m³): 545 Original Application No: - Original Start Date: 15/07/2011 Expiry Date: 31/03/2019 Issue No: 1 Version Start Date: 01/04/2013 Version End Date:
Not shown	1515	NW	527768 179758	Status: Historical Licence No: 28/39/39/0239 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: ONE HYDE PARK, KNIGHTSBRIDGE, LONDON BOREHOLE - POINT A Data Type: Point Name: One Hyde Park Limited	Annual Volume (m³): 514080 Max Daily Volume (m³): 1728 Original Application No: - Original Start Date: 05/03/2009 Expiry Date: 31/03/2013 Issue No: 2 Version Start Date: 17/08/2012 Version End Date:
Not shown	1515	NW	527768 179758	Status: Historical Licence No: 28/39/39/0239 Details: Non-Evaporative Cooling Direct Source: THAMES GROUNDWATER Point: ONE HYDE PARK, KNIGHTSBRIDGE, LONDON BOREHOLE - POINT A Data Type: Point Name: PROJECT GRANDE (GUERNSEY) LTD	Annual Volume (m³): 514080 Max Daily Volume (m³): 1728 Original Application No: - Original Start Date: - Expiry Date: 31/03/2013 Issue No: 1 Version Start Date: 05/03/2009 Version End Date:
Not shown	1515	NW	527768 179758	Status: Active Licence No: TH/039/0039/103 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: ONE HYDE PARK, KNIGHTSBRIDGE, LONDON BOREHOLE - POINT A Data Type: Point Name: One Hyde Park Limited	Annual Volume (m³): 514080 Max Daily Volume (m³): 1728 Original Application No: - Original Start Date: 28/07/2014 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 28/07/2014 Version End Date:
Not shown	1533	NW	527658 179708	Status: Historical Licence No: 28/39/39/0239 Details: Non-Evaporative Cooling Direct Source: THAMES GROUNDWATER Point: ONE HYDE PARK, KNIGHTSBRIDGE, LONDON, BOREHOLE POINT B Data Type: Point Name: PROJECT GRANDE (GUERNSEY) LTD	Annual Volume (m³): 514080 Max Daily Volume (m³): 1728 Original Application No: - Original Start Date: - Expiry Date: 31/03/2013 Issue No: 1 Version Start Date: 05/03/2009 Version End Date:
Not shown	1533	NW	527658 179708	Status: Historical Licence No: 28/39/39/0239 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: ONE HYDE PARK, KNIGHTSBRIDGE, LONDON, BOREHOLE POINT B Data Type: Point Name: One Hyde Park Limited	Annual Volume (m³): 514080 Max Daily Volume (m³): 1728 Original Application No: - Original Start Date: 05/03/2009 Expiry Date: 31/03/2013 Issue No: 2 Version Start Date: 17/08/2012 Version End Date:

ID	Distance (m)	Direction	NGR	Details		
Not shown	1533	NW	527658 179708	Status: Active Licence No: TH/039/0039/103 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: ONE HYDE PARK, KNIGHTSBRIDGE, LONDON, BOREHOLE POINT B Data Type: Point Name: One Hyde Park Limited	Annual Volume (m³): 514080 Max Daily Volume (m³): 1728 Original Application No: - Original Start Date: 28/07/2014 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 28/07/2014 Version End Date:	
Not shown	1540	N	528813 179986	Status: Active Licence No: TH/039/0039/011 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: GREEN PARK, WESTMINSTER, LONDON - BOREHOLE A Data Type: Point Name: LONDON UNDERGROUND LIMITED	Annual Volume (m³): 788400 Max Daily Volume (m³): 2160 Original Application No: - Original Start Date: 24/12/2009 Expiry Date: 31/03/2019 Issue No: 1 Version Start Date: 24/12/2009 Version End Date:	
Not shown	1540	N	528813 179986	Status: Historical Licence No: TH/039/0039/011 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: BOREHOLE AT GREEN PARK, WESTMINSTER Data Type: Point Name: LONDON UNDERGROUND LIMITED	Annual Volume (m³): 788400 Max Daily Volume (m³): 2160 Original Application No: - Original Start Date: 24/12/2009 Expiry Date: 31/03/2019 Issue No: 1 Version Start Date: 24/12/2009 Version End Date:	
Not shown	1596	SW	527280 177190	Status: Historical Licence No: 28/39/42/0065 Details: Water Bottling Direct Source: THAMES GROUNDWATER Point: RANSOME'S DOCK BUSINESS CENTRE, BATTERSEA, LONDON - WELL Data Type: Point Name: RANSOME'S DOCK LTD	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 27/01/2004 Expiry Date: 31/03/2013 Issue No: 1 Version Start Date: 27/01/2004 Version End Date:	
Not shown	1654	NE	530083 179190	Status: Active Licence No: TH/039/0039/013 Details: Non-Evaporative Cooling Direct Source: THAMES GROUNDWATER Point: NORTH HOUSE BOREHOLE Data Type: Point Name: Lord and Lady Sainsbury of Turville	Annual Volume (m³): 70000 Max Daily Volume (m³): 200 Original Application No: - Original Start Date: 06/11/2009 Expiry Date: 31/03/2019 Issue No: 1 Version Start Date: 20/02/2017 Version End Date:	
Not shown	1659	E	530256 177983	Status: Active Licence No: TH/039/0042/012 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: BOREHOLE D AT ST GEORGES WHARF LONDON Data Type: Point Name: St George South London Limited	Annual Volume (m³): 67300 Max Daily Volume (m³): 545 Original Application No: - Original Start Date: 15/07/2011 Expiry Date: 31/03/2019 Issue No: 1 Version Start Date: 01/04/2013 Version End Date:	
Not shown	1679	E	530273 177965	Status: Active Licence No: TH/039/0042/012 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: BOREHOLE C AT ST GEORGES WHARF LONDON Data Type: Point Name: St George South London Limited	Annual Volume (m³): 67300 Max Daily Volume (m³): 545 Original Application No: - Original Start Date: 15/07/2011 Expiry Date: 31/03/2019 Issue No: 1 Version Start Date: 01/04/2013 Version End Date:	
Not shown	1707	S	528730 176510	Status: Historical Licence No: 28/39/42/0057 Details: Dust suppression Direct Source: THAMES GROUNDWATER Point: STEWARTS LANE GOODS YARD BOREHOLE Data Type: Point Name: TARMAC HEAVY BUILDING MATERIALS UK LTD	Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 30/11/1999 Expiry Date: 31/12/2004 Issue No: 1 Version Start Date: 30/11/1999 Version End Date:	

ID	Distance (m)	Direction	NGR	Details	
Not shown	1707	S	528730 176510	Status: Historical Licence No: 28/39/42/0070 Details: General Use Relating To Secondary Category (High Loss) Direct Source: THAMES GROUNDWATER Point: STEWARTS LANE GOODS YARD - BOREHOLE Data Type: Point Name: TARMAC LIMITED	Annual Volume (m³): 23000 Max Daily Volume (m³): 80 Original Application No: - Original Start Date: 07/09/2006 Expiry Date: 31/03/2013 Issue No: 1 Version Start Date: 01/04/2008 Version End Date:
Not shown	1707	S	528730 176510	Status: Active Licence No: TH/039/0042/037 Details: General Use Relating To Secondary Category (High Loss) Direct Source: THAMES GROUNDWATER Point: STEWARTS LANE DEPOT Data Type: Point Name: TARMAC TRADING LIMITED	Annual Volume (m³): 23000 Max Daily Volume (m³): 80 Original Application No: - Original Start Date: 26/01/2016 Expiry Date: 31/03/2028 Issue No: 1 Version Start Date: 26/01/2016 Version End Date:
Not shown	1737	NE	529900 179600	Status: Active Licence No: 28/39/39/0046 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: CENTRAL HALL, MATTHEW PARKER STREET, LONDON Data Type: Point Name: THE CENTRAL HALL	Annual Volume (m³): 9092 Max Daily Volume (m³): 36.37 Original Application No: - Original Start Date: 09/05/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date:
Not shown	1737	NE	529900 179600	Status: Historical Licence No: 28/39/39/0046 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE AT THE CENTRAL HALL, MATTHEW PARKER STREET, LONDON Data Type: Point Name: THE CENTRAL HALL	Annual Volume (m³): 9092 Max Daily Volume (m³): 36.37 Original Application No: - Original Start Date: 09/05/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date:
Not shown	1880	E	530492 178395	Status: Active Licence No: TH/039/0042/017 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: ABSTRACTION BOREHOLE B - SPRING MEWS Data Type: Point Name: Spring Mews Ltd	Annual Volume (m³): 125000 Max Daily Volume (m³): 600 Original Application No: - Original Start Date: 03/04/2014 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 03/04/2014 Version End Date:
Not shown	1928	E	530540 178318	Status: Active Licence No: TH/039/0042/017 Details: Heat Pump Direct Source: THAMES GROUNDWATER Point: ABSTRACTION BOREHOLE A - SPRING MEWS Data Type: Point Name: Spring Mews Ltd	Annual Volume (m³): 125000 Max Daily Volume (m³): 600 Original Application No: - Original Start Date: 03/04/2014 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: 03/04/2014 Version End Date:
Not shown	1984	NE	529480 180230	Status: Active Licence No: 28/39/39/0006 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: ARMY AND NAVY CLUB, PALL MALL, LONDON Data Type: Point Name: ARMY AND NAVY CLUB LIMITED	Annual Volume (m³): 15911 Max Daily Volume (m³): 82.7 Original Application No: - Original Start Date: 11/10/1965 Expiry Date: - Issue No: 101 Version Start Date: 09/01/2014 Version End Date:

ID	Distance (m)	Direction	NGR	Details
Not shown	1984	NE	529480 180230	<p>Status: Historical Licence No: 28/39/39/0006 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE AT THE ARMY AND NAVY CLUB, PALL MALL, LONDON Data Type: Point Name: ARMY & NAVY CLUB</p> <p>Annual Volume (m³): 15911 Max Daily Volume (m³): 82.7 Original Application No: - Original Start Date: 11/10/1965 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date:</p>

6.4 Surface Water Abstraction Licences

Surface Water Abstraction Licences within 2000m of the study site None identified

Database searched and no data found.

6.5 Potable Water Abstraction Licences

Potable Water Abstraction Licences within 2000m of the study site Identified

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	660	SE	528940 177640	<p>Status: Historical Licence No: 28/39/42/0074 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BATTERSEA POWER STATION , BATTERSEA, LONDON - BOREHOLE Data Type: Point Name: Battersea Project Land Company Limited</p> <p>Annual Volume (m³): 438000 Max Daily Volume (m³): 1200 Original Application No: - Original Start Date: 13/11/2007 Expiry Date: 31/03/2013 Issue No: 2 Version Start Date: Version End Date:</p>
Not shown	660	SE	528940 177640	<p>Status: Historical Licence No: 28/39/42/0066 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BATTERSEA POWER STATION , BATTERSEA, LONDON - BOREHOLE Data Type: Point Name: PARKVIEW INTERNATIONAL LONDON PLC</p> <p>Annual Volume (m³): 438000 Max Daily Volume (m³): 1200 Original Application No: - Original Start Date: 30/04/2004 Expiry Date: 31/03/2007 Issue No: 1 Version Start Date: Version End Date:</p>
Not shown	682	SE	529020 177666	<p>Status: Active Licence No: TH/039/0042/020 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE AT BATTERSEA POWER STATION</p> <p>Annual Volume (m³): 438000 Max Daily Volume (m³): 1200 Original Application No: - Original Start Date: 03/05/2013 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: Version End Date:</p>

ID	Distance (m)	Direction	NGR	Details
Data Type: Point Name: Battersea Project Land Company Limited				
Not shown	881	E	529460 177970	<p>Status: Active Licence No: 28/39/39/0141 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: DOLPHIN SQUARE- BOREHOLE C Data Type: Point Name: Dolphin Square Limited</p> <p>Annual Volume (m³): 258967 Max Daily Volume (m³): 763.7 Original Application No: - Original Start Date: 11/02/1974 Expiry Date: - Issue No: 104 Version Start Date: Version End Date:</p>
Not shown	896	E	529490 178030	<p>Status: Active Licence No: 28/39/39/0141 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: DOLPHIN SQUARE- BOREHOLE E Data Type: Point Name: Dolphin Square Limited</p> <p>Annual Volume (m³): 258967 Max Daily Volume (m³): 763.7 Original Application No: - Original Start Date: 11/02/1974 Expiry Date: - Issue No: 104 Version Start Date: Version End Date:</p>
Not shown	912	E	529500 178000	<p>Status: Historical Licence No: 28/39/39/0141 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'D' AT DOLPHIN SQUARE, LONDON SW1 Data Type: Point Name: DOLPHIN SQUARE TRUST LTD</p> <p>Annual Volume (m³): 258967 Max Daily Volume (m³): 763.7 Original Application No: - Original Start Date: 11/02/1974 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:</p>
Not shown	912	E	529500 178000	<p>Status: Historical Licence No: 28/39/39/0141 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'E' AT DPOLPHIN SQUARE, LONDON SW1 Data Type: Point Name: DOLPHIN SQUARE TRUST LTD</p> <p>Annual Volume (m³): 258967 Max Daily Volume (m³): 763.7 Original Application No: - Original Start Date: 11/02/1974 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:</p>
Not shown	912	E	529500 178000	<p>Status: Historical Licence No: 28/39/39/0141 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'B' AT DOLPHIN SQUARE, LONDON SW1 Data Type: Point Name: DOLPHIN SQUARE TRUST LTD</p> <p>Annual Volume (m³): 258967 Max Daily Volume (m³): 763.7 Original Application No: - Original Start Date: 11/02/1974 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:</p>
Not shown	912	E	529500 178000	<p>Status: Historical Licence No: 28/39/39/0141 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'A' AT DOLPHIN SQUARE, LONDON SW1 Data Type: Point Name: DOLPHIN SQUARE TRUST LTD</p> <p>Annual Volume (m³): 258967 Max Daily Volume (m³): 763.7 Original Application No: - Original Start Date: 11/02/1974 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:</p>
Not shown	912	E	529500 178000	<p>Status: Historical Licence No: 28/39/39/0141 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public</p> <p>Annual Volume (m³): 258967 Max Daily Volume (m³): 763.7 Original Application No: - Original Start Date: 11/02/1974</p>

ID	Distance (m)	Direction	NGR	Details
				<p>Services</p> <p>Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'C' AT DOLPHIN SQUARE, LONDON SW1 Data Type: Point Name: DOLPHIN SQUARE TRUST LTD</p> <p>Expiry Date: - Issue No: 100 Version Start Date: Version End Date:</p>
Not shown	914	E	529520 178100	<p>Status: Active Licence No: 28/39/39/0141 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: DOLPHIN SQUARE- BOREHOLE A Data Type: Point Name: Dolphin Square Limited</p> <p>Annual Volume (m³): 258967 Max Daily Volume (m³): 763.7 Original Application No: - Original Start Date: 11/02/1974 Expiry Date: - Issue No: 104 Version Start Date: Version End Date:</p>
Not shown	933	SE	529187 177478	<p>Status: Active Licence No: TH/039/0042/023 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: BOREHOLE AT BATTERSEA PUMPING STATION Data Type: Point Name: THAMES WATER UTILITIES LTD</p> <p>Annual Volume (m³): 2.555e+006 Max Daily Volume (m³): 7500 Original Application No: - Original Start Date: 01/04/2013 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: Version End Date:</p>
Not shown	943	SE	529180 177460	<p>Status: Historical Licence No: 28/39/42/0072 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: BATTERSEA PUMPING STATION - BOREHOLE Data Type: Point Name: THAMES WATER UTILITIES LTD</p> <p>Annual Volume (m³): 2.555e+006 Max Daily Volume (m³): 7500 Original Application No: - Original Start Date: 22/03/2007 Expiry Date: 31/03/2013 Issue No: 1 Version Start Date: Version End Date:</p>
Not shown	943	SE	529180 177460	<p>Status: Historical Licence No: 28/39/42/0061 Details: Potable Water Supply - Direct Direct Source: THAMES GROUNDWATER Point: BATTERSEA PUMPING STATION - BOREHOLE Data Type: Point Name: THAMES WATER UTILITIES LTD</p> <p>Annual Volume (m³): 2555000 Max Daily Volume (m³): 7500 Original Application No: - Original Start Date: 05/09/2002 Expiry Date: 31/03/2007 Issue No: 1 Version Start Date: Version End Date:</p>
Not shown	961	E	529550 178000	<p>Status: Active Licence No: 28/39/39/0141 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: DOLPHIN SQUARE- BOREHOLE B Data Type: Point Name: Dolphin Square Limited</p> <p>Annual Volume (m³): 258967 Max Daily Volume (m³): 763.7 Original Application No: - Original Start Date: 11/02/1974 Expiry Date: - Issue No: 104 Version Start Date: Version End Date:</p>
Not shown	1195	W	527305 178087	<p>Status: Historical Licence No: 28/39/39/0080 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: CHELSEA MANOR STREET, LONDON SW3-BOREHOLE Data Type: Point Name: GREENWICH LEISURE LIMITED</p> <p>Annual Volume (m³): 20313 Max Daily Volume (m³): 286.4 Original Application No: - Original Start Date: 13/06/1966 Expiry Date: - Issue No: 102 Version Start Date: Version End Date:</p>
Not shown	1199	W	527300 178100	<p>Status: Historical Licence No: 28/39/39/0080 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE AT CHELSEA MANOR</p> <p>Annual Volume (m³): 20313 Max Daily Volume (m³): 286.4 Original Application No: - Original Start Date: 13/06/1966 Expiry Date: - Issue No: 100 Version Start Date:</p>

ID	Distance (m)	Direction	NGR	Details
				STREET, LONDON SW3 Data Type: Point Name: ROYAL BOROUGH OF KENSINGTON AND CHELSEA Version End Date:
Not shown	1199	W	527300 178100	Status: Historical Licence No: 28/39/39/0080 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: CHELSEA MANOR STREET, LONDON SW3-BOREHOLE Data Type: Point Name: CANNONS HEALTH AND FITNESS LIMITED Annual Volume (m³): 20313 Max Daily Volume (m³): 286.4 Original Application No: - Original Start Date: 13/06/1966 Expiry Date: - Issue No: 101 Version Start Date: Version End Date:
Not shown	1283	NW	527620 179350	Status: Historical Licence No: 28/39/39/0038 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: HARRODS, KNIGHTSBRIDGE - BOREHOLE C Data Type: Point Name: HARRODS LTD Annual Volume (m³): 286000 Max Daily Volume (m³): 1091 Original Application No: - Original Start Date: 09/05/1966 Expiry Date: - Issue No: 101 Version Start Date: Version End Date:
Not shown	1286	NW	527629 179364	Status: Active Licence No: 28/39/39/0038 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: HARRODS, KNIGHTSBRIDGE - BOREHOLE C Data Type: Point Name: HARRODS LTD Annual Volume (m³): 286000 Max Daily Volume (m³): 1091 Original Application No: - Original Start Date: 09/05/1966 Expiry Date: - Issue No: 102 Version Start Date: Version End Date:
Not shown	1303	NW	527589 179347	Status: Active Licence No: 28/39/39/0038 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: HARRODS, KNIGHTSBRIDGE - BOREHOLE B Data Type: Point Name: HARRODS LTD Annual Volume (m³): 286000 Max Daily Volume (m³): 1091 Original Application No: - Original Start Date: 09/05/1966 Expiry Date: - Issue No: 102 Version Start Date: Version End Date:
Not shown	1304	NW	527610 179370	Status: Historical Licence No: 28/39/39/0038 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: HARRODS, KNIGHTSBRIDGE - BOREHOLE A Data Type: Point Name: HARRODS LTD Annual Volume (m³): 286000 Max Daily Volume (m³): 1091 Original Application No: - Original Start Date: 09/05/1966 Expiry Date: - Issue No: 101 Version Start Date: Version End Date:
Not shown	1305	NW	527617 179378	Status: Active Licence No: 28/39/39/0038 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: HARRODS, KNIGHTSBRIDGE - BOREHOLE A Data Type: Point Name: HARRODS LTD Annual Volume (m³): 286000 Max Daily Volume (m³): 1091 Original Application No: - Original Start Date: 09/05/1966 Expiry Date: - Issue No: 102 Version Start Date: Version End Date:

ID	Distance (m)	Direction	NGR	Details
Not shown	1311	NW	527590 179360	<p>Status: Historical Licence No: 28/39/39/0038 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: HARRODS, KNIGHTSBRIDGE - BOREHOLE B Data Type: Point Name: HARRODS LTD</p> <p>Annual Volume (m³): 286000 Max Daily Volume (m³): 1091 Original Application No: - Original Start Date: 09/05/1966 Expiry Date: - Issue No: 101 Version Start Date: Version End Date:</p>
Not shown	1357	E	529970 178230	<p>Status: Historical Licence No: 28/39/39/0139 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'C' AT 152 GROSVENOR ROAD Data Type: Point Name: BENCHMARK (RIVERMILL) LTD</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 09/10/1972 Expiry Date: - Issue No: 101 Version Start Date: Version End Date:</p>
Not shown	1357	E	529970 178230	<p>Status: Historical Licence No: 28/39/39/0139 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: 152 GROSVENOR ROAD- BOREHOLE C Data Type: Point Name: PANORAMIC MANAGEMENT CO LTD</p> <p>Annual Volume (m³): 125520 Max Daily Volume (m³): 442.8 Original Application No: - Original Start Date: 09/10/1972 Expiry Date: - Issue No: 104 Version Start Date: Version End Date:</p>
Not shown	1358	E	529970 178270	<p>Status: Historical Licence No: 28/39/39/0139 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE 'B' AT 152 GROSVENOR ROAD, LONDON Data Type: Point Name: BENCHMARK (RIVERMILL) LTD</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 09/10/1972 Expiry Date: - Issue No: 101 Version Start Date: Version End Date:</p>
Not shown	1358	E	529970 178270	<p>Status: Historical Licence No: 28/39/39/0139 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: 152 GROSVENOR ROAD, LONDON- BOREHOLE 'B' Data Type: Point Name: PANORAMIC MANAGEMENT CO LTD</p> <p>Annual Volume (m³): 125520 Max Daily Volume (m³): 442.8 Original Application No: - Original Start Date: 09/10/1972 Expiry Date: - Issue No: 104 Version Start Date: Version End Date:</p>
Not shown	1446	NW	527520 179480	<p>Status: Historical Licence No: 28/39/39/0008 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: THAMES GROUNDWATER Point: PRINCES COURT, LONDON- BOREHOLE Data Type: Point Name: GOLFRATE KNIGHTSBRIDGE LTD</p> <p>Annual Volume (m³): 28636 Max Daily Volume (m³): 91 Original Application No: - Original Start Date: 11/10/1965 Expiry Date: - Issue No: 101 Version Start Date: Version End Date:</p>
Not shown	1457	E	530030 178770	<p>Status: Historical Licence No: 28/39/39/0209 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: THAMES GROUNDWATER Point: MARSHAM STREET, LONDON - BOREHOLE Data Type: Point</p> <p>Annual Volume (m³): 12810 Max Daily Volume (m³): 35 Original Application No: - Original Start Date: 18/07/2003 Expiry Date: 31/03/2013 Issue No: 2 Version Start Date: Version End Date:</p>

ID	Distance (m)	Direction	NGR	Details
Name: WESTMINSTER GARDENS LIMITED				
Not shown	1457	E	530030 178770	<p>Status: Active Licence No: TH/039/0039/072 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: THAMES GROUNDWATER Point: MARSHAM STREET, LONDON - BOREHOLE Data Type: Point Name: WESTMINSTER GARDENS LIMITED</p> <p>Annual Volume (m³): 20000 Max Daily Volume (m³): 105 Original Application No: - Original Start Date: 26/06/2013 Expiry Date: 31/03/2025 Issue No: 1 Version Start Date: Version End Date:</p>
Not shown	1474	NW	527500 179500	<p>Status: Historical Licence No: 28/39/39/0008 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: THAMES GROUNDWATER Point: BOREHOLE AT PRINCES COURT, 78-94A BROMPTON ROAD, LONDON Data Type: Point Name: ITEMTRUMP LIMITED</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 11/10/1965 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:</p>
Not shown	1596	SW	527280 177190	<p>Status: Historical Licence No: 28/39/42/0065 Details: Water Bottling Direct Source: THAMES GROUNDWATER Point: RANSOME'S DOCK BUSINESS CENTRE, BATTERSEA, LONDON - WELL Data Type: Point Name: RANSOME'S DOCK LTD</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: - Original Start Date: 27/01/2004 Expiry Date: 31/03/2013 Issue No: 1 Version Start Date: Version End Date:</p>
Not shown	1737	NE	529900 179600	<p>Status: Active Licence No: 28/39/39/0046 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: CENTRAL HALL, MATTHEW PARKER STREET, LONDON Data Type: Point Name: THE CENTRAL HALL</p> <p>Annual Volume (m³): 9092 Max Daily Volume (m³): 36.37 Original Application No: - Original Start Date: 09/05/1966 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:</p>
Not shown	1737	NE	529900 179600	<p>Status: Historical Licence No: 28/39/39/0046 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE AT THE CENTRAL HALL, MATTHEW PARKER STREET, LONDON Data Type: Point Name: THE CENTRAL HALL</p> <p>Annual Volume (m³): 9092 Max Daily Volume (m³): 36.37 Original Application No: - Original Start Date: 09/05/1966 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:</p>
Not shown	1984	NE	529480 180230	<p>Status: Active Licence No: 28/39/39/0006 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: ARMY AND NAVY CLUB, PALL MALL, LONDON Data Type: Point Name: ARMY AND NAVY CLUB LIMITED</p> <p>Annual Volume (m³): 15911 Max Daily Volume (m³): 82.7 Original Application No: - Original Start Date: 11/10/1965 Expiry Date: - Issue No: 101 Version Start Date: Version End Date:</p>
Not shown	1984	NE	529480 180230	<p>Status: Historical Licence No: 28/39/39/0006 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: THAMES GROUNDWATER Point: BOREHOLE AT THE ARMY AND NAVY CLUB, PALL MALL, LONDON</p> <p>Annual Volume (m³): 15911 Max Daily Volume (m³): 82.7 Original Application No: - Original Start Date: 11/10/1965 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:</p>

ID	Distance (m)	Direction	NGR	Details
Data Type: Point Name: ARMY & NAVY CLUB				

6.6 Source Protection Zones

Source Protection Zones within 500m of the study site

Identified

The following Source Protection Zones records are represented on the SPZ and Potable Water Abstraction Map (6c):

ID	Distance (m)	Direction	Zone	Description
1	218	SE	2	Outer catchment

6.7 Source Protection Zones within Confined Aquifer

Source Protection Zones within the Confined Aquifer within 500m of the study site

None identified

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

Environment Agency/Natural Resources Wales information on groundwater vulnerability and soil leaching potential within 500m of the study site

Identified

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	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

Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site

None identified

6.9.1 Biological Quality:

Database searched and no data found.

6.9.2 Chemical Quality:

Database searched and no data found.

6.10 Ordnance Survey MasterMap Water Network

Ordnance Survey MasterMap Water Network entries within 500m of the study site

This watercourse information is provided by Ordnance Survey MasterMap Water Network. The data provides a detailed centre line following the curve of the waterway precisely, so all distances provided in the report should be understood as measurements to the centreline rather than a measurement to the nearest point of the watercourse. Underground watercourses are inferred from entry and exit points so caution is advised in using these to indicate precise locations of underground watercourses when planning site investigation and development.

The following Ordnance Survey MasterMap Water Network records are represented on the Hydrology Map (6e):

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
1	105 S	Grosvenor Canal	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
78	105 S	Grosvenor Canal	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
2	202 S	Grosvenor Canal	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 8.0
79	202 S	Grosvenor Canal	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): 8.0
3	225 S	Grosvenor Canal	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
80	225 S	Grosvenor Canal	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
4	407 S	River Thames	Tidal river or stream.	Catchment Area: Thames Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
5	407 S	River Thames	Tidal river or stream.	Catchment Area: Thames Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	407 S	River Thames	Tidal river or stream.	Catchment Area: Thames Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	407 S	River Thames	Tidal river or stream.	Catchment Area: Thames Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided

6.11 Surface Water Features

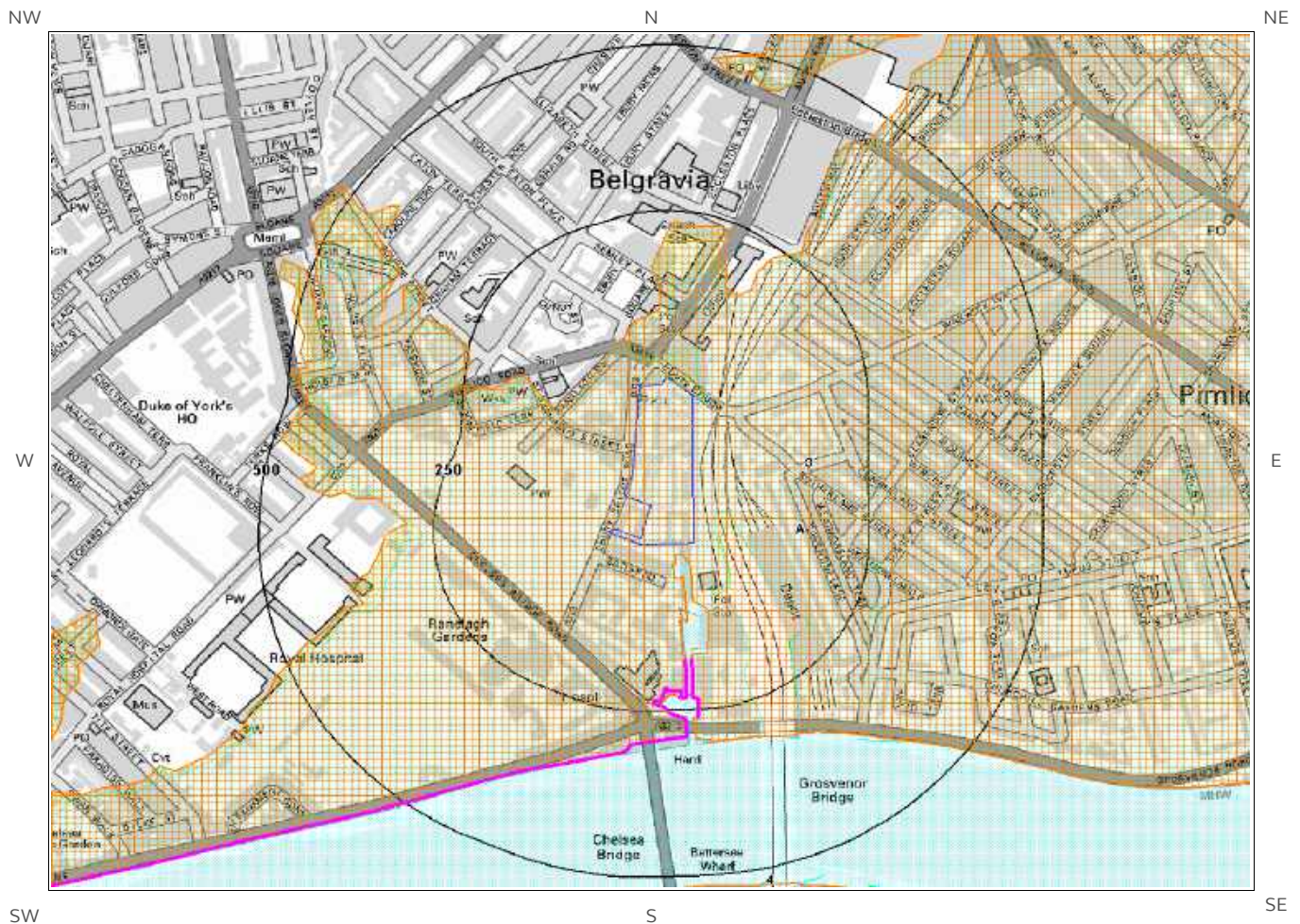
Surface water features within 250m of the study site

Identified

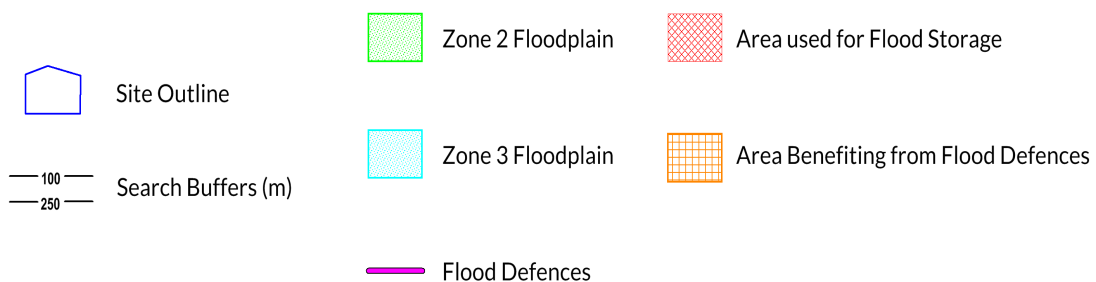
The following surface water records are not represented on mapping:

Distance (m)	Direction
95	S

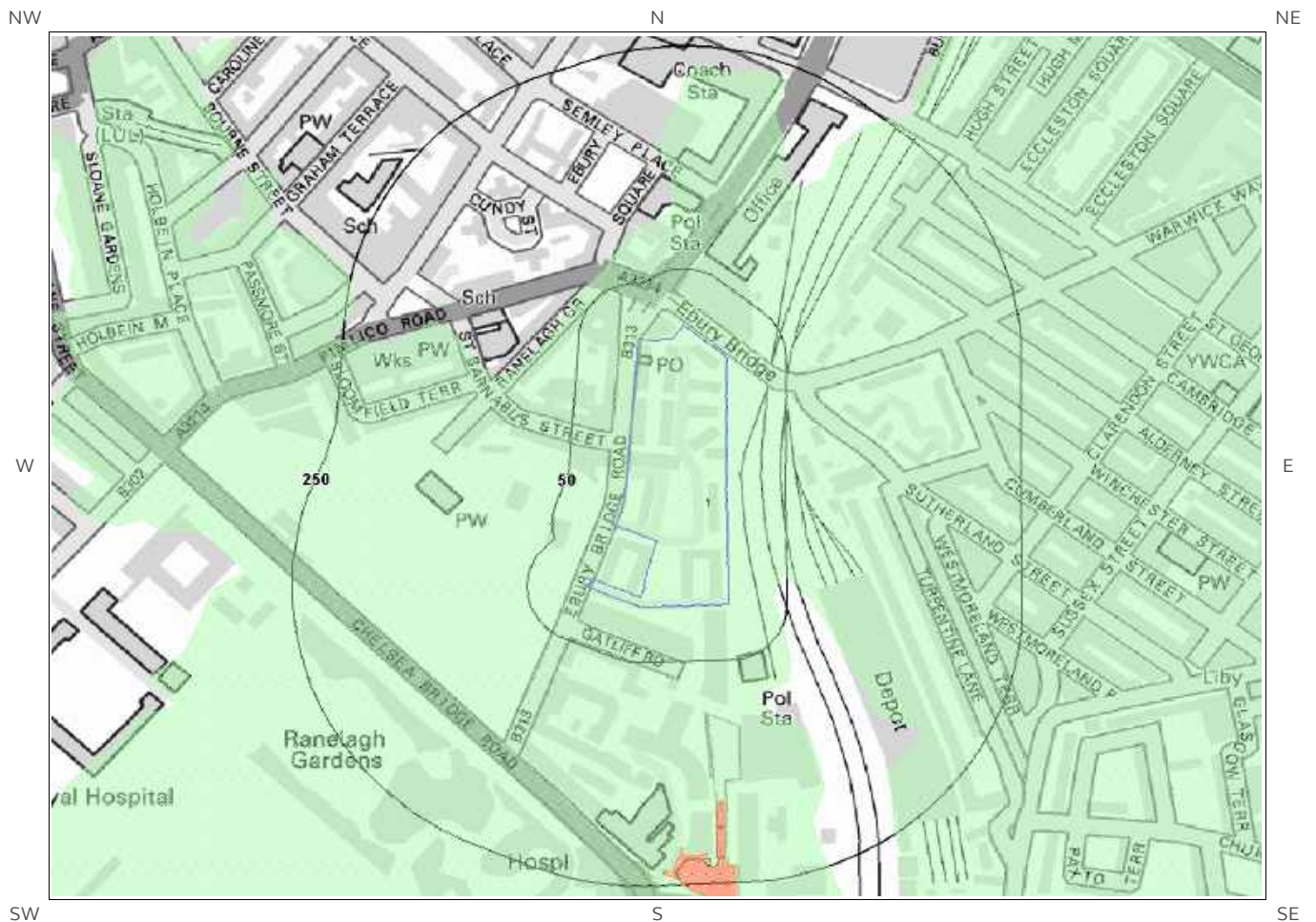
7a. Environment Agency/Natural Resources Wales Flood Map for Planning (from rivers and the sea)



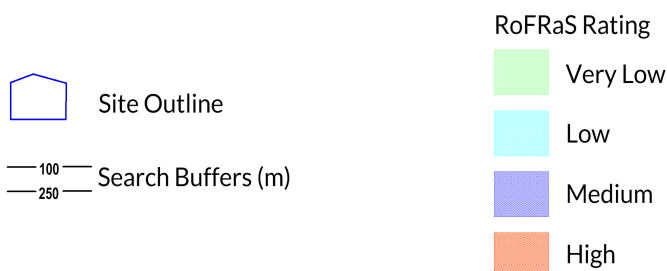
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7b. Environment Agency/Natural Resources Wales Risk of Flooding from Rivers and the Sea (RoFRaS) Map



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7 Flooding

7.1 River and Coastal Zone 2 Flooding

Environment Agency/Natural Resources Wales Zone 2 floodplain within 250m

Identified

Environment Agency/Natural Resources Wales 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:

ID	Distance (m)	Direction	Update	Type
1A	0	On Site	21-Feb-2019	Zone 2 - (Fluvial /Tidal Models)

7.2 River and Coastal Zone 3 Flooding

Environment Agency/Natural Resources Wales Zone 3 floodplain within 250m

Identified

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.

ID	Distance (m)	Direction	Update	Type
1A	0	On Site	21-Feb-2019	Zone 3 - (Fluvial /Tidal Models)

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

Highest risk of flooding onsite

Very Low

The Environment Agency/Natural Resources Wales 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.

Any relevant data within 250m is represented on the RoFRaS Flood map. Data to 50m is reported in the table below.

ID	Distance (m)	Direction	RoFRaS flood Risk
1	0.0	On Site	Very Low

7.4 Flood Defences

Flood Defences within 250m of the study site

Identified

The following flood defence records are represented as lines on the Flood Map:

ID	Distance (m)	Direction	Update
5	173	S	21-Feb-2019
6	174	S	21-Feb-2019

7.5 Areas benefiting from Flood Defences

Areas benefiting from Flood Defences within 250m of the study site

Identified

7.6 Areas benefiting from Flood Storage

Areas used for Flood Storage within 250m of the study site

None identified

7.7 Groundwater Flooding Susceptibility Areas

7.7.1 British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site

Identified

Clearwater Flooding or Superficial Deposits Flooding

Superficial Deposits Flooding

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 Highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions

Potential at Surface

Where potential for groundwater flooding to occur at surface is indicated, this means that given the geological conditions in the area groundwater flooding hazard should be considered in all land-use planning decisions. It is recommended that other relevant information e.g. records of previous incidence of groundwater flooding, rainfall, property type, and land drainage information be investigated in order to establish relative, but not absolute, risk of groundwater flooding.

7.8 Groundwater Flooding Confidence Areas

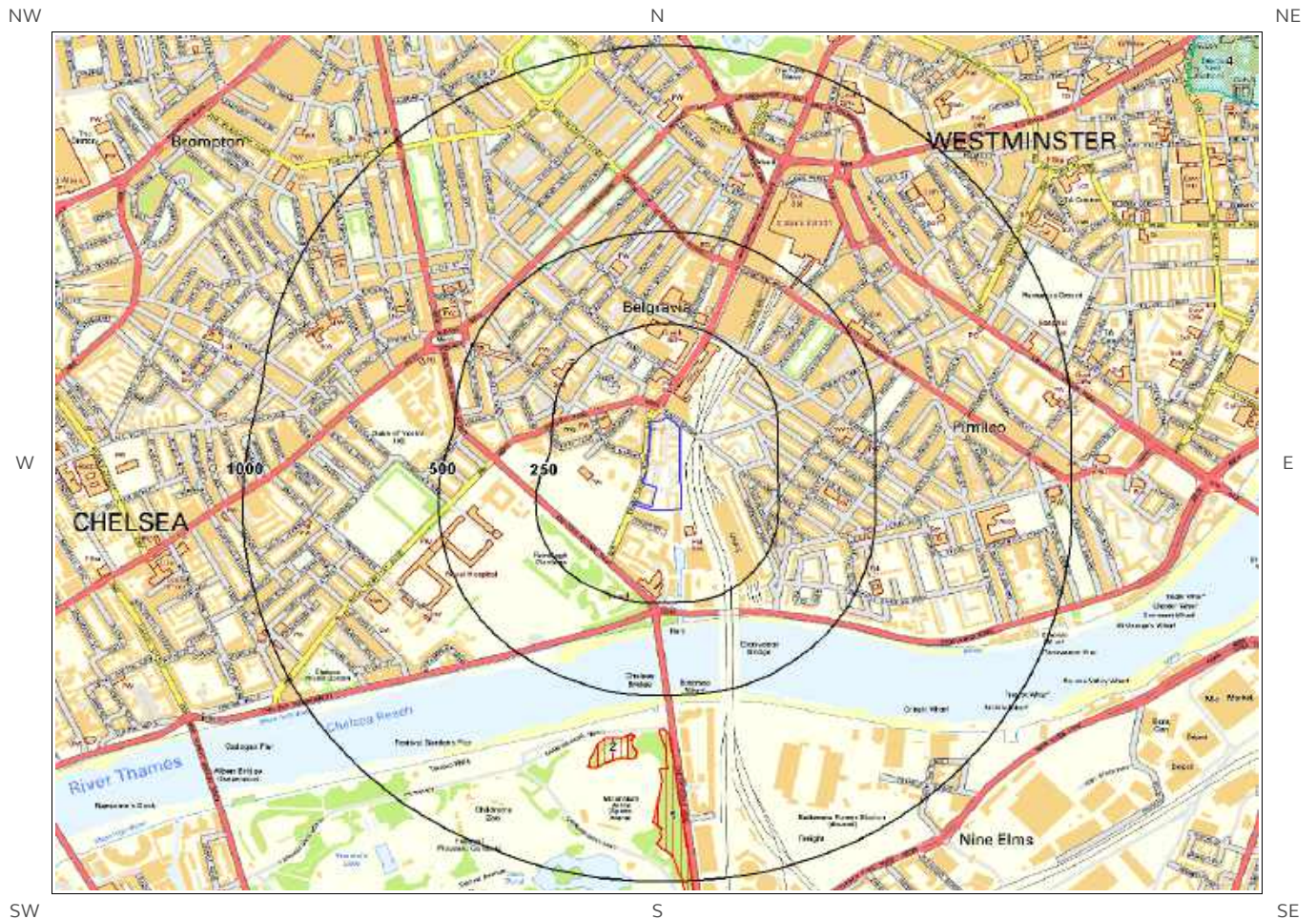
British Geological Survey confidence rating in this result

Moderate

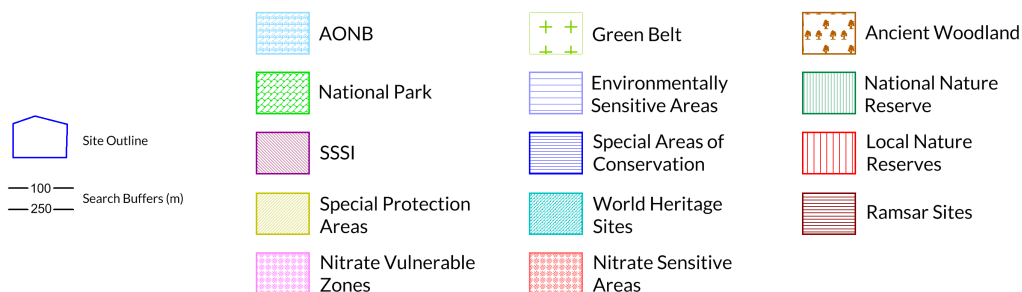
Notes: Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

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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8. Designated Environmentally Sensitive Sites

Designated Environmentally Sensitive Sites within 2000m of the study site	Identified
---	------------

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:

0

Database searched and no data found.

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

3

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
1	591	S	Battersea Park Nature Areas	Natural England
2	606	S	Battersea Park Nature Areas	Natural England
Not shown	1138	S	Battersea Park Nature Areas	Natural England

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

1

The following World Heritage Site records provided by English Heritage and Cadw are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	World Heritage Site Name	Data Source
4	1588	NE	Palace of Westminster, Westminster Abbey and St. Margaret's Church	Historic England

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:

0

Database searched and no data found.

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

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

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

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

Maximum Compressible Ground* hazard rating identified on the study site

High

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

Hazard
Very significant potential for compressibility problems. Avoid large differential loadings of ground. Do not drain or de-water ground near the property without technical advice. For new build consider possibility of compressible ground in ground investigation, construction and building design. Consider effects of groundwater changes. Construction may not be possible at economic cost. For existing property probable increase in insurance risk from compressibility especially if water conditions or loading of the ground change significantly.

9.1.5 Collapsible Rocks

Maximum Collapsible 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
No indicators for collapsible deposits identified. No actions required to avoid problems due to collapsible deposits. 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

Maximum Running Sand** 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
Possibility of running sand problems after major changes in ground conditions. Normal maintenance to avoid leakage of water-bearing services or water bodies (ponds, swimming pools) should reduce likelihood of problems due to running sand. For new build consider possibility of running sand into trenches or excavations if water table is high or sandy strata are exposed to water. Avoid concentrated water inputs to site. Unlikely to be an increase in construction costs due to potential for running sand. For existing property no significant increase in insurance risk due to running sand problems is likely.

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

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 site is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

The radon data in this report is supplied by the BGS/Public Health England and is the definitive map of Radon Affected Areas in Great Britain and Northern Ireland. The dataset was created using long-term radon measurements in over 479,000 homes across Great Britain and 23,000 homes across Northern Ireland, combined with geological data. The dataset is considered accurate to 50m to allow for the margin of error in geological lines, and the findings of this report supercede any answer given in the less accurate Indicative Atlas of Radon in Great Britain, which simplifies the data to give the highest risk within any given 1km grid square. As such, the radon atlas is considered indicative, whereas the data given in this report is considered definitive.

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

Coal mining areas within 75m of the study site

None identified

Database searched and no data found.

10.2 Non-Coal Mining

Non-Coal Mining areas within 50m of the study site boundary

None identified

Database searched and no data found.

10.3 Brine Affected Areas

Brine affected areas within 75m of the study site

None identified

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: 03708 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

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Tel: 08456 050505

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Authority: City of Westminster
Phone: 020 7641 6000

Web: <http://www.westminster.gov.uk/>

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Gemapping PLC

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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/Natural Resources Wales who retain the Copyright and Intellectual Property Rights for the data.

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<https://www.groundsure.com/terms-and-conditions-feb11-2019>

Ove Arup & Partners International Ltd
Share Service Centre, Central Square, Forth
Street,
Newcastle Upon Tyne, NE1 3PL

Groundsure Reference: GS-6014873

Your Reference: 257461

Report Date 9 May 2019

Report Delivery Method: Email - pdf

Geo Insight

Address: STREET RECORD, EBURY BRIDGE ESTATE, LONDON, SW1W 8QX

Dear Sir/ Madam,

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

Address: STREET RECORD, EBURY BRIDGE ESTATE, LONDON, SW1W 8QX
Date: 9 May 2019
Reference: GS-6014873
Client: Ove Arup & Partners International Ltd



Aerial Photograph Capture date: 30-Jun-2015
Grid Reference: 528571,178337
Site Size: 1.9397ha

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Overview of Findings

The Groundsure Geo Insight 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?	Yes
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?*	Yes
	1.2.2 Are there any records of landslide within 500m of the study site boundary at 1:10,000 scale?	No
1.3 Bedrock, Solid Geology and linear features	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 linear features 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?	Yes
	2.1.2 Are there any records relating to permeability of artificial ground within the study site*boundary?	Yes
2.2 Superficial Geology and Landslips	2.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?*	Yes
	2.2.2 Are there any records of permeability of superficial ground within 500m of the study site?	Yes
	2.2.3 Are there any records of landslide 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 linear features

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 relating to permeability of bedrock ground within the study site boundary?

Yes

2.3.3 Are there any records of linear features within 500m of the study site boundary?

No

Section 3: Radon

3. Radon

3.1 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.

3.2 Radon 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	7	5	14	Not Searched	Not Searched
4.2 Historical Underground Workings from Small Scale Mapping	0	0	4	6	10
4.3 Current Ground Workings	0	0	0	0	2

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	0	0	0	0	0
5.4 Non-Coal Mining*	0	0	0	0	0
5.5 Non-Coal Mining Cavities	0	0	0	0	0
5.5 Natural Cavities	0	0	1	0	4

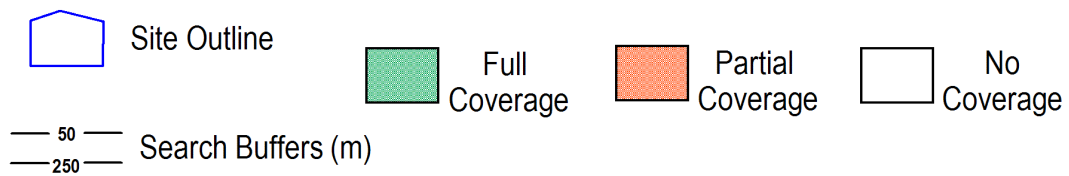
Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.6 Brine Extraction	0	0	0	0	0
5.7 Gypsum Extraction	0	0	0	0	0
5.8 Tin Mining	0	0	0	0	0
5.9 Clay Mining	0	0	0	0	0
Section 6: Natural Ground Subsidence	On-site				
6.1 Shrink-Swell Clay	Low				
6.2 Landslides	Very Low				
6.3 Ground Dissolution of Soluble Rocks	Negligible				
6.4 Compressible Deposits	High				
6.5 Collapsible Deposits	Negligible				
6.5 Running Sand	Low				
Section 7: Borehole Records	On-site	0-50m	51-250		
7 BGS Recorded Boreholes	2	9	29		
Section 8: Estimated Background Soil Chemistry	On-site	0-50m	51-250		
8 Records of Background Soil Chemistry	2	1	0		
Section 9: Railways and Tunnels	On-site	0-50m	51-250	250-500	
9.1 Tunnels	0	0	4	Not Searched	
9.2 Historical Railway and Tunnel Features	18	25	46	Not Searched	
9.3 Historical Railways	0	0	0	Not Searched	
9.4 Active Railways	0	70	126	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	1387.0	Some deposits are mapped	Full	Full	No coverage
N3	1536.0	Some deposits are mapped	Full	Full	No coverage

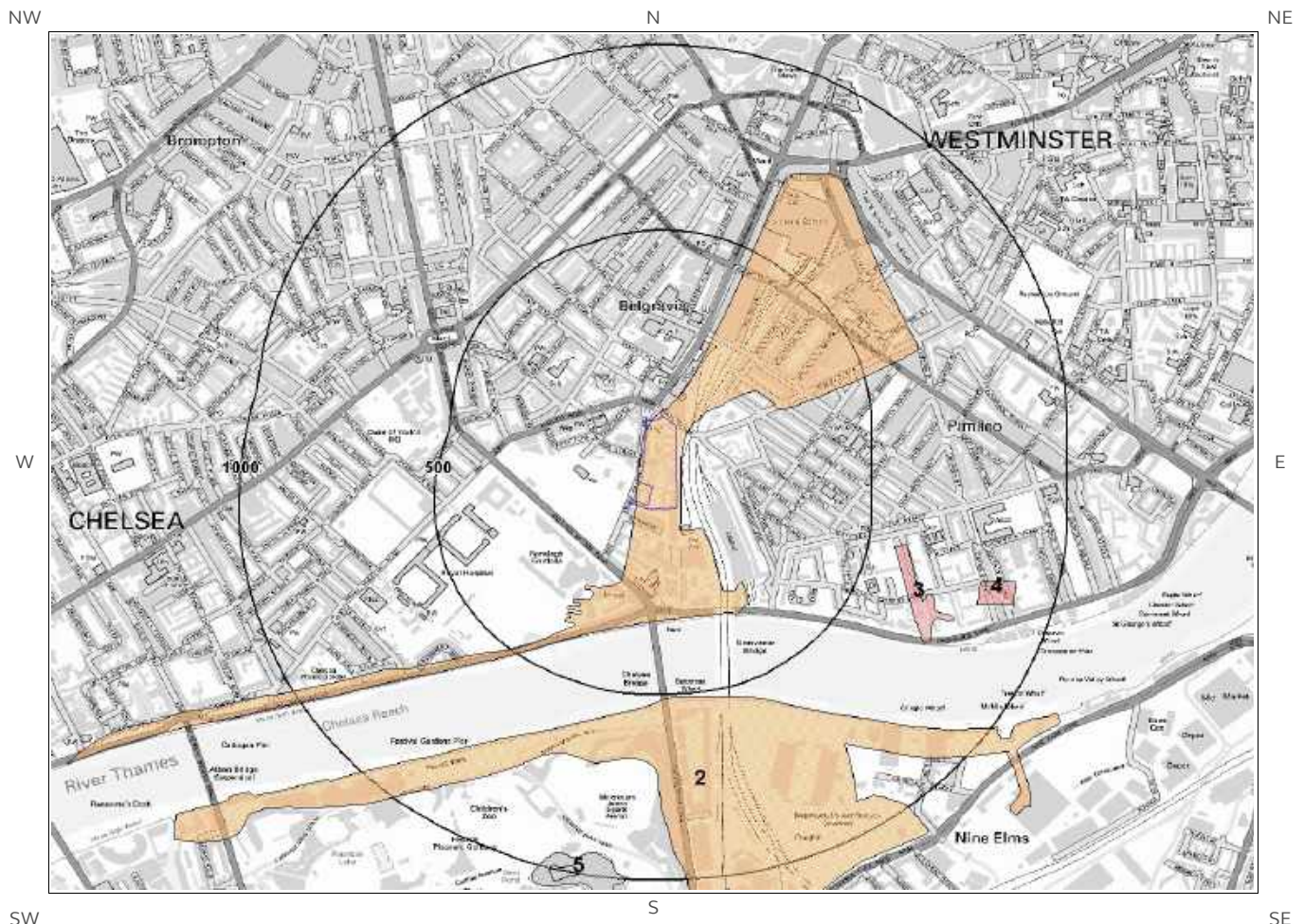
Guidance: The 1:10,000 scale geological interpretation is the most detailed generally available from BGS and is the scale at which most geological surveying is carried out in the field. The database is presented as four types of geology (artificial, mass movement, superficial and bedrock), although not 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

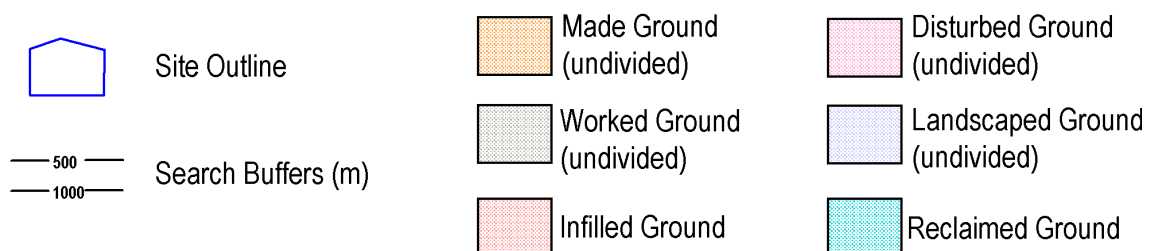
1 Geology (1:10,000 scale).

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



Artificial Ground Legend

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1. Geology 1:10,000 scale

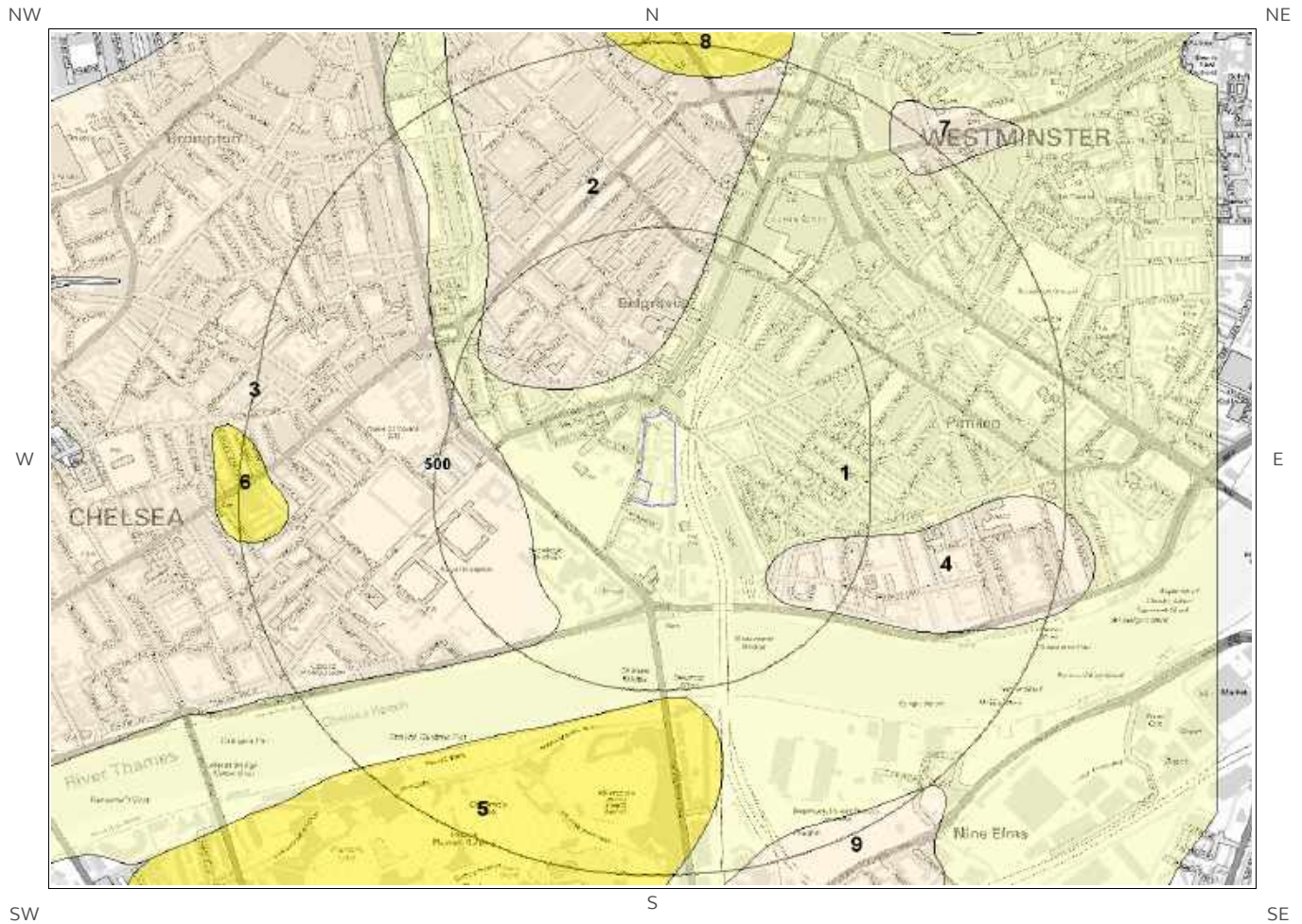
1.1 Artificial Ground

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

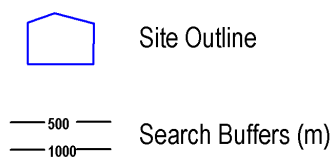
ID	Distance	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	MGR- UNKNOWN	Made Ground (Undivided)	Unknown/unclassified Entry

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



Artificial Ground Legend

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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	0.0	On Site	ALV-Z	Alluvium - Silt (unlithified Deposits Coding Scheme)	Silt
2	128.0	NW	KPGR-XSV	Kempton Park Gravel Formation - Sand And Gravel	Sand And Gravel
3	261.0	W	KPGR-XSV	Kempton Park Gravel Formation - Sand And Gravel	Sand And Gravel
4	291.0	SE	KPGR-XSV	Kempton Park Gravel Formation - Sand And Gravel	Sand And Gravel

1.2.2 Landslip

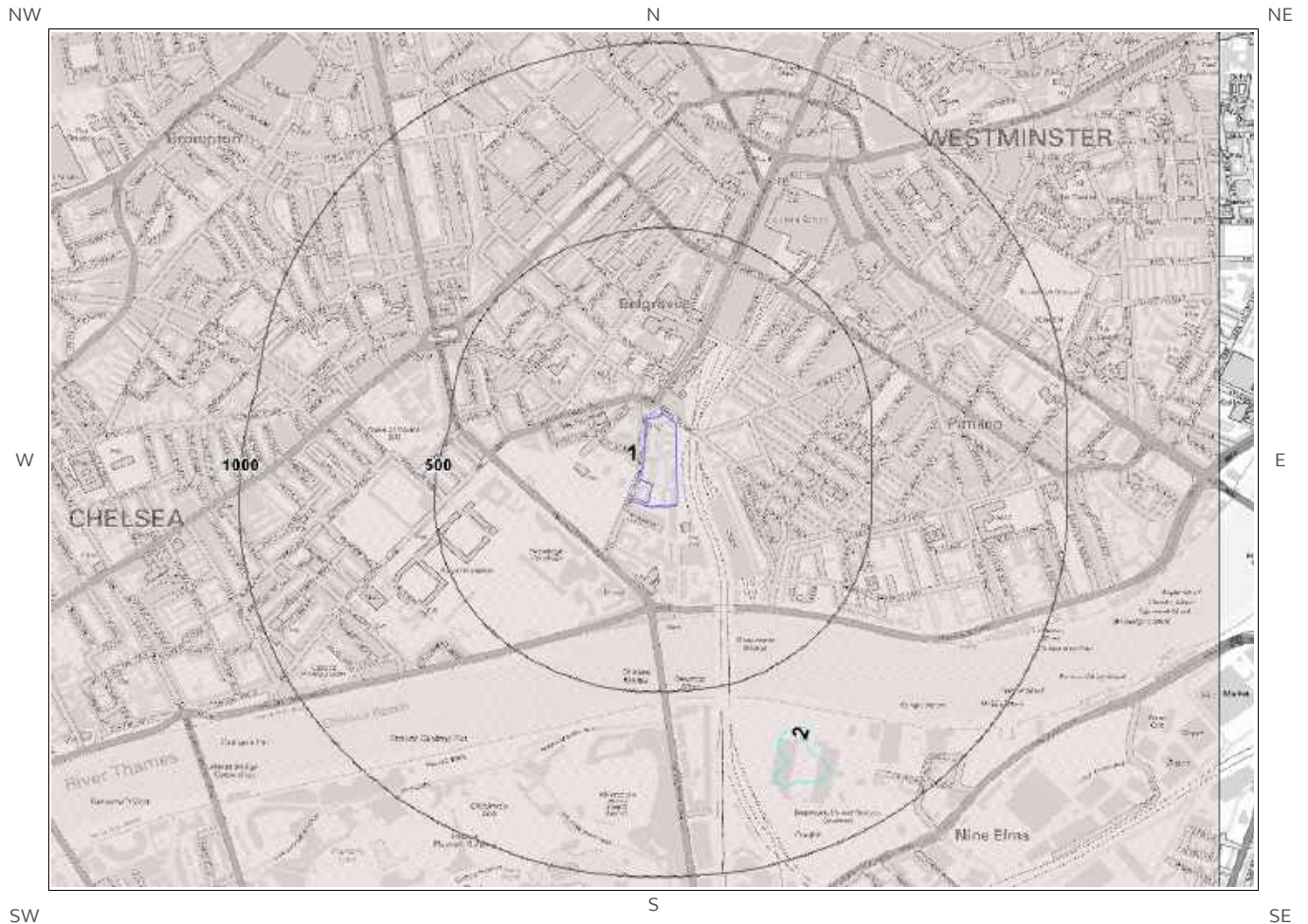
Are there any records of Landslip within 500m of the study site boundary at 1:10,000 scale? No

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

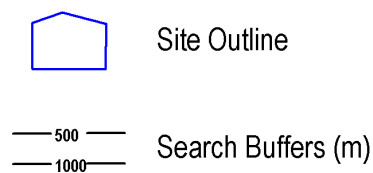
This Geology shows the main components as discrete layers, these are: Artificial / Made Ground, Superficial / Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

1.3 Bedrock and linear features map (1:10,000 scale)



Bedrock and linear features Legend

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1.3 Bedrock and linear features

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-CLAY	London Clay Formation - Clay	Eocene Epoch

1.3.2 Linear features

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

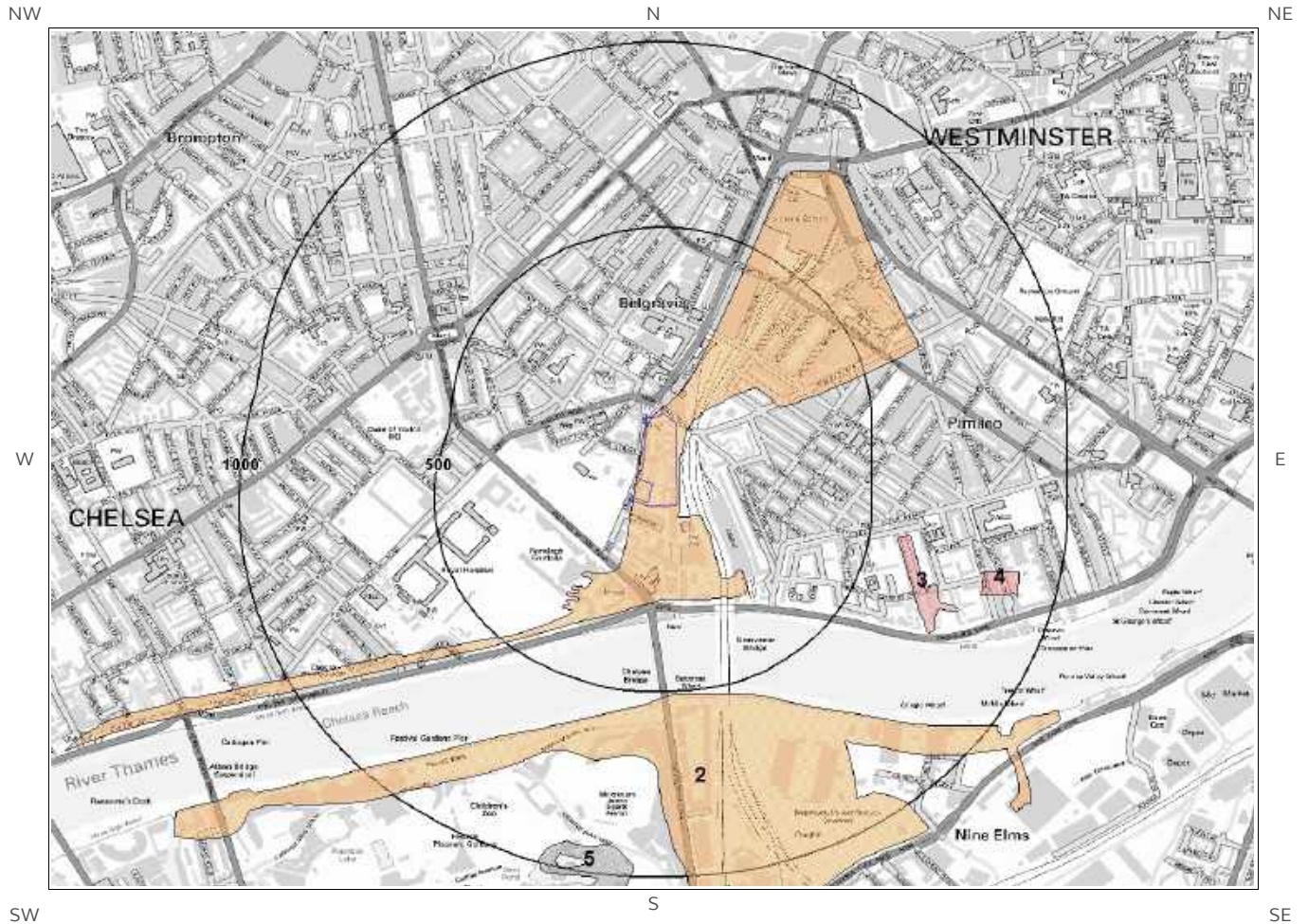
Database searched and no data found at this scale.

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.

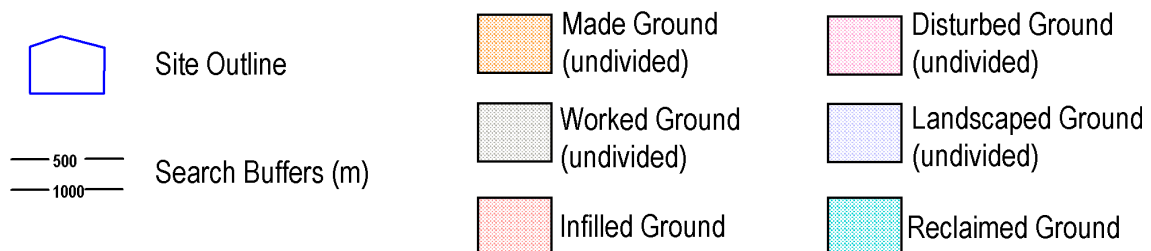
This Geology shows the main components as discrete layers, these are: Bedrock/ Solid Geology and linear features such as faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

2 Geology 1:50,000 Scale

2.1 Artificial Ground map



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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: 270

2.1.1 Artificial/ Made Ground

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

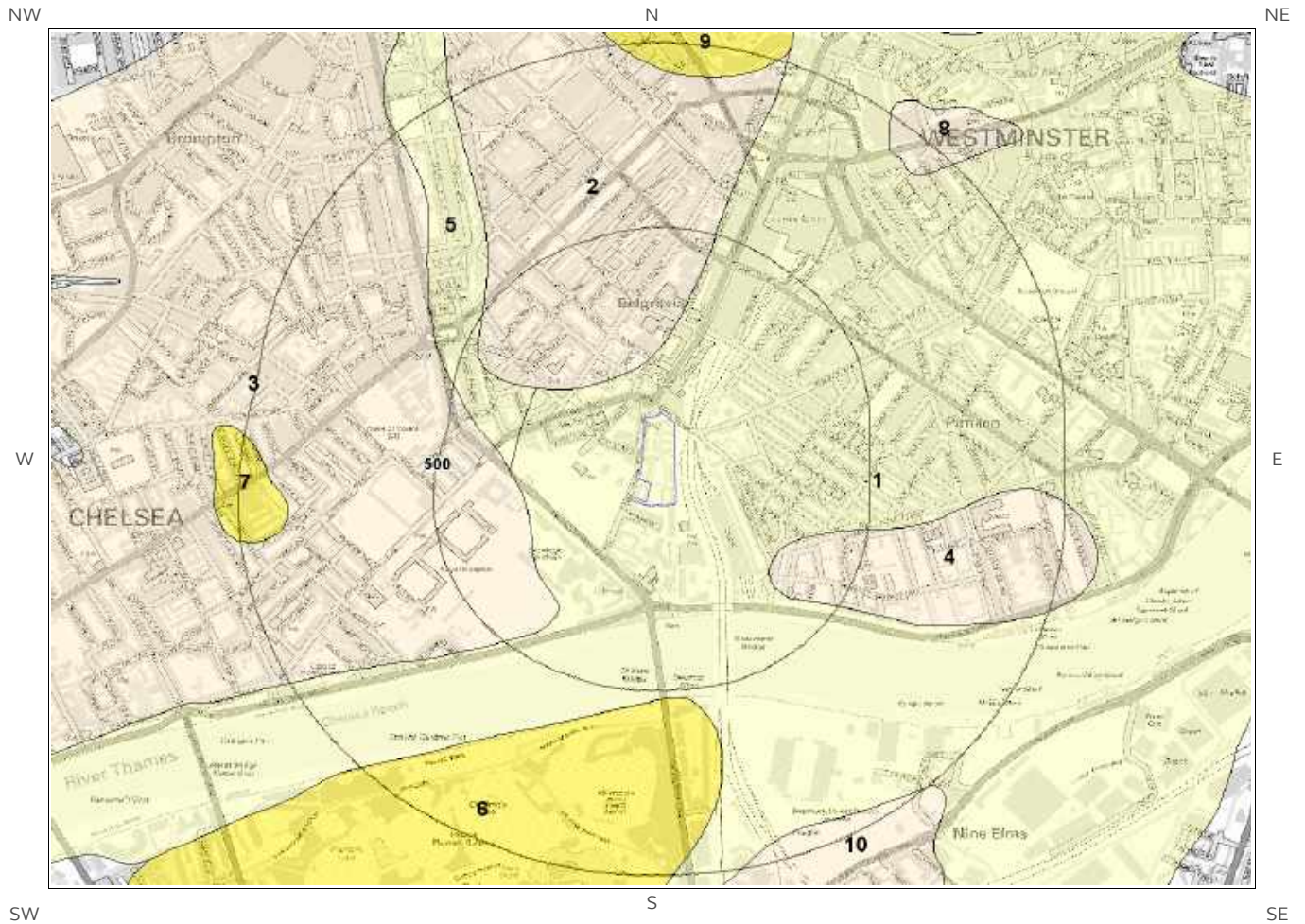
ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

2.1.2 Permeability of Artificial Ground

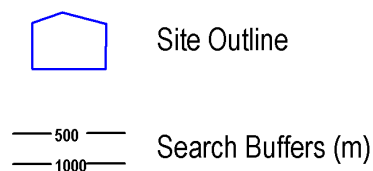
Are there any records relating to permeability of artificial ground within the study site boundary? Yes

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Mixed	Very High	Low

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



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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	0.0	On Site	ALV-XCZSP	ALLUVIUM	CLAY, SILT, SAND AND PEAT
2	129.0	NW	KPGR-XSV	KEMPTON PARK GRAVEL MEMBER	SAND AND GRAVEL
3	260.0	W	KPGR-XSV	KEMPTON PARK GRAVEL MEMBER	SAND AND GRAVEL
4	290.0	SE	KPGR-XSV	KEMPTON PARK GRAVEL MEMBER	SAND AND GRAVEL
5	292.0	W	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL

2.2.2 Permeability of Superficial Ground

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

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Intergranular	Moderate	Very Low

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.

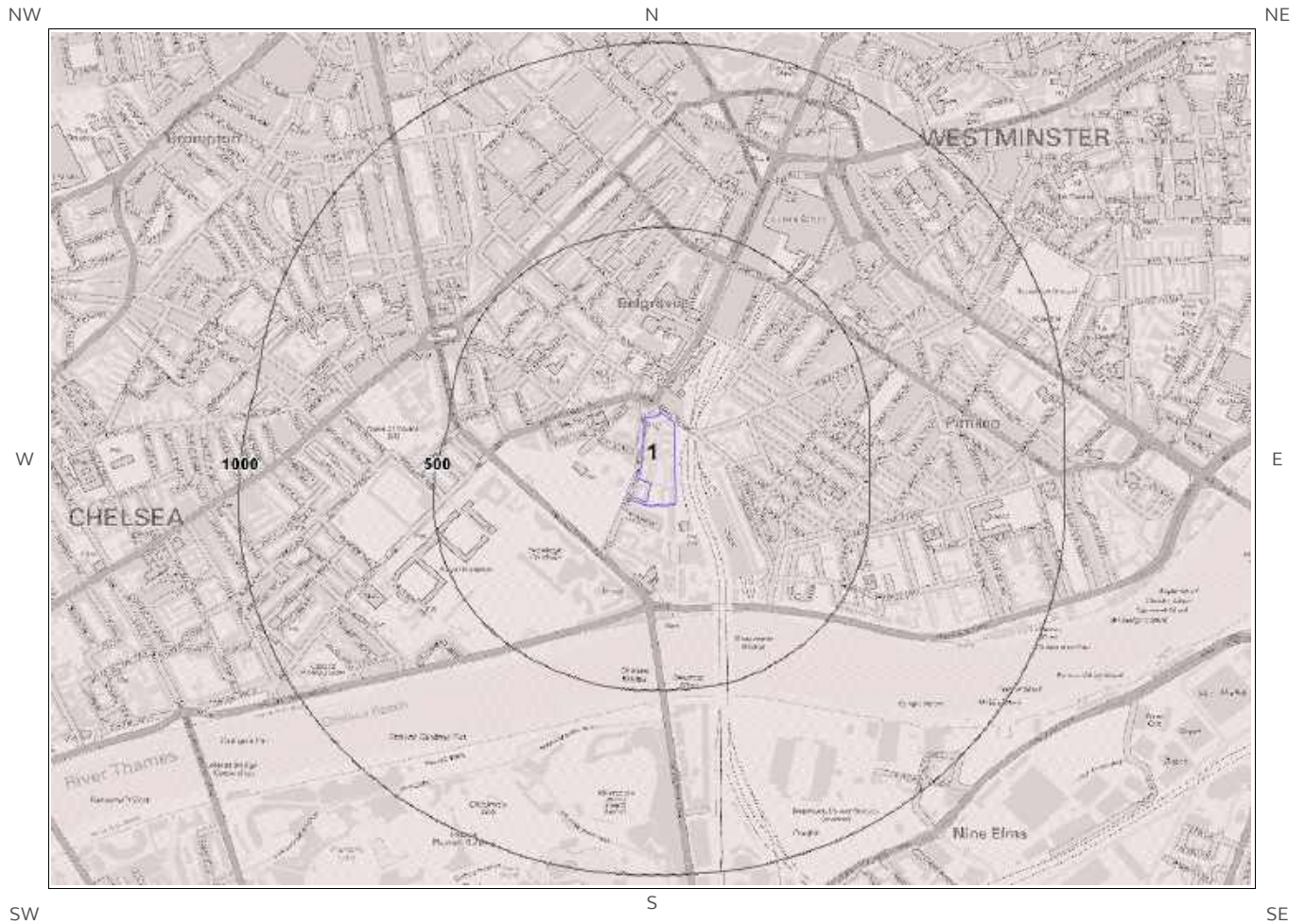
This Geology shows the main components as discrete layers, there are: Artificial/ Made Ground, Superficial/ Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

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.

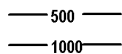
2.3 Bedrock and linear features map (1:50,000 scale)



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Site Outline



Search Buffers (m)

2.3 Bedrock, Solid Geology & linear features

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 270

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-XCZ	LONDON CLAY FORMATION - CLAY AND SILT	YPRESIAN

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	Low	Very Low

2.3.3 Linear features

Are there any records of linear features 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

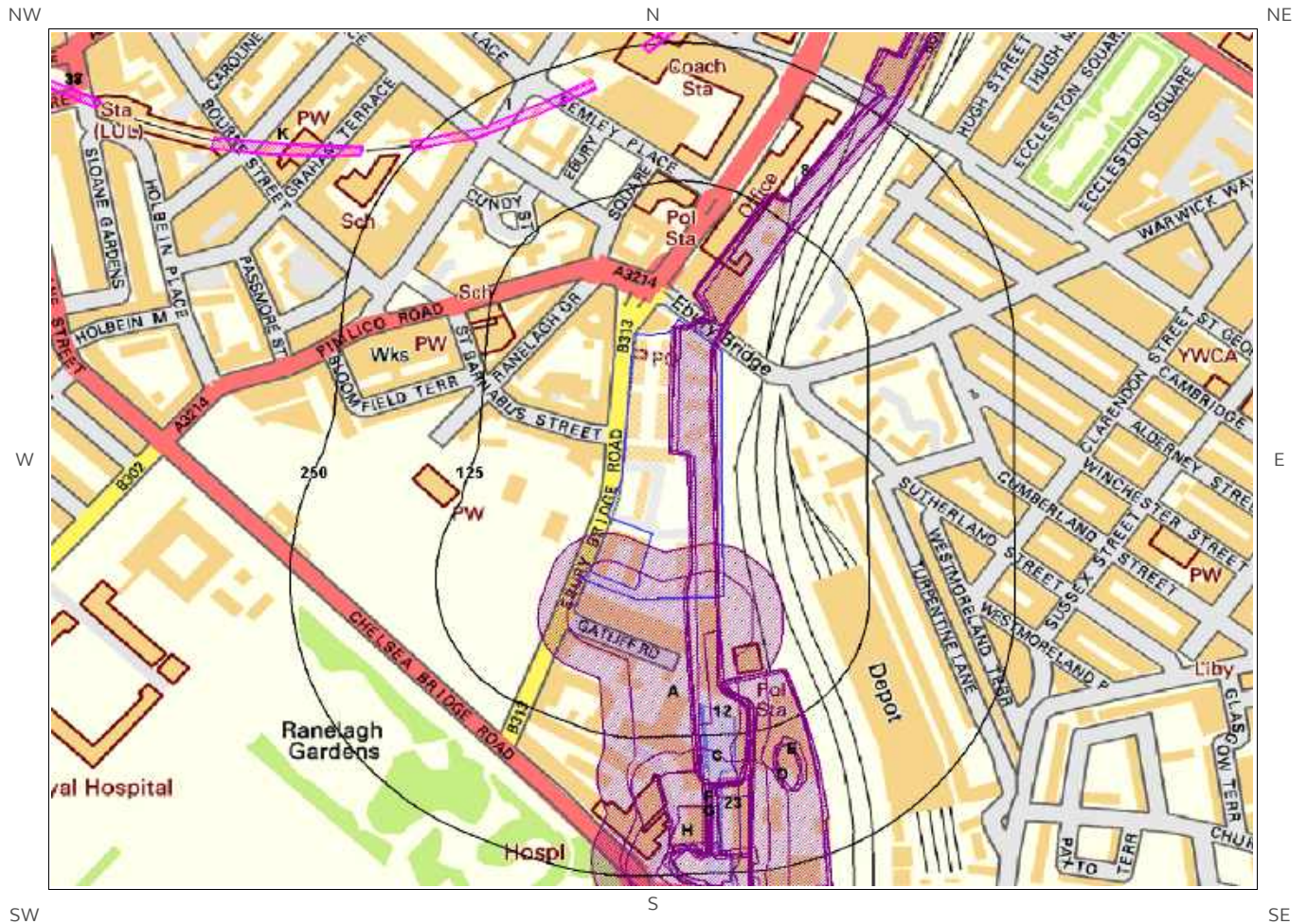
Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

The radon data in this report is supplied by the BGS/Public Health England and is the definitive map of Radon Affected Areas in Great Britain and Northern Ireland. The dataset was created using long-term radon measurements in over 479,000 homes across Great Britain and 23,000 homes across Northern Ireland, combined with geological data. The dataset is considered accurate to 50m to allow for the margin of error in geological lines, and the findings of this report supercede any answer given in the less accurate Indicative Atlas of Radon in Great Britain, which simplifies the data to give the highest risk within any given 1km grid square. As such, the radon atlas is considered indicative, whereas the data given in this report is considered definitive.

3.2 Radon Protection



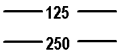


Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.

4 Ground Workings map



Ground Workings Legend

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- | | | | |
|---|--------------------|---|----------------------------------|
|  | Site Outline |  | Historic Surface Ground Workings |
|  | Search Buffers (m) |  | 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	0.0	On Site	528577 178086	Dock	1967
2A	0.0	On Site	528577 178086	Dock	1973
3	0.0	On Site	528587 178414	Canal	1898
4B	0.0	On Site	528595 178345	Canal	1871
5B	0.0	On Site	528587 178363	Canal	1894
6	0.0	On Site	528584 178383	Canal	1895
7A	0.0	On Site	528577 178086	Dock	1955
8	15.0	NE	528715 178621	Canal	1894
9C	31.0	S	528613 178112	Canal	1973
10C	31.0	S	528613 178112	Canal	1967
11C	31.0	S	528613 178112	Canal	1955
12	31.0	S	528613 178112	Canal	1985
13D	74.0	S	528658 178047	Sewage Works	1894
14D	75.0	S	528656 178046	Sewage Works	1895
15D	75.0	S	528660 178047	Sewage Works	1898
16D	77.0	S	528661 178045	Sewage Works	1894
17G	137.0	S	528582 177997	Dock	1920
18E	137.0	S	528671 178062	Pond	1955
19E	141.0	S	528666 178059	Pond	1895
20E	144.0	S	528669 178058	Pond	1894
21F	147.0	S	528596 178024	Unspecified Dock	1894

ID	Distance (m)	Direction	NGR	Use	Date
22F	156.0	S	528577 178018	Unspecified Dock	1898
23	166.0	S	528620 178014	Unspecified Dock	1898
24G	181.0	S	528621 178006	Dock	1895
25H	189.0	S	528597 177984	Dock	1894
26H	222.0	S	528593 177971	Dock	1985

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? Yes

The following Historical Underground Working Features are provided by Groundsure:

ID	Distance (m)	Direction	NGR	Use	Date
27I	214.0	NW	528443 178649	Tunnel	1894
28I	214.0	NW	528444 178649	Tunnel	1895
29J	241.0	N	528582 178741	Tunnel	1894
30J	243.0	N	528580 178740	Tunnel	1895
31K	283.0	NW	528239 178620	Tunnel	1895
32K	283.0	NW	528239 178620	Tunnel	1894
Not shown	354.0	N	528665 178851	Tunnel	1895
Not shown	354.0	N	528729 178966	Tunnel	1873
Not shown	354.0	N	528729 178966	Tunnel	1873
Not shown	361.0	N	528726 178972	Tunnel	1895
37	501.0	NW	527943 178718	Tunnel	1894
38	503.0	NW	527965 178709	Tunnel	1895
Not shown	654.0	N	528831 179098	Tunnel	1895
Not shown	774.0	NE	529136 179194	Tunnel	1895
Not shown	776.0	NE	529144 179192	Tunnel	1873

ID	Distance (m)	Direction	NGR	Use	Date
Not shown	776.0	NE	529144 179192	Tunnel	1873
Not shown	780.0	NW	527757 178786	Tunnel	1895
Not shown	784.0	NE	529142 179200	Tunnel	1895
Not shown	827.0	NW	527690 178786	Tunnel	1866
Not shown	838.0	NW	527686 178789	Tunnel	1894

4.3 Current Ground Workings

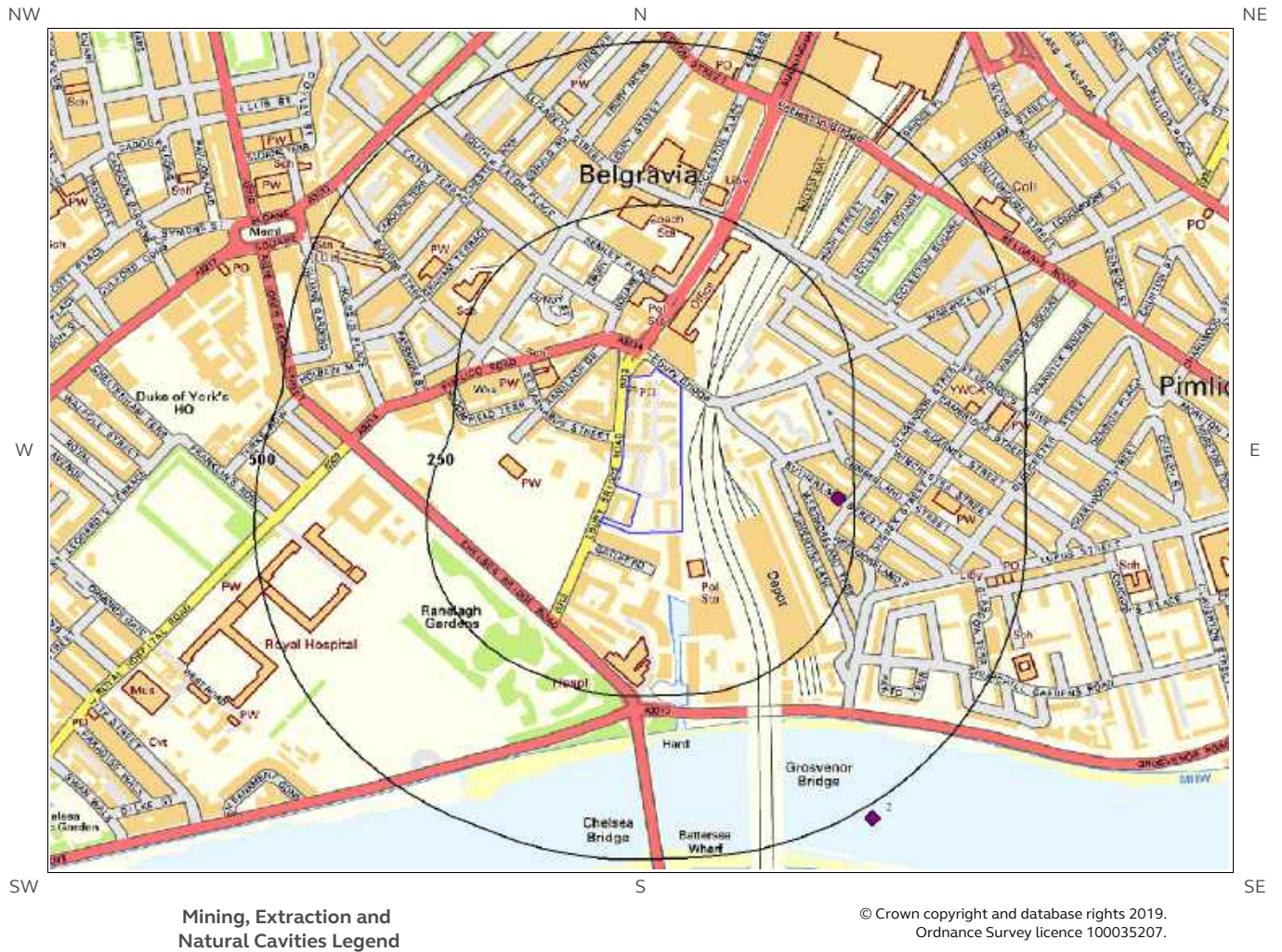
This dataset is derived from the BGS BRITPITS database covering active; inactive mines; quarries; oil wells; gas wells and mineral wharves; and rail deposits throughout the British Isles.

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	810.0	SE	529200 177655	Marine Sand & Gravel	Cringle Wharf	Sea, river or canal wharf where mineral commodities are unloaded and stored	Active
Not shown	950.0	SE	529370 177640	Marine Sand & Gravel	Vauxhall Wharf	Sea, river or canal wharf where mineral commodities are unloaded and stored	Ceased

5 Mining, Extraction & Natural Cavities map



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? No

The following information provided by JPB is not represented on mapping: Database searched and no data found.

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? No

Database searched and no data found.

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? No

Database searched and no data found.

5.6 Natural Cavities

This dataset provides information based on the Peter Brett Associates natural cavities database. The dataset is made up of points and polygons. Where polygons are used these represent an area in which it is expected the cavities could be found. It does not indicate that cavities are present everywhere within the polygon, and caution should be used in the interpretation of this data.

Are there any Natural Cavities within 1000m of the study site boundary? Yes

The following Natural Cavities information provided by Peter Brett Associates:

ID	Distance (m)	Direction	NGR	Superficial Deposits	Bedrock Deposits	Cavity Type and Number
1	228.0	E	528840 178260	-	Chalk Group, Lambeth Group, London Clay Formation, Thanet Sand Formation	Scour Hollows x 1
2	523.0	SE	528890 177770	Alluvium	London Clay Formation	Scour Hollows x 1
Not shown	677.0	SE	528900 177600	Alluvium	Chalk Group, Lambeth Group, London Clay Formation	Unknown x 5
Not shown	717.0	SE	528910 177560	Alluvium	London Clay Formation	Scour Hollows x 1
Not shown	807.0	SE	528950 177480	Alluvium	London Clay Formation	Scour Hollows x 1

5.7 Brine Extraction

This data provides information from 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

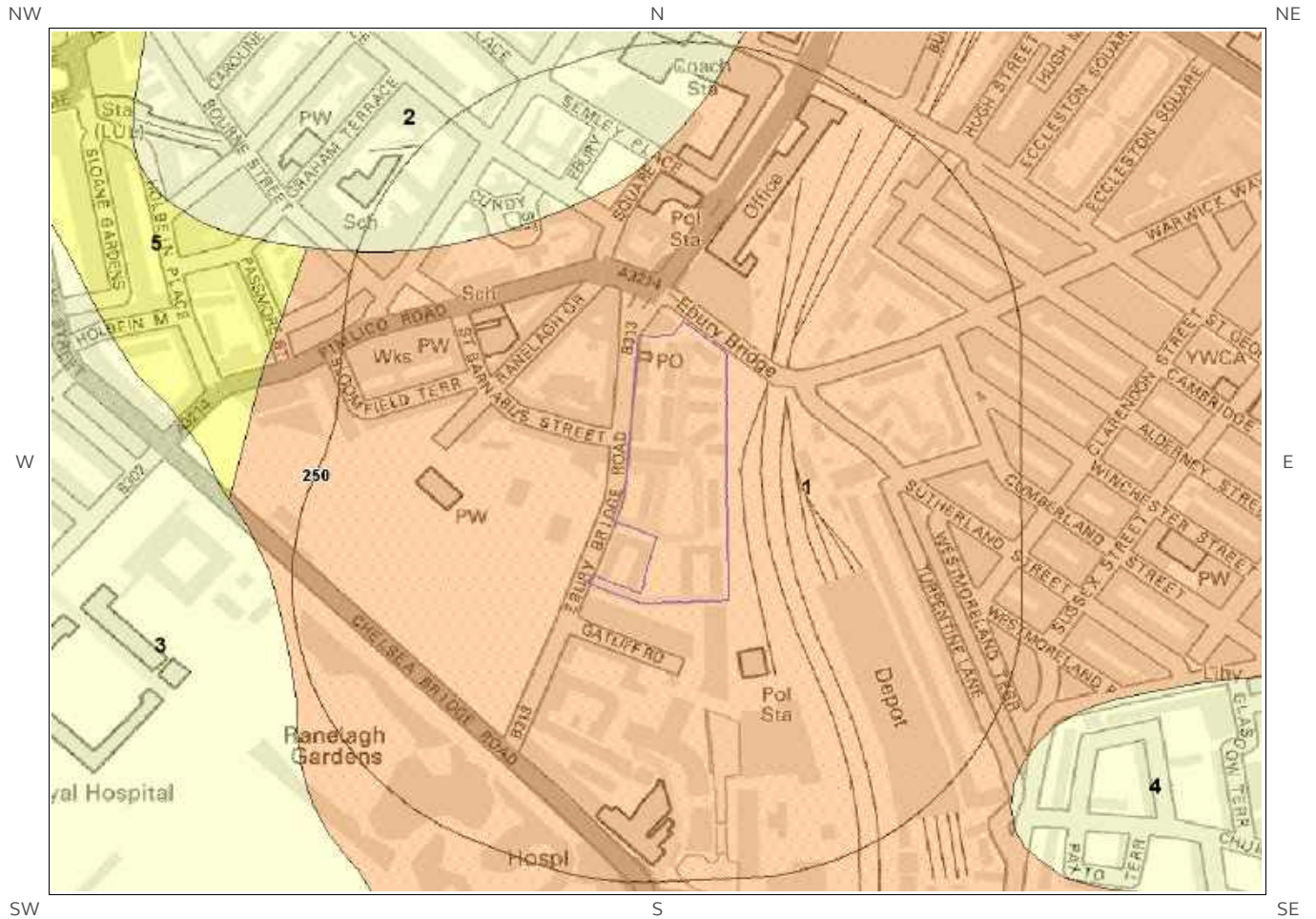
This dataset provides information on Kaolin and Ball Clay mining from relevant mining records.

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

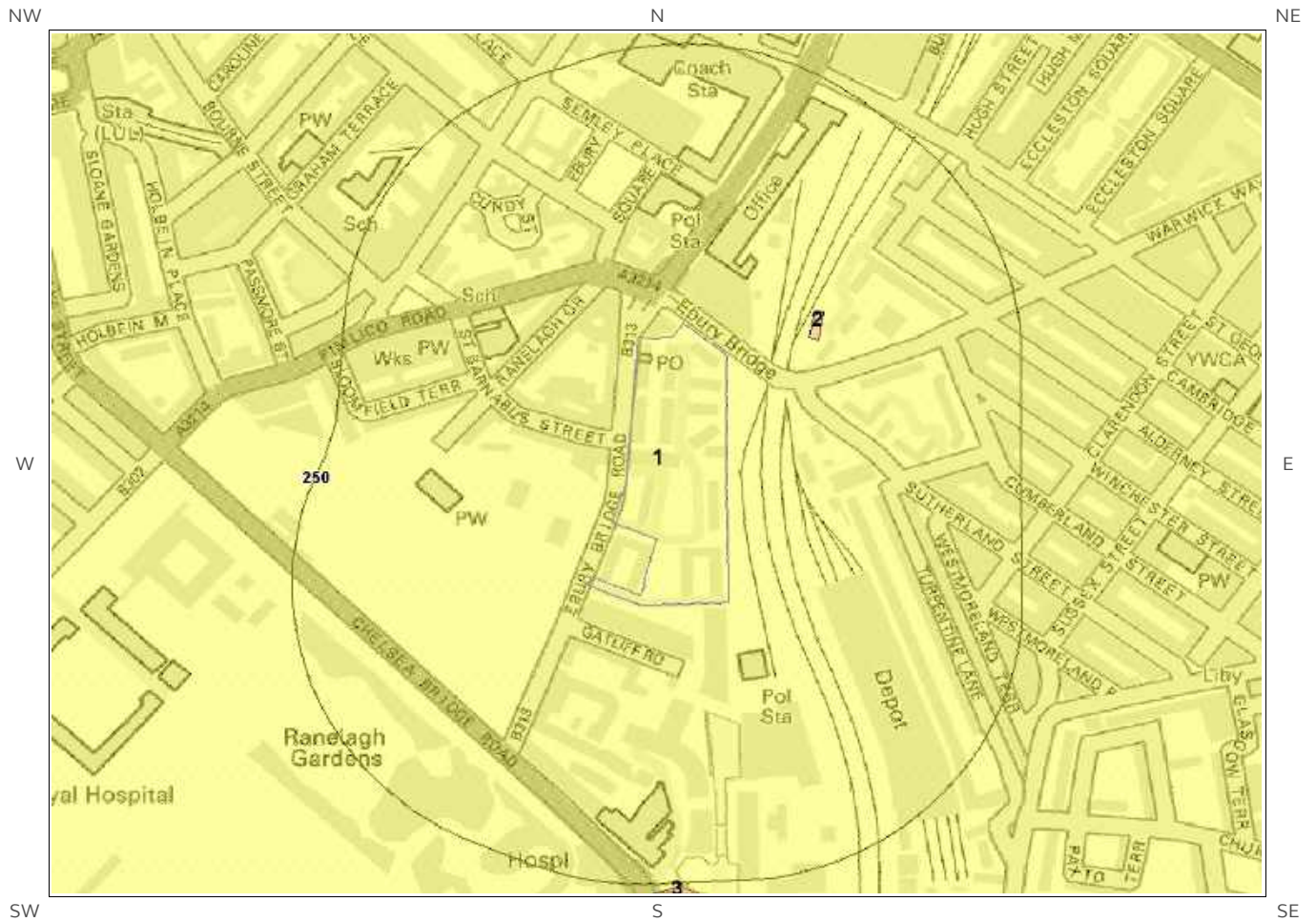


Shrink Swell Clay Legend

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6.2 Landslides map



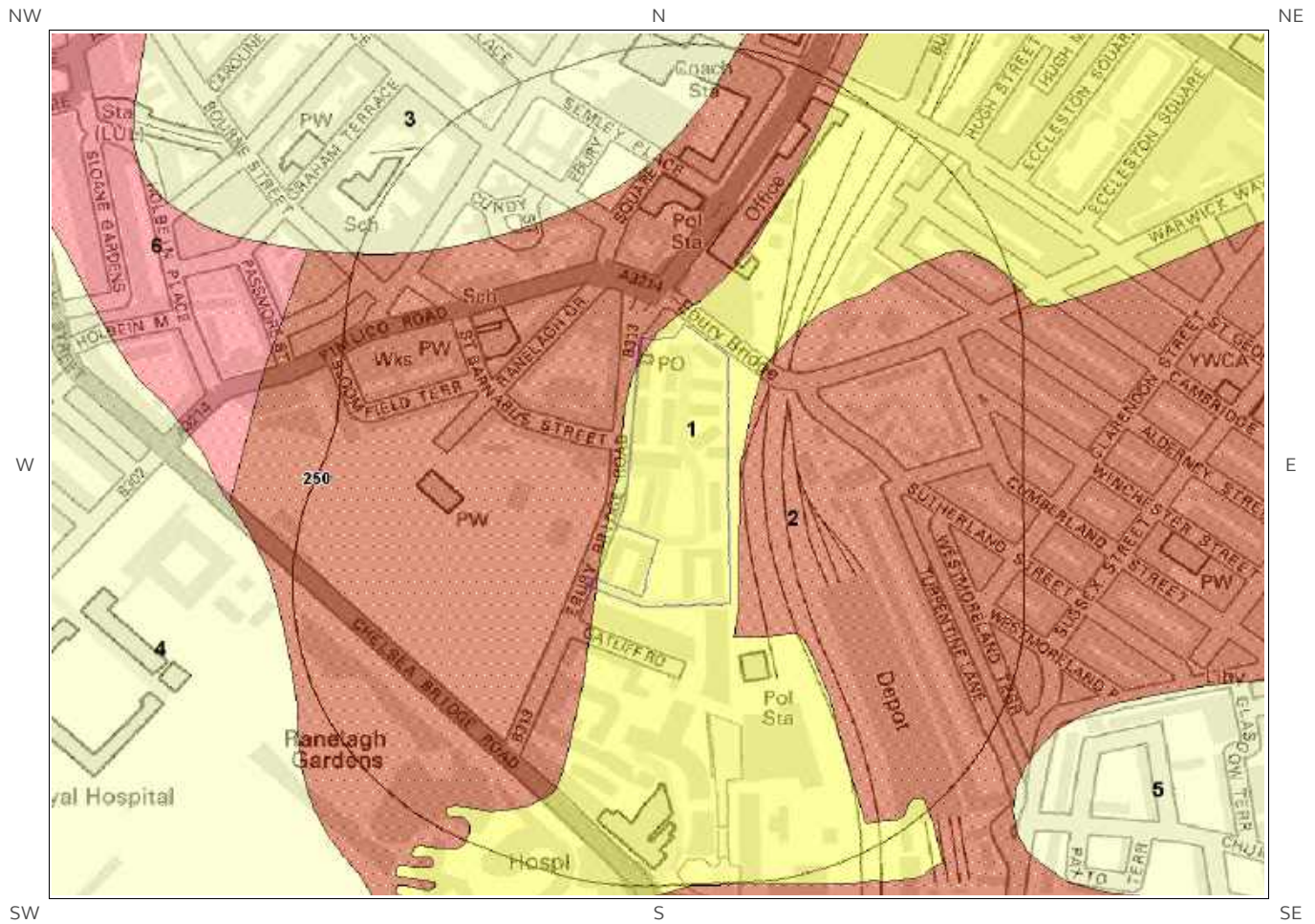
Landslides Legend

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6.4 Compressible Deposits map

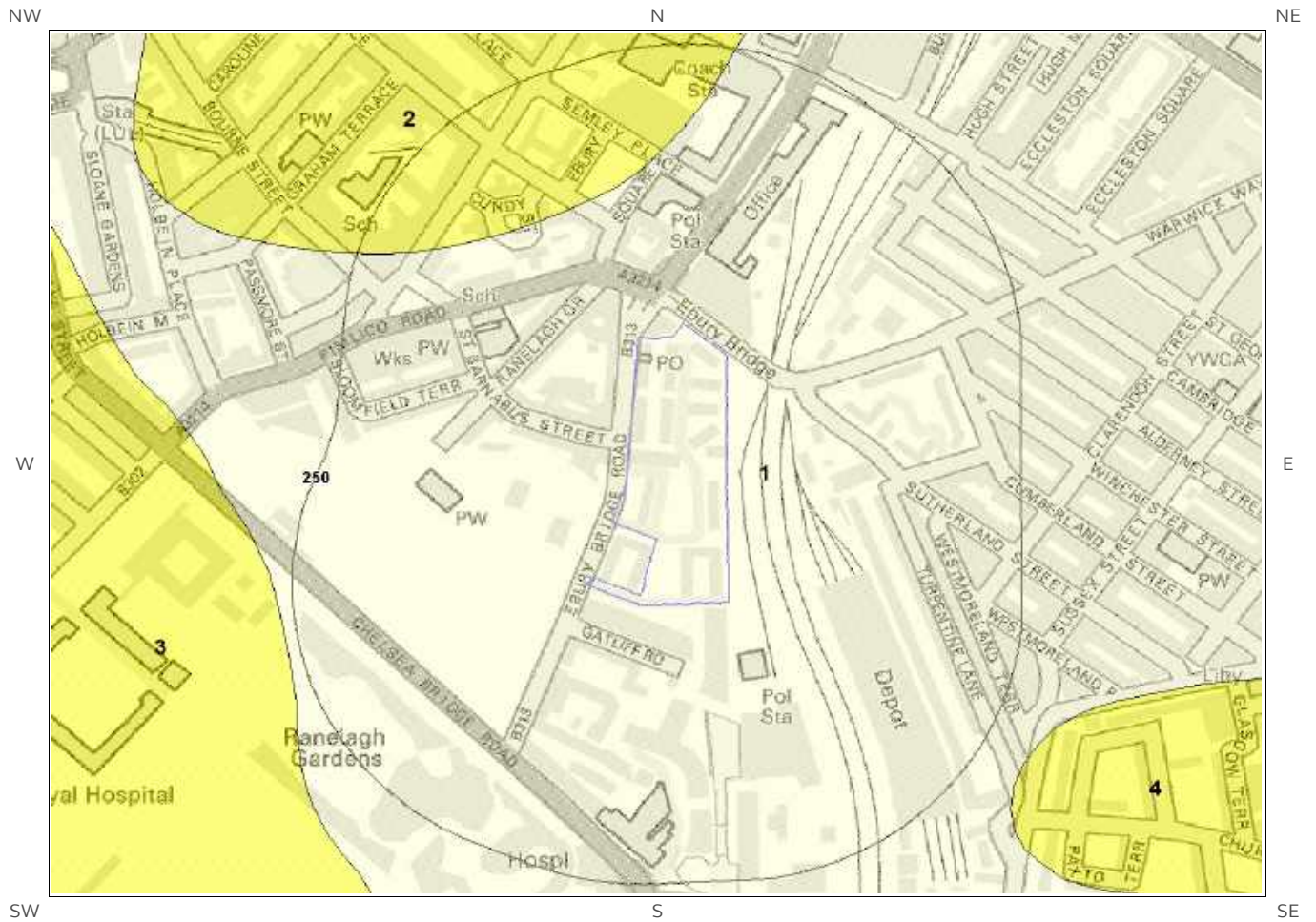


Compressible Deposits Legend

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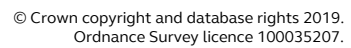
6.5 Collapsible Deposits map



Collapsible Deposits Legend

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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? High

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	Very Low	Very low potential for compressible deposits to be present. 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.
2	0.0	On Site	High	Very significant potential for compressibility problems. Avoid large differential loadings of ground. Do not drain or de-water ground near the property without technical advice. For new build - consider possibility of compressible ground in ground investigation, construction and building design. Consider effects of groundwater changes. Construction may not be possible at economic cost. For existing property - probable increase in insurance risk from compressibility especially if water conditions or loading of the ground change significantly.

6.5 Collapsible Deposits

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

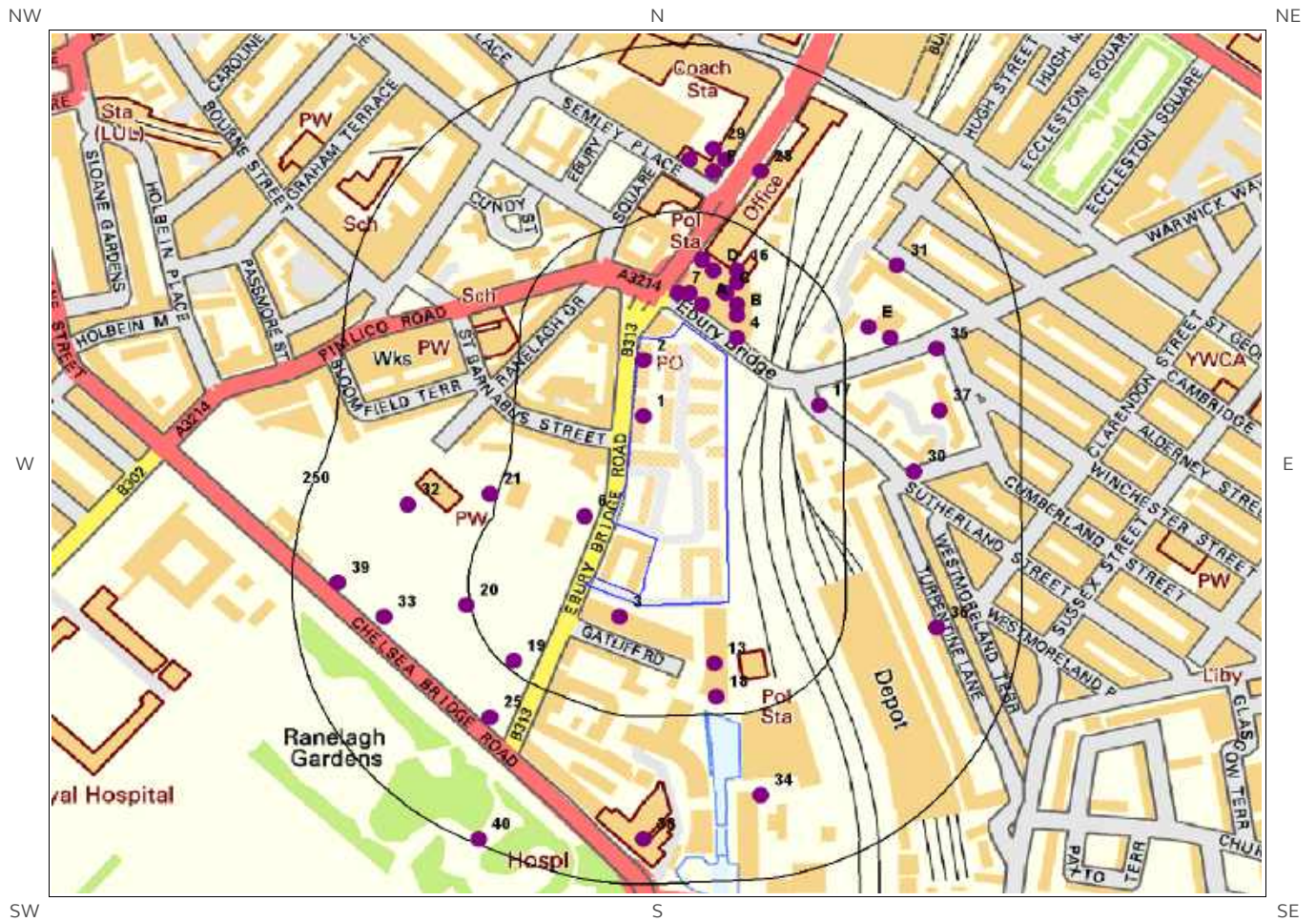
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for collapsible deposits identified. No actions required to avoid problems due to collapsible deposits. No special ground investigation required, or increased construction costs or increased financial risk due to potential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

6.6 Running Sands

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

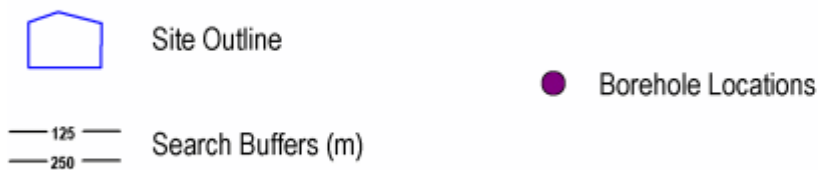
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Low	Possibility of running sand problems after major changes in ground conditions. Normal maintenance to avoid leakage of water-bearing services or water bodies (ponds, swimming pools) should reduce likelihood of problems due to running sand. For new build - consider possibility of running sand into trenches or excavations if water table is high or sandy strata are exposed to water. Avoid concentrated water inputs to site. Unlikely to be an increase in construction costs due to potential for running sand. For existing property - no significant increase in insurance risk due to running sand problems is likely.
2	0.0	On Site	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. 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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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:

40

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1	0.0	On Site	528540 178380	TQ27NE1892	Not available	EBURY BRIDGE ESTATE 1
2	0.0	On Site	528540 178430	TQ27NE1893	Not available	EBURY BRIDGE ESTATE 2
3	16.0	S	528520 178200	TQ27NE653	30	EBURY BRIDGE RD WESTMINSTER BH1
4	17.0	NE	528620 178450	TQ27NE139	10	EBURY BRIDGE J163 WESTMINSTER
5A	22.0	NE	528590 178480	TQ27NE1592	Not available	BUCKINGHAM PALACE RD 3
6	23.0	W	528490 178290	TQ27NE2051	Not available	CHELSEA BARRACKS LONDON 8
7	26.0	N	528570 178490	TQ27NE138	5	CORNER OF BUCKINGHAM WESTMINSTER J162
8A	26.0	N	528580 178490	TQ27NE1594	Not available	BUCKINGHAM PALACE RD 5
9B	32.0	NE	528620 178470	TQ27NE1588	Not available	BUCKINGHAM PALACE RD 1
10B	40.0	NE	528620 178480	TQ27NE1589	Not available	BUCKINGHAM PALACE RD 1A
11C	42.0	NE	528610 178490	TQ27NE1536	Not available	400KV CABLE TUNNEL 45
12D	52.0	NE	528600 178510	TQ27NE1593	Not available	BUCKINGHAM PALACE RD 4
13	55.0	S	528601 178158	TQ27NE479	9	GROSVENOR DOCK WESTMINSTER BH7
14C	56.0	NE	528620 178500	TQ27NE1590	Not available	BUCKINGHAM PALACE RD 2
15D	58.0	N	528590 178520	TQ27NE1595	Not available	BUCKINGHAM PALACE RD 6
16	64.0	NE	528620 178510	TQ27NE1591	Not available	BUCKINGHAM PALACE RD 2A
17	78.0	E	528690 178390	TQ27NE1537	Not available	400KV CABLE TUNNEL 46
18	85.0	S	528602 178128	TQ27NE480	9	GROSVENOR DOCK WESTMINSTER BH8
19	93.0	SW	528430 178160	TQ27NE2050	Not available	CHELSEA BARRACKS LONDON 7
20	104.0	W	528390 178210	TQ27NE2047	Not available	CHELSEA BARRACKS LONDON 4
21	106.0	W	528410 178310	TQ27NE2045	Not available	CHELSEA BARRACKS LONDON 2
22E	123.0	E	528732 178460	TQ27NE351/B	27	ABBOTS MANOR HOUSING SCHEME

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
23F	138.0	N	528600 178600	TQ27NE1574	24	SEMLEY PLACE COACH PK 1
24E	139.0	E	528750 178450	TQ27NE351/A-G	35	ABBOTS MANOR HOUSING SCHEME WESTMINSTER
25	144.0	SW	528410 178110	TQ27NE2046	Not available	CHELSEA BARRACKS LONDON 3
26F	146.0	N	528580 178610	TQ27NE1577	18	SEMLEY PLACE COACH PK 4
27F	150.0	N	528610 178610	TQ27NE1575	24	SEMLEY PLACE COACH PK 2
28	151.0	NE	528640 178600	TQ27NE1535	Not available	400KV CABLE TUNNEL 44
29	158.0	N	528600 178620	TQ27NE1576	18	SEMLEY PLACE COACH PK 3
30	158.0	E	528770 178330	TQ27NE1538	Not available	400KV CABLE TUNNEL 47
31	165.0	NE	528756 178515	TQ27NE351/A	9	ABBOTS MANOR HOUSING SCHEME
32	168.0	NW	528340 178300	TQ27NE2048	Not available	CHELSEA BARRACKS LONDON 5
33	174.0	W	528320 178200	TQ27NE2049	Not available	CHELSEA BARRACKS LONDON 6
34	175.0	S	528640 178040	TQ27NE1564	142	WESTERN PUMPING STATION
35	178.0	E	528790 178440	TQ27NE351/D	11	ABBOTS MANOR HOUSING SCHEME
36	179.0	E	528790 178190	TQ27NE1539	Not available	400KV CABLE TUNNEL 48/48A+B
37	180.0	E	528792 178385	TQ27NE351/G	13	ABBOTS MANOR HOUSING SCHEME
38	210.0	S	528540 178000	TQ27NE392/A-C	13	LISTER INSTITUTE BH1-3 CHELSEA
39	212.0	W	528280 178230	TQ27NE2044	Not available	CHELSEA BARRACKS LONDON 1
40	247.0	S	528400 178000	TQ27NE269	21	CHELSEA BRIDGE ROAD CHELSEA

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.

#3: scans.bgs.ac.uk/sobi_scans/boreholes/588054
#4: scans.bgs.ac.uk/sobi_scans/boreholes/587418
#7: scans.bgs.ac.uk/sobi_scans/boreholes/587417
#13: scans.bgs.ac.uk/sobi_scans/boreholes/587838
#18: scans.bgs.ac.uk/sobi_scans/boreholes/587839
#22E: scans.bgs.ac.uk/sobi_scans/boreholes/587693
#23F: scans.bgs.ac.uk/sobi_scans/boreholes/588996
#24E: scans.bgs.ac.uk/sobi_scans/boreholes/587696
#26F: scans.bgs.ac.uk/sobi_scans/boreholes/588999
#27F: scans.bgs.ac.uk/sobi_scans/boreholes/588997
#29: scans.bgs.ac.uk/sobi_scans/boreholes/588998
#31: scans.bgs.ac.uk/sobi_scans/boreholes/587692
#34: scans.bgs.ac.uk/sobi_scans/boreholes/588986
#35: scans.bgs.ac.uk/sobi_scans/boreholes/587694
#37: scans.bgs.ac.uk/sobi_scans/boreholes/587695
#38: scans.bgs.ac.uk/sobi_scans/boreholes/587749
#40: scans.bgs.ac.uk/sobi_scans/boreholes/587576

8 Estimated Background Soil Chemistry

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

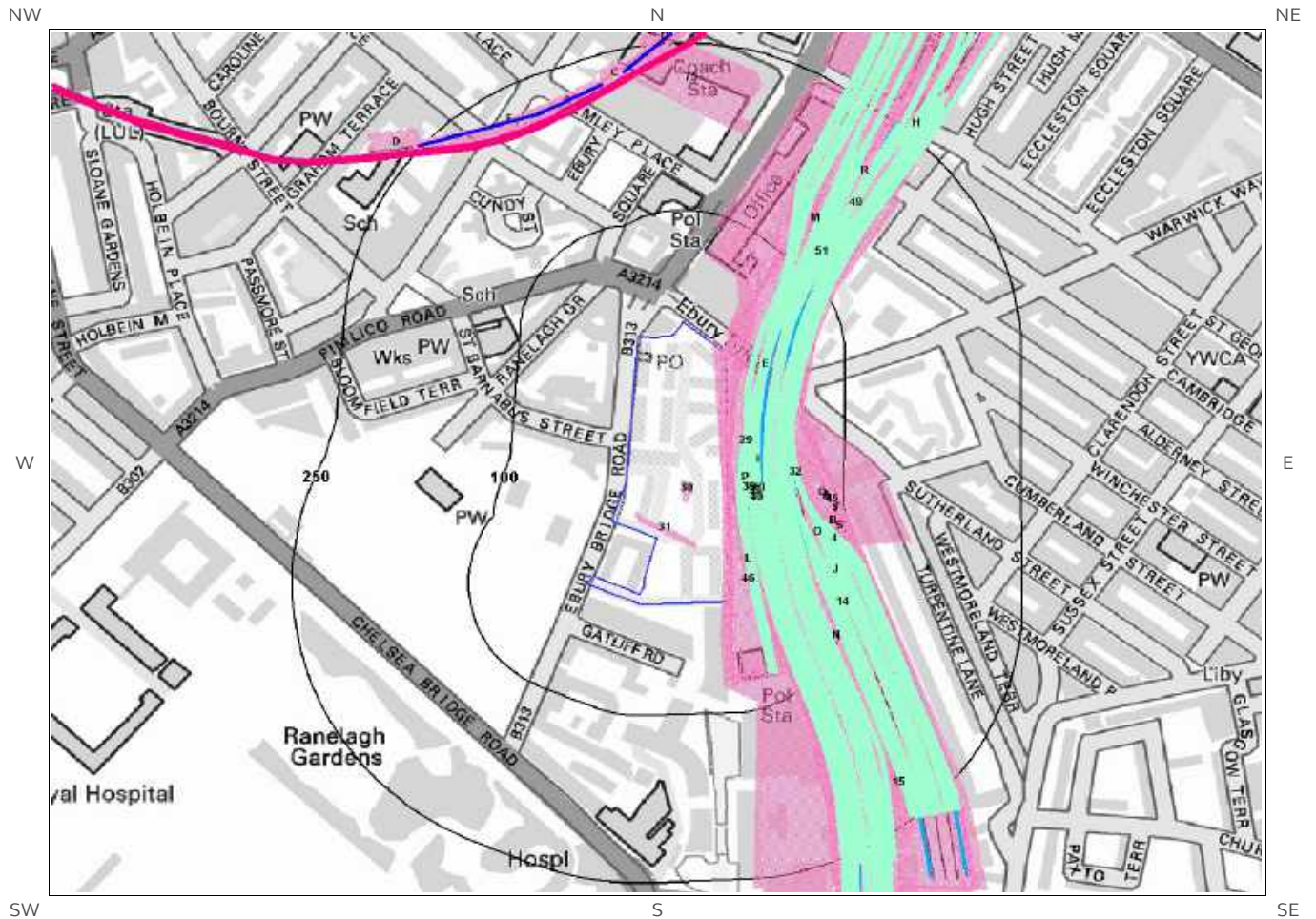
3

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

Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	London	No data	No data	No data	No data	No data
0.0	On Site	London	No data	No data	No data	No data	No data
36.0	N	London	No data	No data	No data	No data	No data

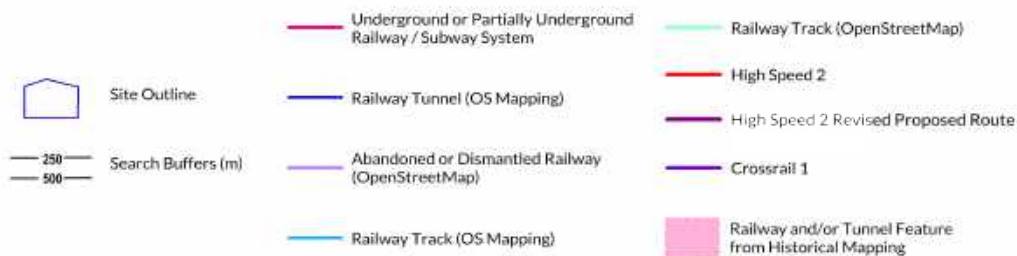
*As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.

9 Railways and Tunnels map



Railways and Tunnels Legend

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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? Yes

Distance (m)	Direction	Detail
205	NW	London Underground - Circle Line
205	NW	London Underground - District Line

The approximate depth value for the nearest London Underground line given in this dataset has been extrapolated from published depths of tube lines at station platforms, and assume a constant gradient between stations. Using this method, topographical variation has resulted in some parts of the line having associated depth values either shallower or deeper than the real-world situation. Depth values are for indication only and should not be relied upon for any calculation or technical purpose and are in no way a substitute for a professional survey.

Line
London Underground Line: District Line Depth: 13mbgl Track Type: Tunnel

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? Yes

Distance (m)	Direction	Detail
216	NW	Railway Tunnel
230	N	Railway Tunnel

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? Yes

Have any historical railway or tunnel features been identified within 250m of the study site boundary? Yes

ID	Distance (m)	Direction	NGR	Details	Date
1A	0	On Site	528704 177563	Railway Sidings	1938
2A	0	On Site	528704 177563	Railway Sidings	1920
3	0	On Site	528704 177529	Railway Sidings	1871
4	0	On Site	528709 178185	Railway Sidings	1895
5	0	On Site	528736 177624	Railway Sidings	1985
6J	0	On Site	528716 178176	Railway Sidings	1894
7	0	On Site	528737 177625	Railway Sidings	1973
8B	0	On Site	528821 177614	Railway Sidings	1967
9B	0	On Site	528821 177614	Railway Sidings	1955
10	0	On Site	528700 177616	Railway Sidings	1948
29	0	On Site	528640 178380	Railway Sidings	1916
30	0	On Site	528578 178312	Railway Sidings	1896
31	0	On Site	528559 178278	Railway Sidings	1896
32	0	On Site	n/a	Railways	1875
33I	0	On Site	n/a	Railway	1916
34I	0	On Site	n/a	Railway	1935
35	0	On Site	n/a	Railway	1868
36J	0	On Site	n/a	Railway	1868
11K	1	E	528632 178288	Railway Sidings	1898
20E	1	NE	n/a	Railway Tunnel	1875
37K	2	E	n/a	Railways	1916
38K	2	E	n/a	Railways	1930
39	2	E	528660 178461	Railway Sidings	1951
12	3	E	528653 178199	Railway Sidings	1894
40	3	E	528642 178387	Railway Sidings	1896
41L	3	E	528624 178295	Railway Sidings	1971
42L	3	E	528624 178295	Railway Sidings	1949

ID	Distance (m)	Direction	NGR	Details	Date
43L	3	E	528624 178295	Railway Sidings	1957
44K	3	E	n/a	Railways	1897
45	3	E	528661 178459	Railway Sidings	1966
46	4	E	528625 178260	Railway Sidings	1988
47P	4	E	n/a	Railway	1881
48L	8	E	528628 178269	Railway Sidings	1991
21E	10	E	n/a	Railway Tunnel	1897
49	19	NE	n/a	Railways	1897
50	19	NE	528659 178522	Railway Sidings	1875
51	19	NE	n/a	Railways	1875
52M	22	E	n/a	Railways	1916
53M	22	E	n/a	Railways	1930
13O	46	E	528691 178293	Railway Sidings	1894
54N	50	E	528695 178197	Railway Sidings	1949
55N	50	E	528695 178197	Railway Sidings	1971
56N	50	E	528695 178197	Railway Sidings	1957
57O	52	E	528695 178283	Railway Sidings	1875
58N	52	E	528699 178190	Railway Sidings	1988
59N	52	E	528699 178190	Railway Sidings	1991
14	53	E	528717 178183	Railway Sidings	1898
60P	54	E	528688 178310	Railway Sidings	1971
61Q	54	E	528695 178310	Railway Sidings	1957
62Q	55	E	528697 178303	Railway Sidings	1949
63R	66	NE	528811 178709	Railway Sidings	1965
64R	67	NE	528817 178709	Railway Sidings	1949
65R	67	NE	528811 178709	Railway Sidings	1973
66R	69	NE	528799 178702	Railway Sidings	1987
67R	69	NE	528799 178702	Railway Sidings	1987
68S	70	E	528710 178277	Railway Sidings	1991
69S	70	E	528710 178277	Railway Sidings	1988
70R	76	NE	528799 178702	Railway Sidings	1991
71R	76	NE	528799 178702	Railway Sidings	1990

ID	Distance (m)	Direction	NGR	Details	Date
72R	76	NE	528799 178702	Railway Sidings	1991
73R	76	NE	528799 178702	Railway Sidings	1990
74	158	S	528643 178003	Railway Sidings	1896
75	175	N	n/a	Railway	1935
15	182	SE	528757 178048	Railway Sidings	1894
76C	209	NW	n/a	Railways	1875
77T	209	NW	n/a	Railways	1897
22F	212	N	n/a	Railway Tunnel	1881
23F	212	N	n/a	Railway Tunnel	1896
86F	214	NW	528443 178649	Tunnel	1894
87F	214	NW	528444 178649	Tunnel	1895
16C	216	N	528517 178685	Railway Sidings	1985
17C	216	N	528517 178685	Railway Sidings	1973
78T	217	N	n/a	Railways	1930
79T	218	N	n/a	Railways	1916
80T	219	N	n/a	Railway	1881
81T	219	N	n/a	Railway	1896
82T	220	N	n/a	Railway	1916
24G	239	N	n/a	Railway Tunnel	1881
88G	241	N	528582 178741	Tunnel	1894
18D	242	NW	528331 178624	Railway Sidings	1985
19D	242	NW	528331 178624	Railway Sidings	1973
25G	242	N	n/a	Railway Tunnel	1896
26G	243	N	n/a	Tunnel	1868
89G	243	N	528580 178740	Tunnel	1895
27H	248	NE	n/a	Railway Tunnel	1897
83D	248	NW	n/a	Railway	1916
84D	249	NW	n/a	Railway	1896
85D	249	NW	n/a	Railways	1881
28H	250	NE	n/a	Railway Tunnel	1875

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? Yes

Distance (m)	Direction	Name	Type
9	E	Not given	Multi Track
9	E	Not given	Multi Track
10	E	Not given	rail
10	E	Not given	rail
14	E	Not given	rail
14	E	Not given	rail
17	E	Not given	rail
17	E	Not given	rail
17	E	Not given	rail
17	E	Not given	rail
17	E	Not given	rail
17	E	Not given	rail
18	E	Not given	rail
18	E	Not given	rail
23	E	Not given	rail
23	E	Not given	rail
23	E	Not given	rail
23	E	Not given	rail
23	E	Not given	rail
23	E	Not given	rail
26	E	Not given	rail
26	E	Not given	rail
26	E	Not given	rail
26	E	Not given	rail
29	E	Not given	Multi Track
29	E	Not given	Multi Track
33	E	Not given	rail
33	E	Not given	rail
34	E	Not given	Multi Track
34	E	Not given	Multi Track
35	E	Not given	rail

Distance (m)	Direction	Name	Type
35	E	Not given	rail
35	E	Not given	rail
35	E	Not given	rail
36	E	Not given	rail
36	E	Not given	rail
37	E	Not given	rail
37	E	Not given	rail
37	E	Not given	rail
37	E	Not given	rail
37	E	Not given	Multi Track
37	E	Not given	Multi Track
37	E	Not given	Multi Track
37	E	Not given	Multi Track
37	E	Not given	rail
37	E	Not given	rail
37	E	Not given	rail
37	E	Not given	rail
41	E	Not given	rail
41	E	Not given	rail
41	E	Not given	rail
41	E	Not given	rail
42	E	Chatham Main Line	rail
42	E	Chatham Main Line	rail
43	E	Not given	rail
43	E	Not given	rail
43	E	Not given	rail
43	E	Not given	rail
45	E	Not given	Multi Track
45	E	Not given	Multi Track
46	E	Chatham Main Line	rail
46	E	Chatham Main Line	rail
47	E	Not given	rail
47	E	Not given	rail
49	E	Not given	Multi Track
49	E	Not given	Multi Track
49	E	Not given	Multi Track
49	E	Not given	Multi Track
50	E	Chatham Main Line	rail
50	E	Chatham Main Line	rail
54	E	Not given	rail
54	E	Chatham Main Line	rail
54	E	Not given	rail
54	E	Chatham Main Line	rail
55	E	Not given	rail
55	E	Not given	Multi Track
55	E	Not given	Multi Track
55	E	Not given	Multi Track
55	E	Not given	Multi Track
55	E	Not given	rail
56	E	Not given	rail
56	E	Not given	rail
64	E	Not given	rail
64	E	Not given	rail

Distance (m)	Direction	Name	Type
67	E	Not given	rail
67	E	Not given	rail
68	NE	Not given	rail
68	NE	Not given	rail
68	E	Not given	rail
68	NE	Not given	rail
68	NE	Not given	rail
68	E	Not given	rail
69	E	Not given	rail
69	E	Not given	rail
71	NE	Not given	rail
71	NE	Not given	rail
72	NE	Not given	rail
72	NE	Not given	rail
74	E	Not given	Multi Track
74	E	Not given	Multi Track
76	E	Not given	rail
76	NE	Not given	rail
76	E	Not given	rail
76	NE	Not given	rail
78	E	Not given	rail
78	E	Not given	rail
81	E	Not given	rail
81	E	Not given	rail
83	E	Not given	rail
83	E	Not given	rail
85	E	Not given	rail
85	E	Not given	rail
89	E	Not given	rail
89	E	Not given	rail
91	E	Not given	rail
91	E	Not given	rail
94	NE	Not given	rail
94	E	Not given	rail
94	NE	Not given	rail
94	E	Not given	rail
95	NE	Not given	rail
95	NE	Not given	rail
98	NE	Not given	rail
98	NE	Not given	rail
98	NE	Not given	rail
98	NE	Not given	rail
98	NE	Not given	rail
98	NE	Not given	rail
99	E	Not given	rail
99	E	Not given	rail
102	NE	Not given	rail
102	NE	Not given	rail
103	E	Not given	rail
103	E	Not given	rail
109	E	Not given	rail
109	E	Not given	rail
113	E	Not given	rail

Distance (m)	Direction	Name	Type
113	NE	Not given	rail
113	NE	Not given	rail
113	E	Not given	rail
113	NE	Not given	rail
113	NE	Not given	rail
116	E	Not given	rail
116	E	Not given	rail
126	NE	Not given	rail
126	NE	Not given	rail
132	NE	Not given	rail
132	NE	Not given	rail
132	NE	Not given	rail
132	NE	Not given	rail
132	NE	Not given	rail
132	NE	Not given	rail
150	NE	Not given	rail
150	NE	Not given	rail
154	NE	Not given	rail
154	NE	Not given	rail
160	NE	Not given	rail
160	NE	Not given	rail
161	NE	Not given	rail
161	NE	Not given	rail
165	NE	Not given	rail
165	NE	Not given	rail
166	NE	Not given	rail
166	NE	Not given	rail
170	NE	Not given	rail
170	NE	Not given	rail
186	NE	Not given	rail
186	NE	Not given	rail
186	NE	Not given	rail
186	NE	Not given	rail
187	NE	Not given	rail
187	NE	Not given	rail
199	NE	Not given	rail
199	NE	Not given	rail
205	NE	Not given	rail
205	NE	Not given	rail
206	NE	Not given	rail
206	NE	Not given	rail
206	NE	Not given	rail
206	NE	Not given	rail
207	NE	Not given	rail
207	NE	Not given	rail
220	NE	Not given	rail
220	NE	Not given	rail
222	NE	Not given	rail
222	NE	Not given	rail
224	NE	Not given	rail
224	NE	Not given	rail
226	NE	Not given	rail
226	NE	Not given	rail

Distance (m)	Direction	Name	Type
228	NE	Not given	rail
228	NE	Not given	rail
232	NE	Not given	rail
232	NE	Not given	rail
249	NE	Not given	rail
249	NE	Not given	rail

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? Yes

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.

Please note that this assessment takes account of both the original Phase 2b proposed route and the amended route proposed in 2016. As the Phase 2b route is still under consultation, Groundsure are providing information on both options until the final route is formally confirmed. Practitioners should take account of this uncertainty when advising clients.

Contact Details

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DX 716176 Mansfield 5
www.coal.gov.uk



The Coal
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<https://www.gov.uk/government/organisations/public-health-england>
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Main switchboard: 020 7654 8000



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Scale: 1:1,056

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Map Name: 1056 Scale Town Plan

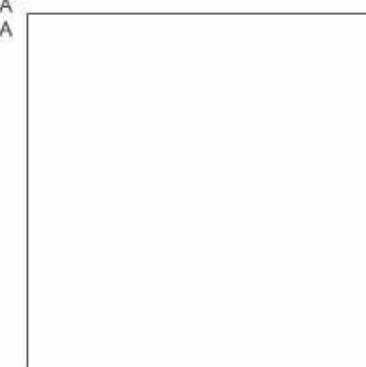
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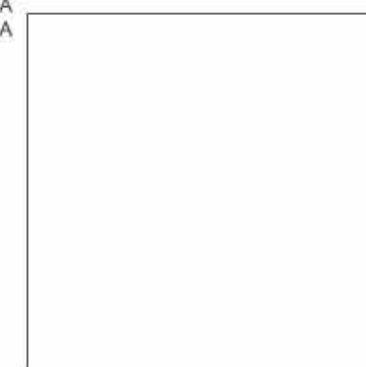
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Client Ref: 257461
Report Ref: GS-6014874
Grid Ref: 528552, 178337

Map Name: County Series

Map date: 1875

Scale: 1:2,500

Printed at: 1:2,500



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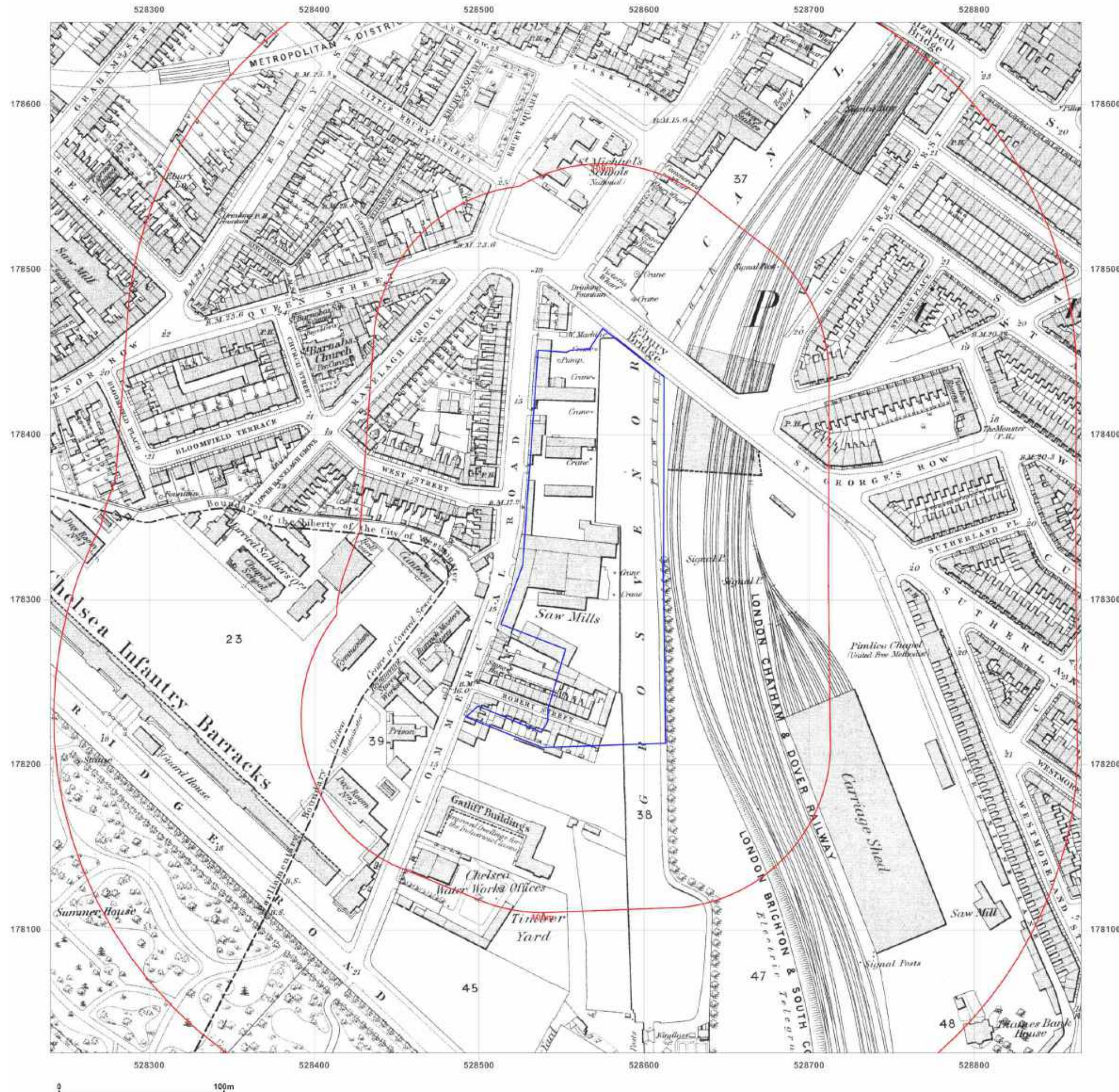


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Report Ref: GS-6014874
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Map Name: 1056 Scale Town Plan

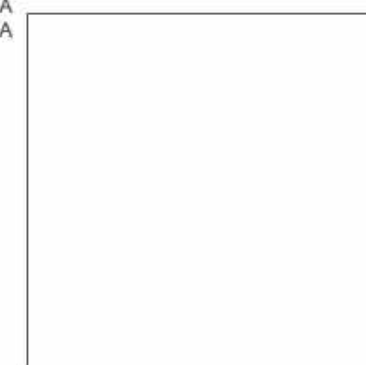
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Grid Ref: 528552, 178337

Map Name: County Series

Map date: 1896

Scale: 1:2,500

Printed at: 1:2,500



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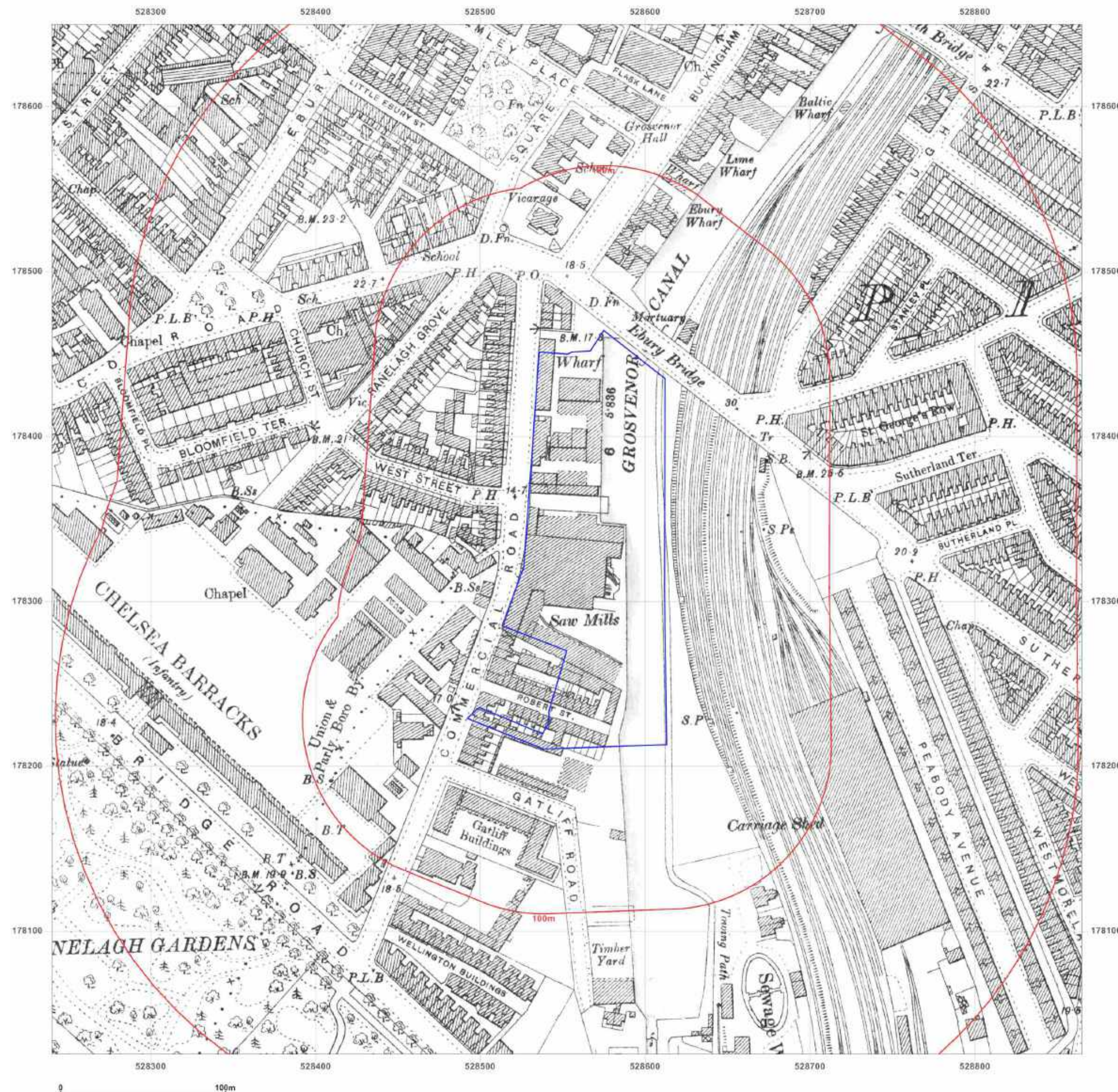


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Map Name: County Series

Map date: 1916

Scale: 1:2,500

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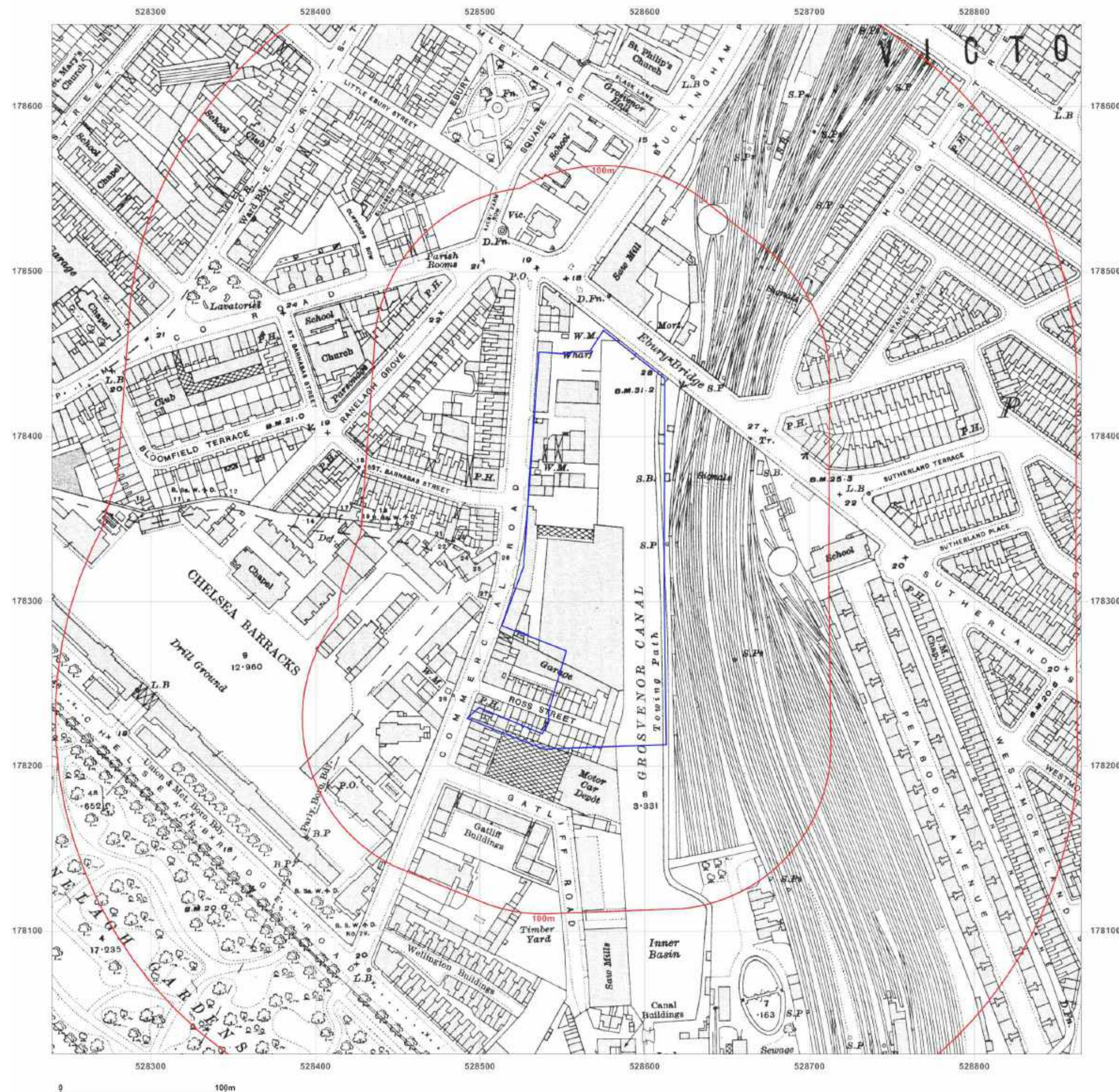


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Report Ref: GS-6014874
Grid Ref: 528552, 178337

Map Name: National Grid

Map date: 1949

Scale: 1:1,250

Printed at: 1:2,000



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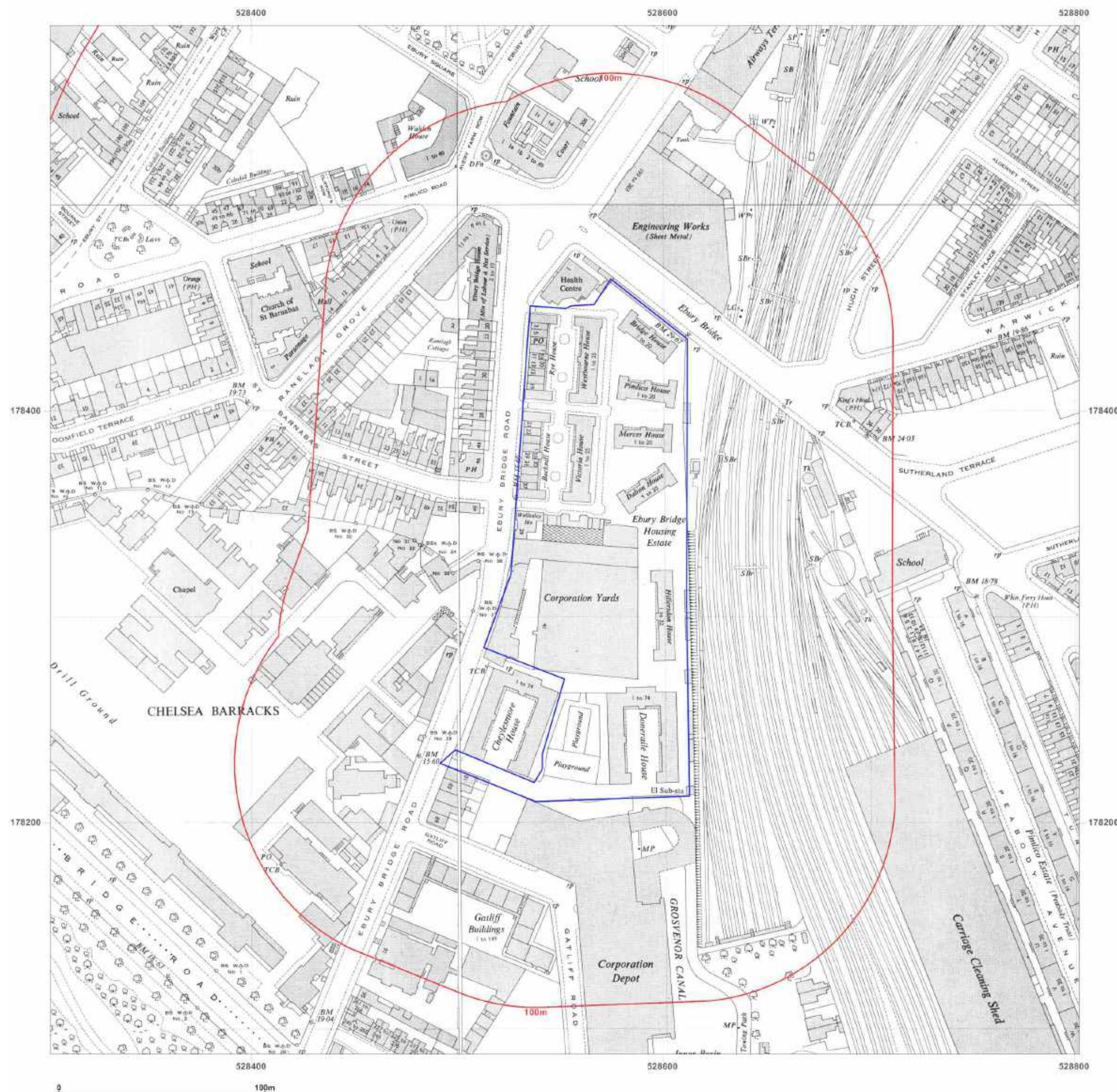


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Report Ref: GS-6014874
Grid Ref: 528552, 178337

Map Name: National Grid

Map date: 1950-1951

Scale: 1:1,250

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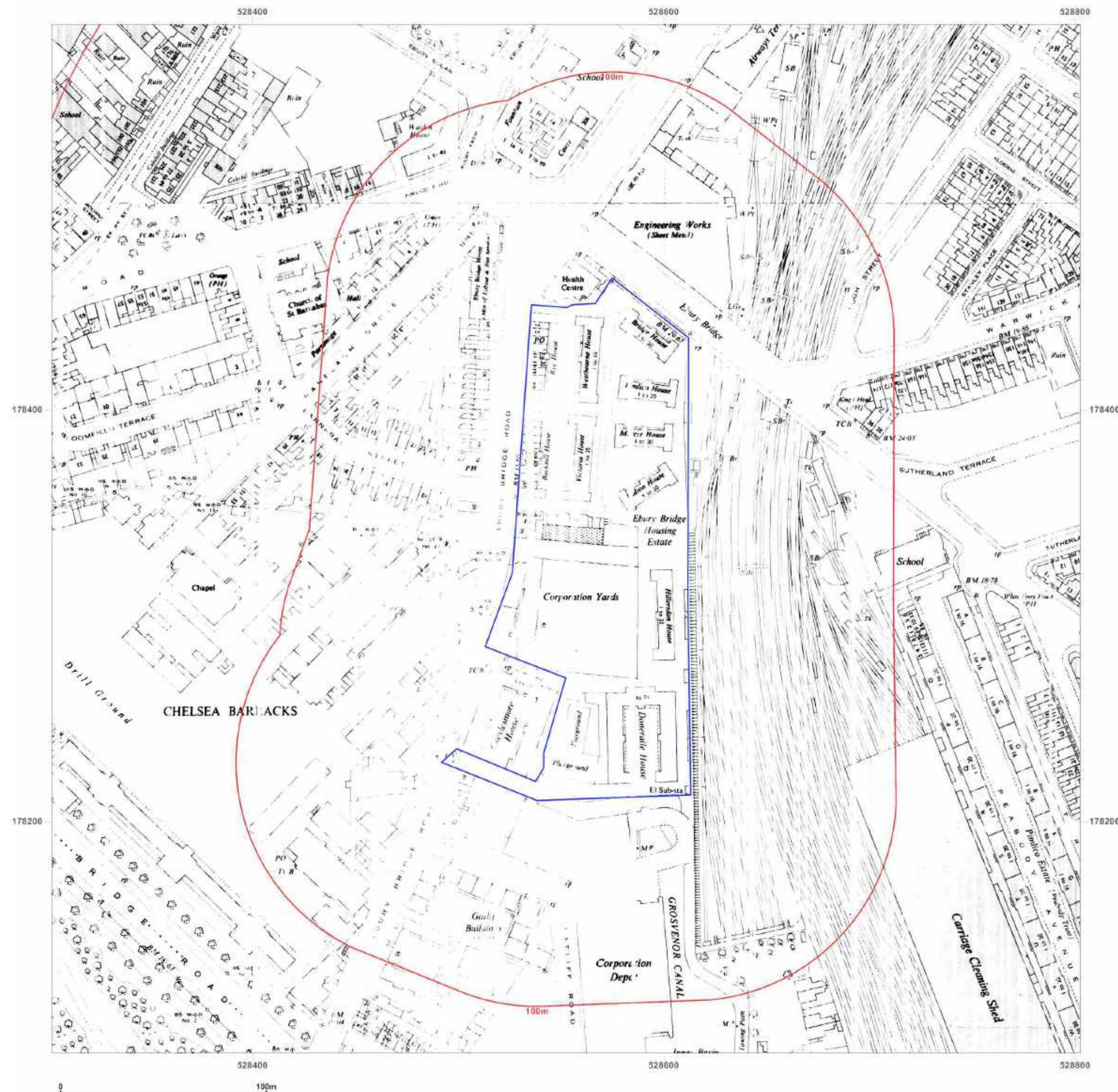


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Grid Ref: 528552, 178337

Map Name: National Grid

Map date: 1951

Scale: 1:2,500

Printed at: 1:2,500



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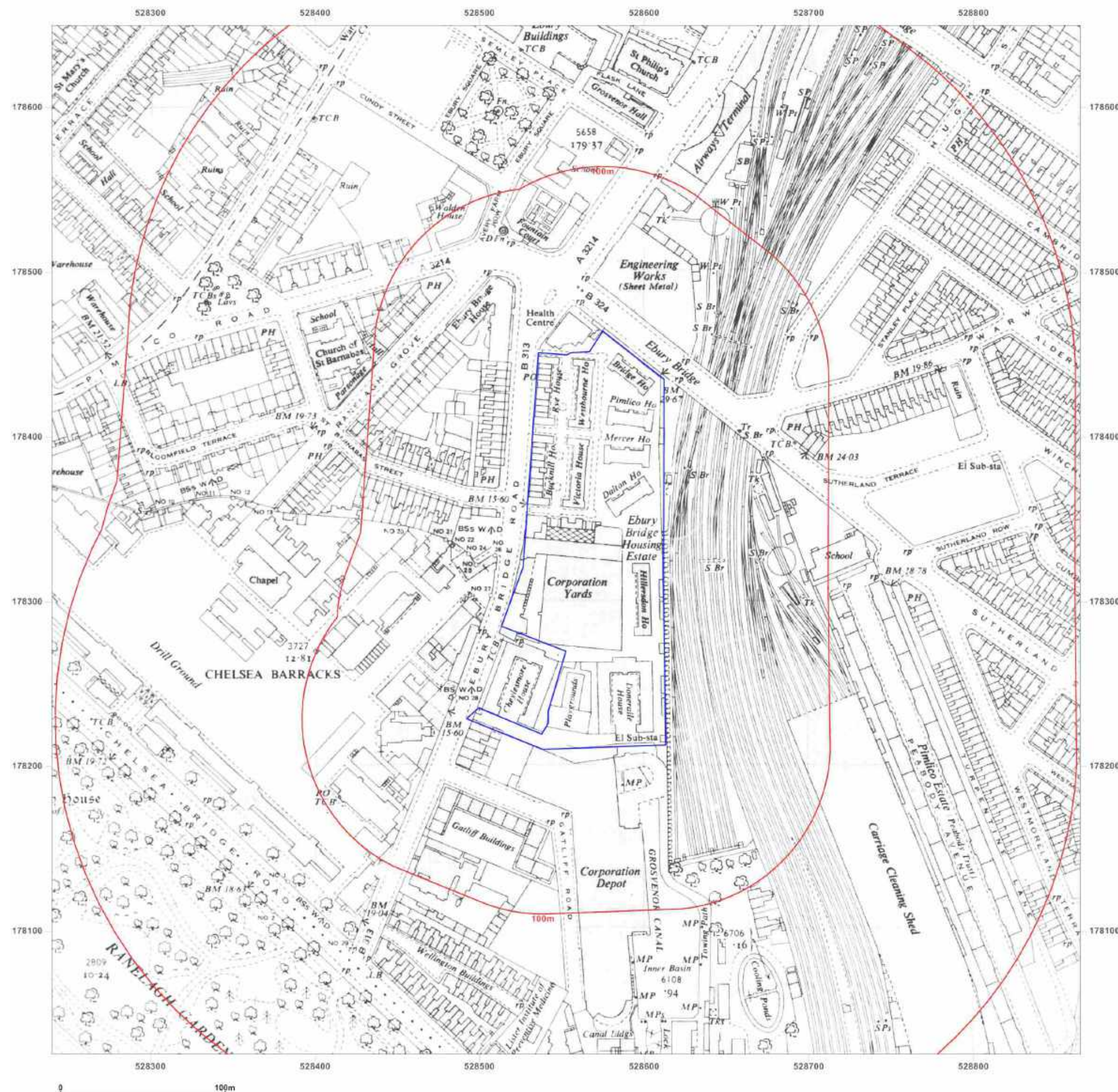


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Map Name: National Grid

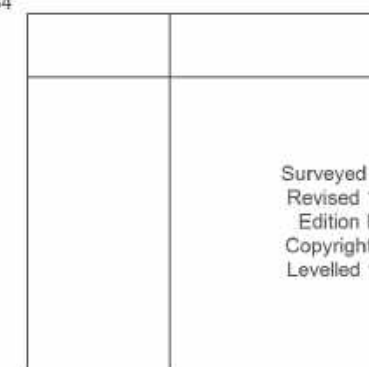
Map date: 1953-1957

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Map Name: National Grid

Map date: 1954-1958

Scale: 1:1,250

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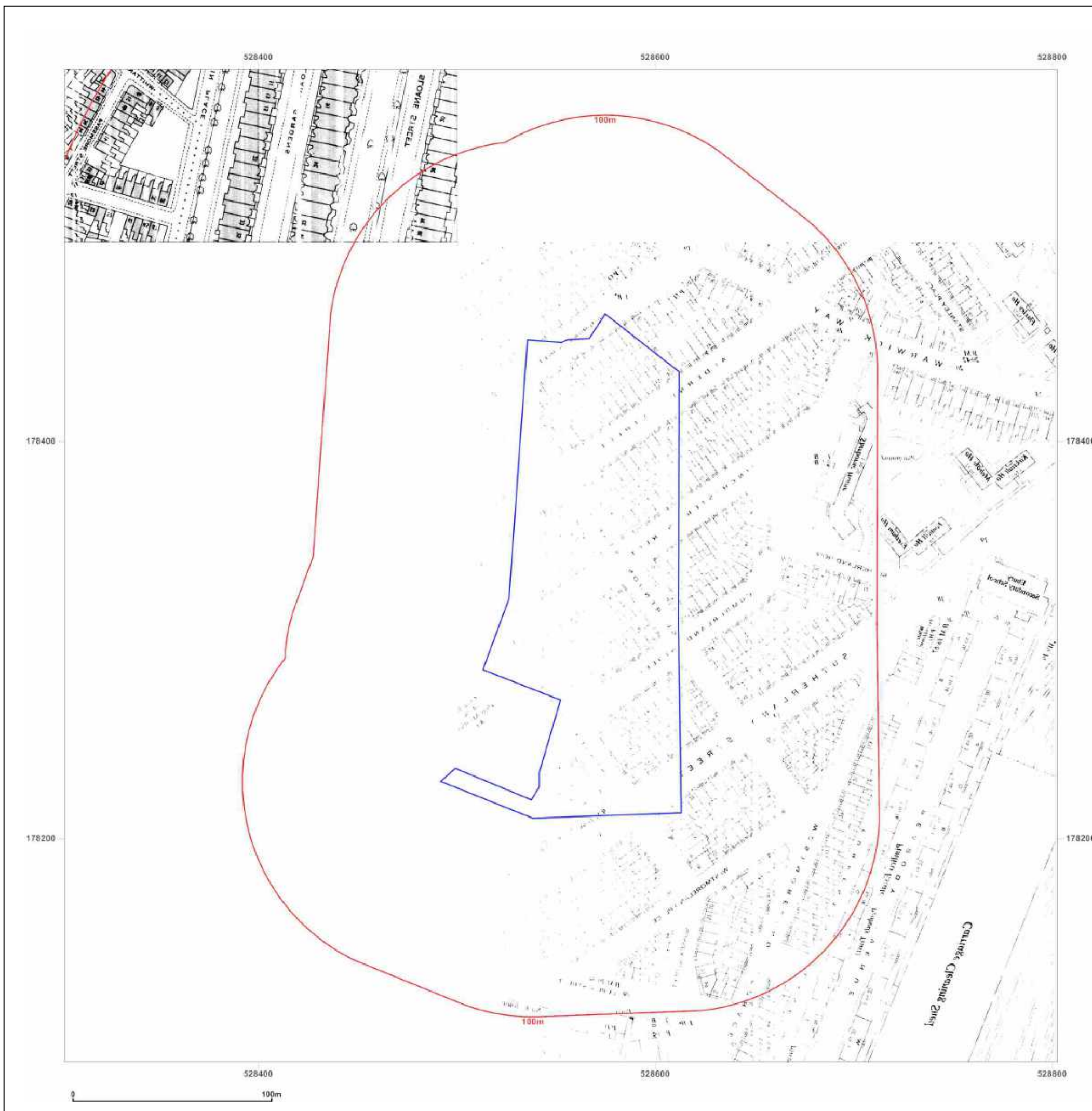


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Map Name: National Grid

Map date: 1960-1965

Scale: 1:1,250

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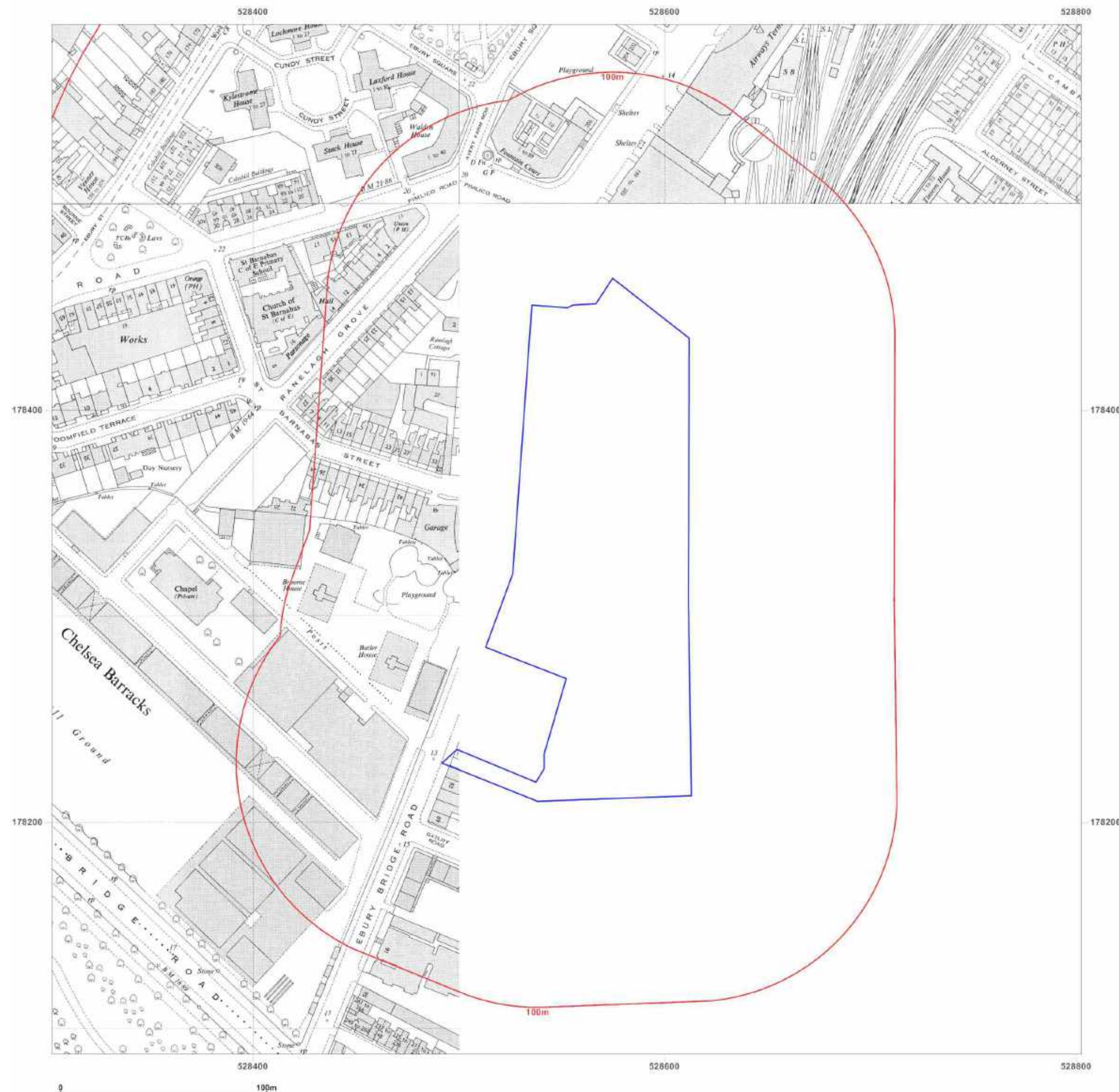


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Grid Ref: 528552, 178337

Map Name: National Grid

Map date: 1967

Scale: 1:2,500

Printed at: 1:2,500



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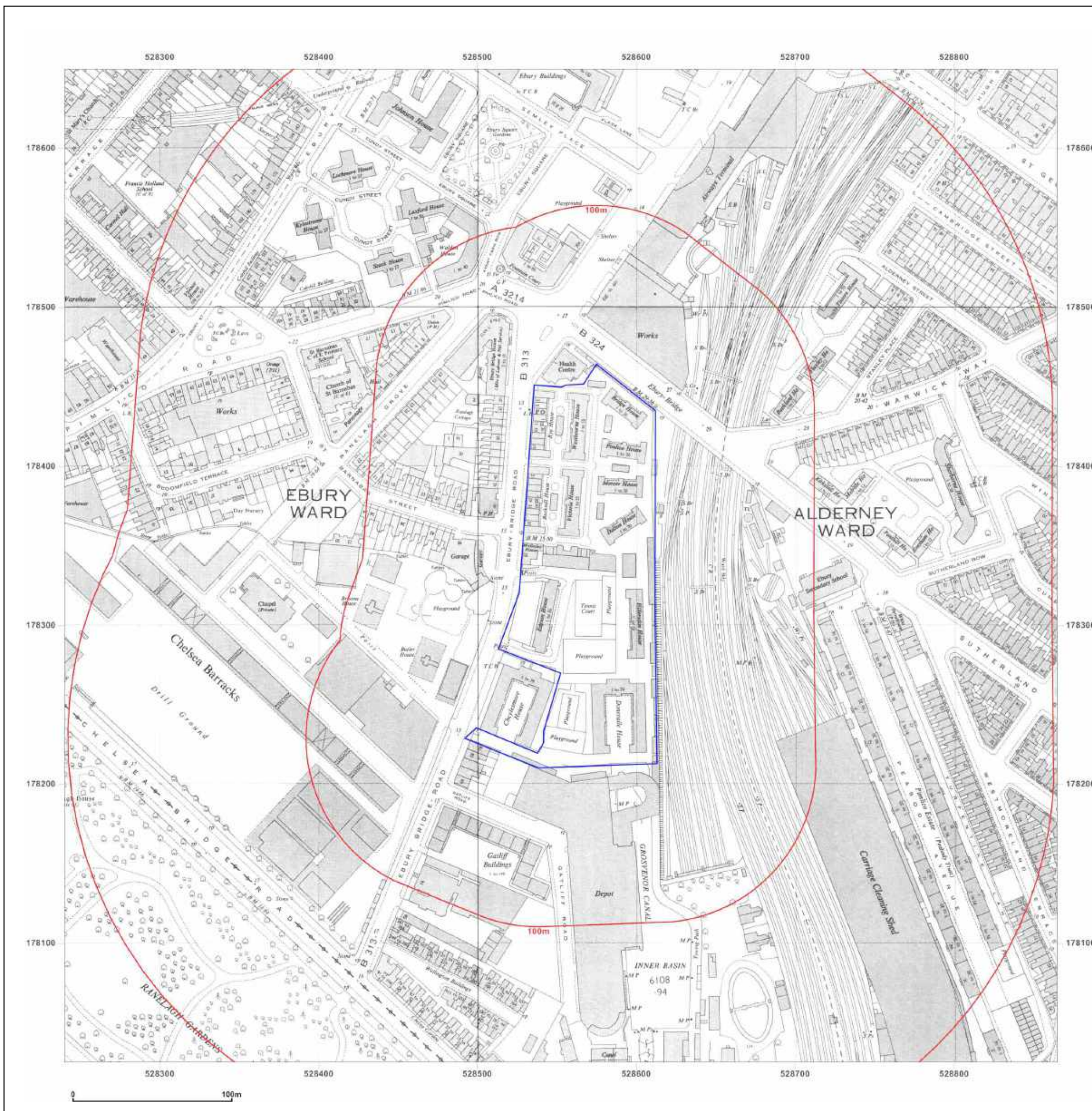


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Grid Ref: 528552, 178337

Map Name: National Grid

Map date: 1971-1975

Scale: 1:1,250

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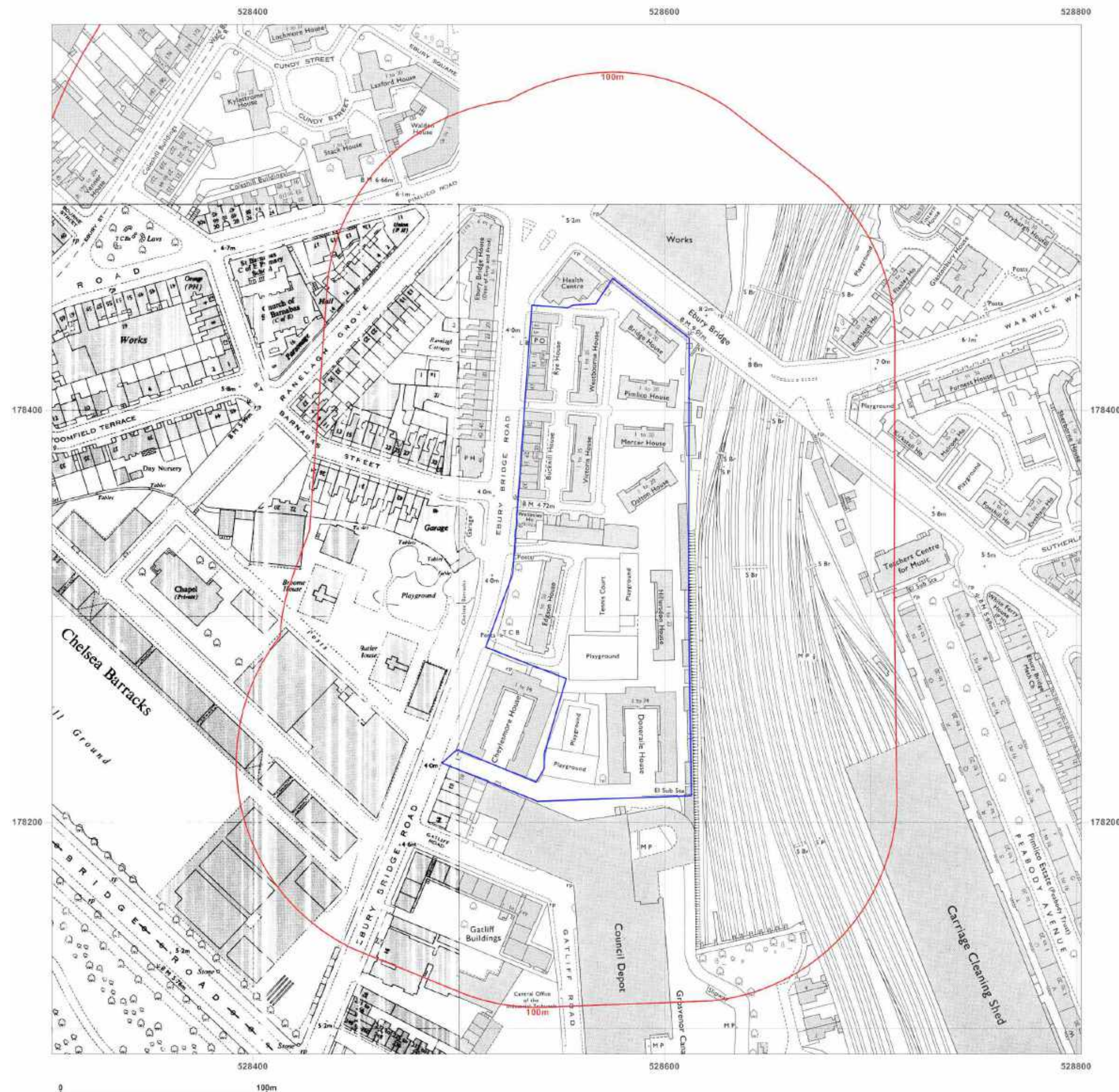


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Grid Ref: 528552, 178337

Map Name: National Grid

Map date: 1980-1985

Scale: 1:1,250

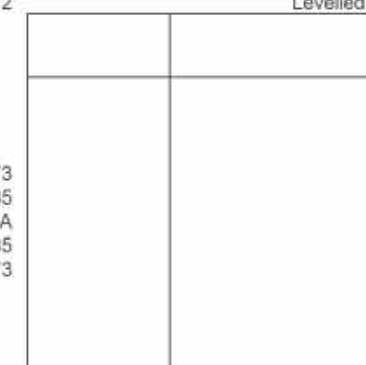
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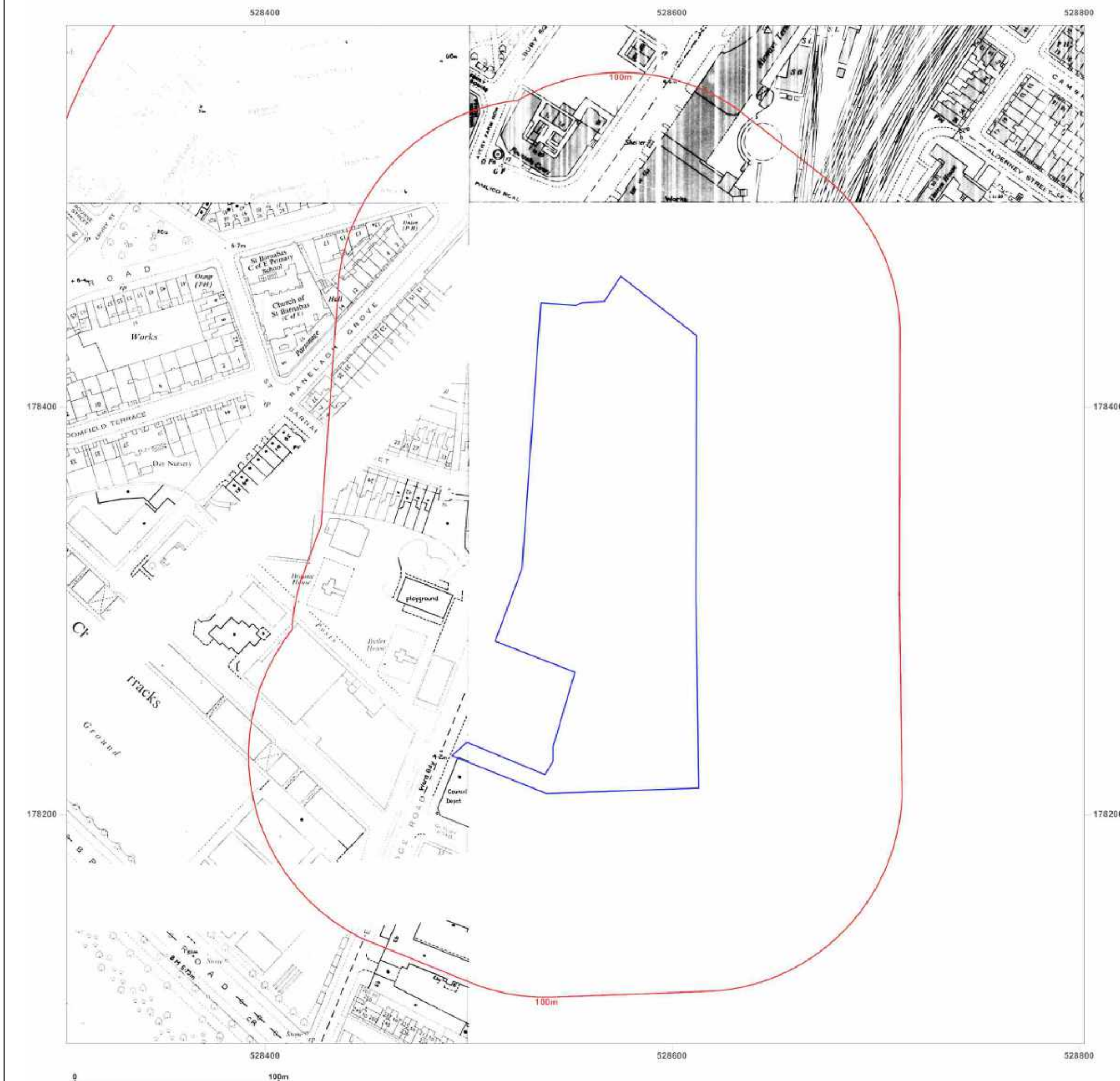


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Map Name: National Grid

Map date: 1986-1991

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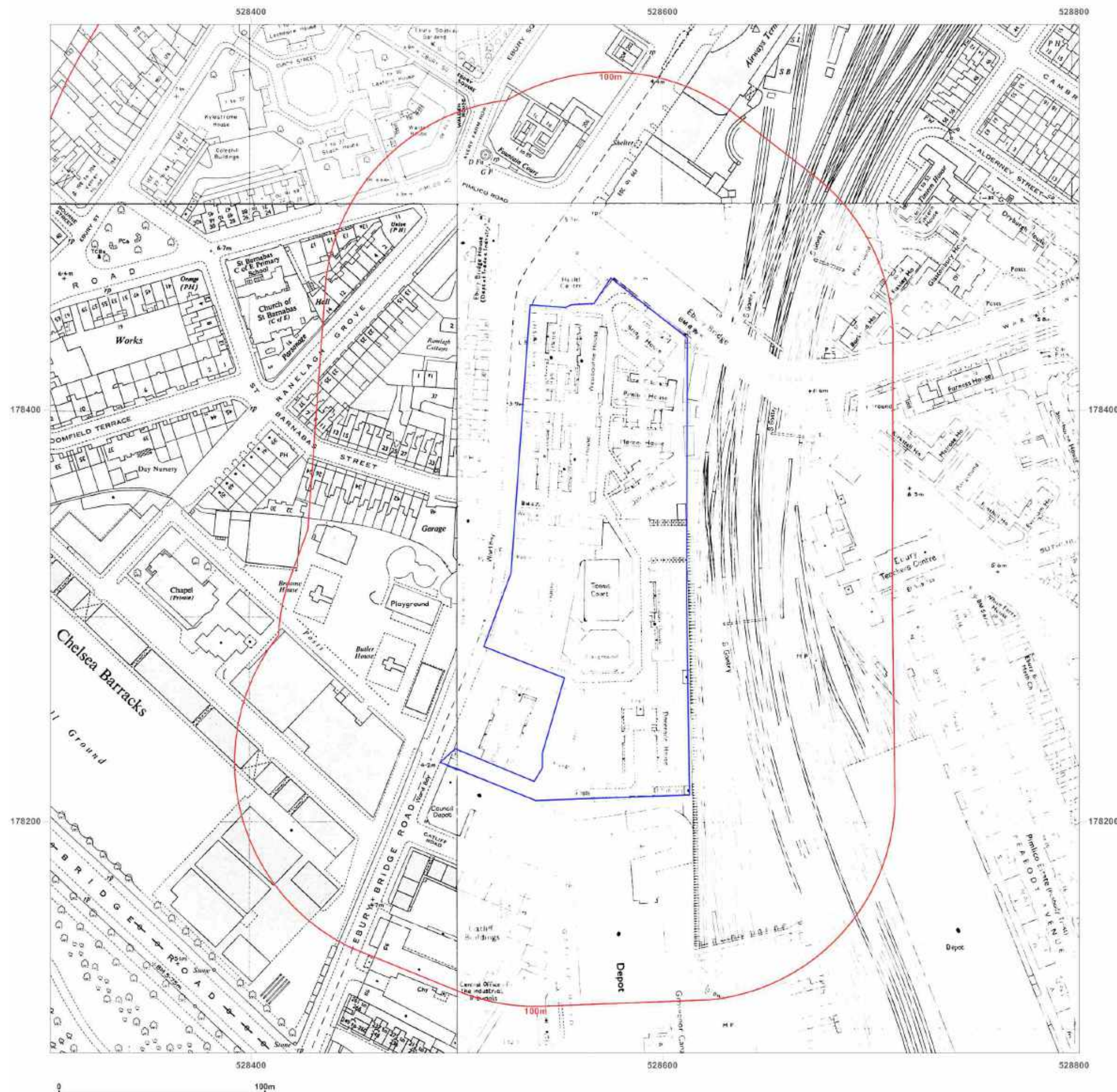


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Grid Ref: 528552, 178337

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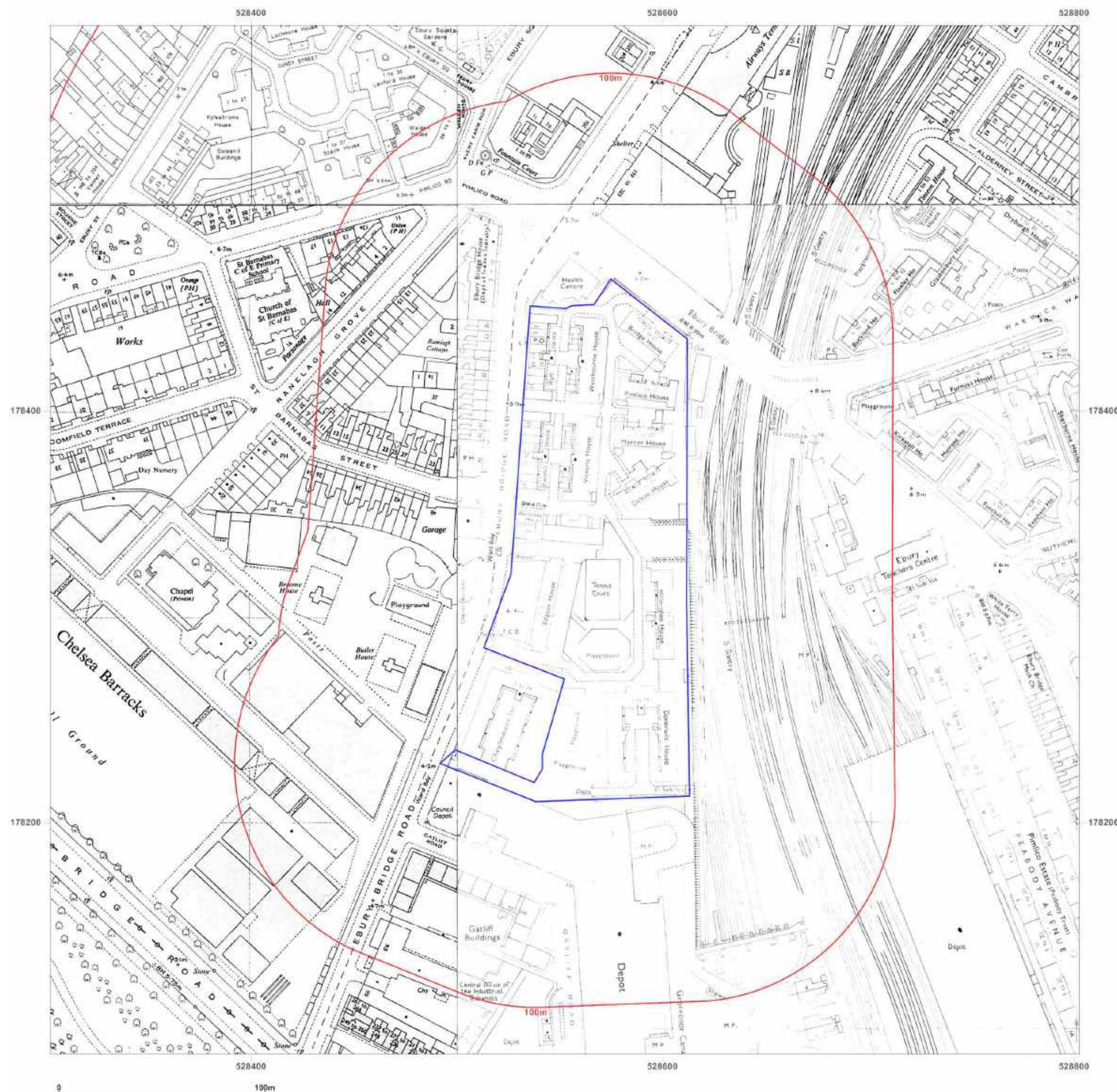


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Map Name: National Grid

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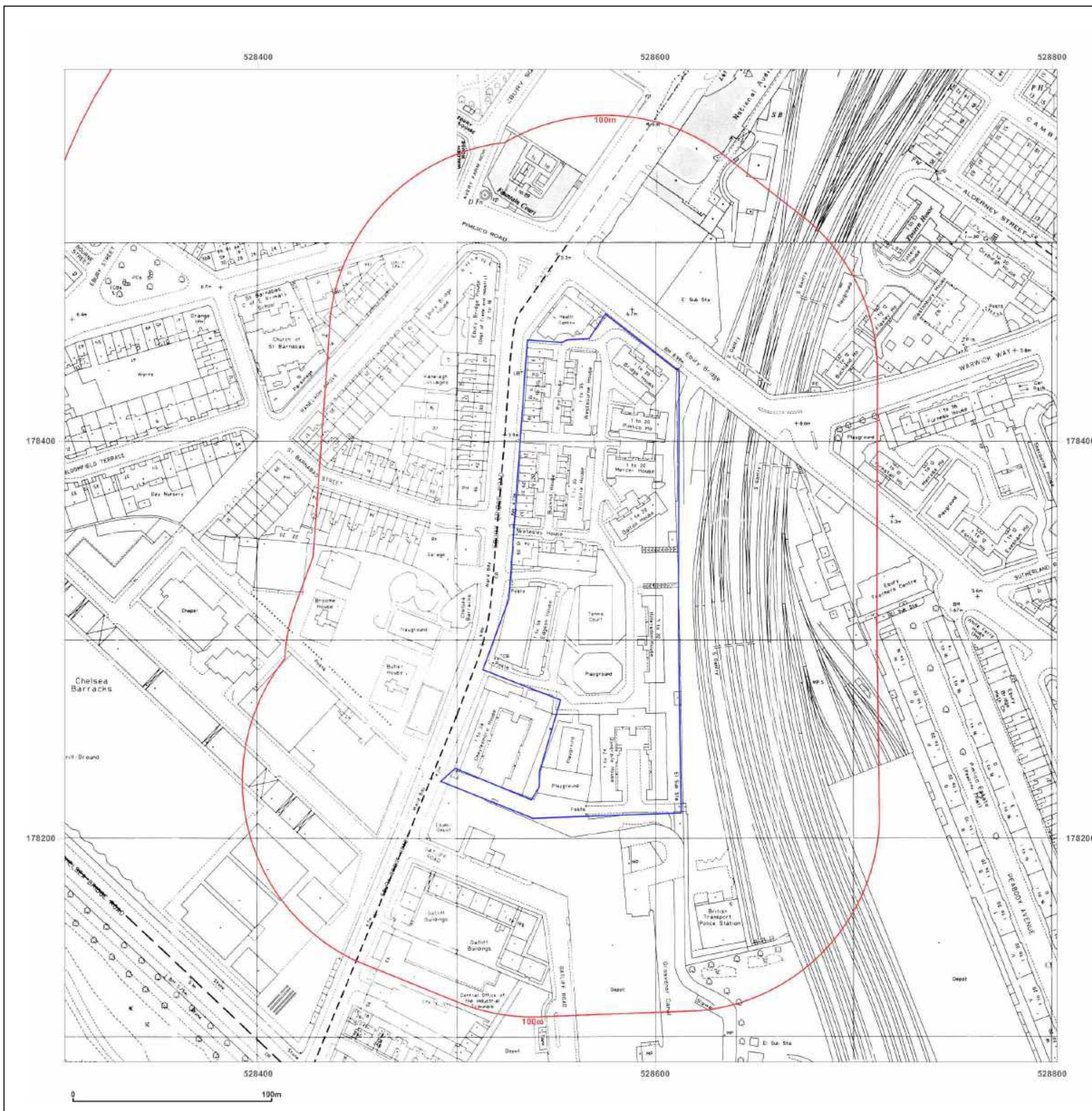


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Copyright 1991
Levelled N/A

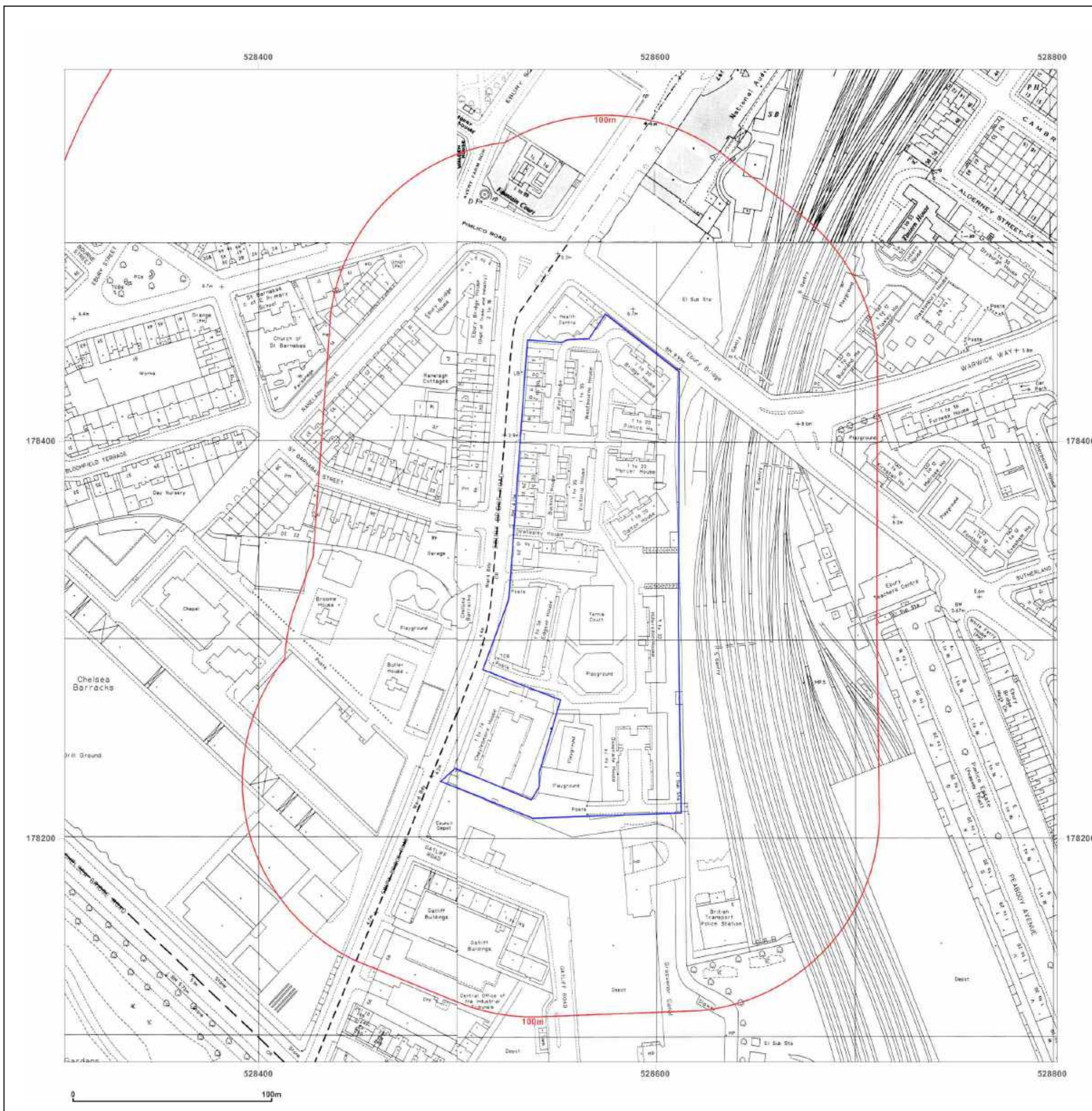


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Site Details:

STREET RECORD, EBURY
BRIDGE ESTATE, LONDON,
SW1W 8QX

Client Ref: 257461
Report Ref: GS-6014874
Grid Ref: 528552, 178337

Map Name: County Series

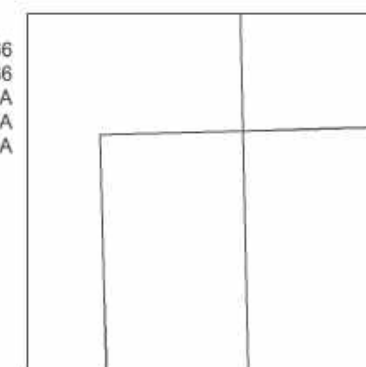
Map date: 1866-1871

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1866
Revised 1866
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1871
Revised 1871
Edition N/A
Copyright N/A
Levelled N/A



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SW1W 8QX

Client Ref: 257461
Report Ref: GS-6014874
Grid Ref: 528552, 178337

Map Name: County Series

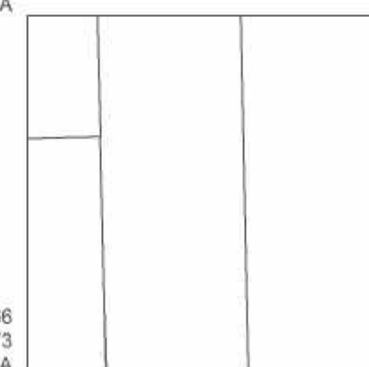
Map date: 1873-1874

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1866
Revised 1874
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1873
Revised 1873
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1866
Revised 1873
Edition N/A
Copyright N/A
Levelled N/A



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SW1W 8QX

Client Ref: 257461
Report Ref: GS-6014874
Grid Ref: 528552, 178337

Map Name: County Series

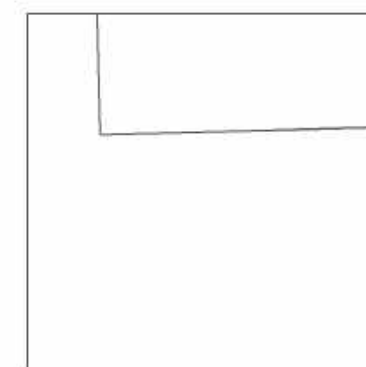
Map date: 1882

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1873
Revised 1873
Edition 1882
Copyright N/A
Levelled N/A



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Site Details:

STREET RECORD, EBURY
BRIDGE ESTATE, LONDON,
SW1W 8QX

Client Ref: 257461
Report Ref: GS-6014874
Grid Ref: 528552, 178337

Map Name: County Series

Map date: 1894-1895

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1894
Revised 1894
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1895
Revised 1895
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1894
Revised 1894
Edition N/A
Copyright N/A
Levelled N/A

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Copyright N/A
Levelled N/A

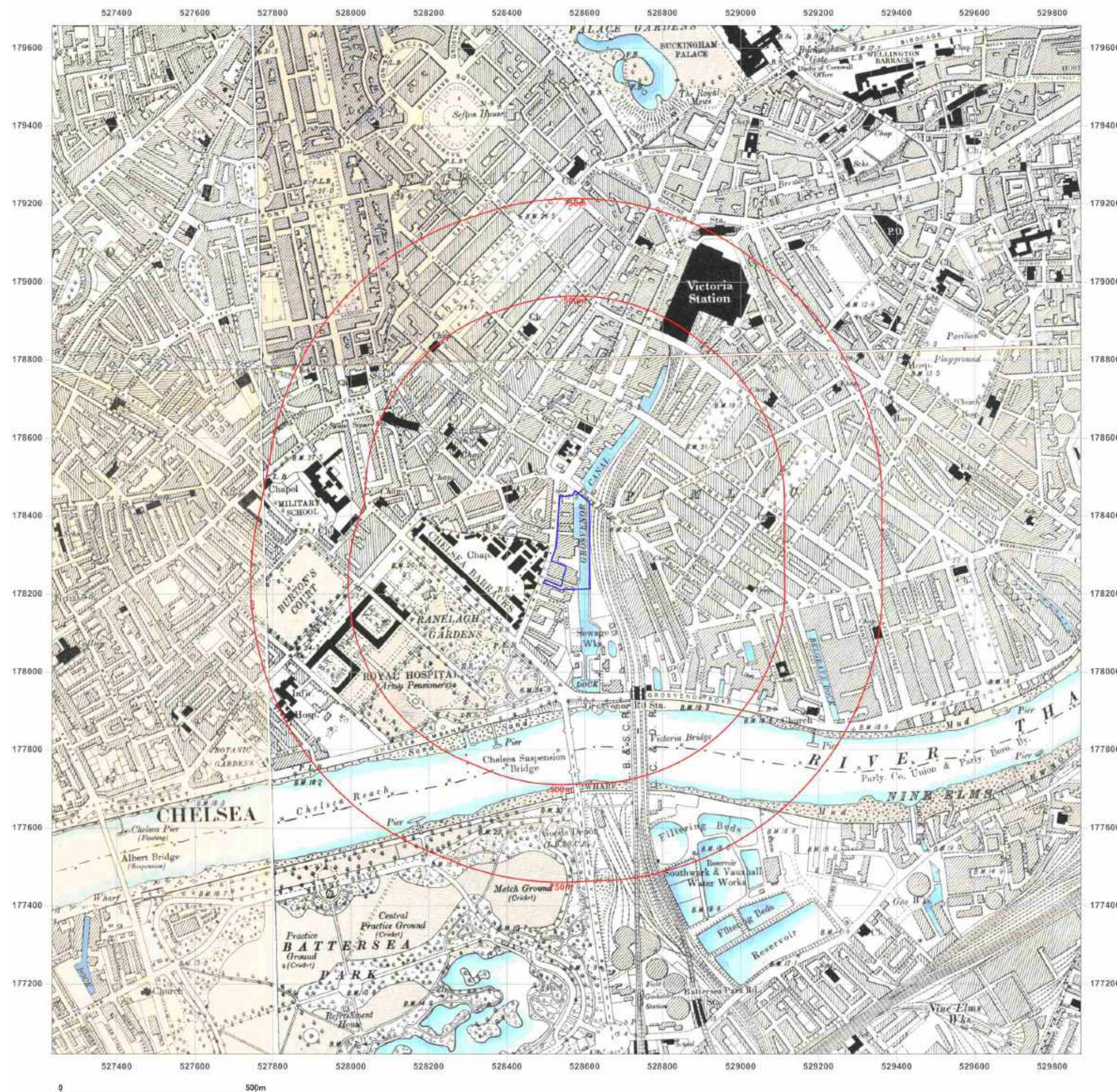


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SW1W 8QX

Client Ref: 257461
Report Ref: GS-6014874
Grid Ref: 528552, 178337

Map Name: County Series

Map date: 1894-1896

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1869
Revised 1896
Edition 1896
Copyright N/A
Levelled N/A

Surveyed 1870
Revised 1894
Edition N/A
Copyright N/A
Levelled N/A

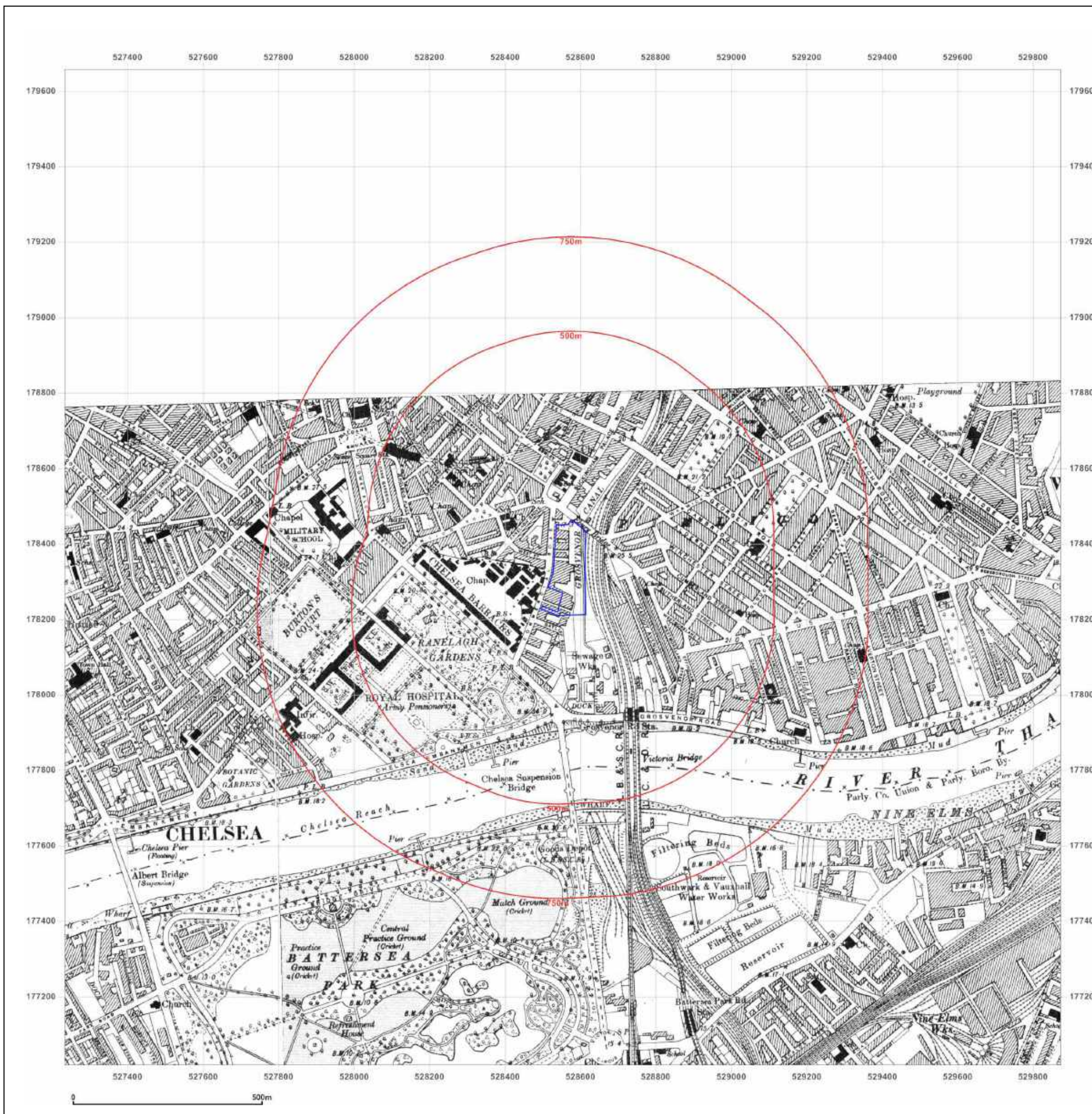


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SW1W 8QX

Client Ref: 257461
Report Ref: GS-6014874
Grid Ref: 528552, 178337

Map Name: County Series

Map date: 1895-1898

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1873
Revised 1895
Edition 1898
Copyright N/A
Levelled N/A

Surveyed 1866
Revised 1895
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1895
Revised 1895
Edition N/A
Copyright N/A
Levelled N/A

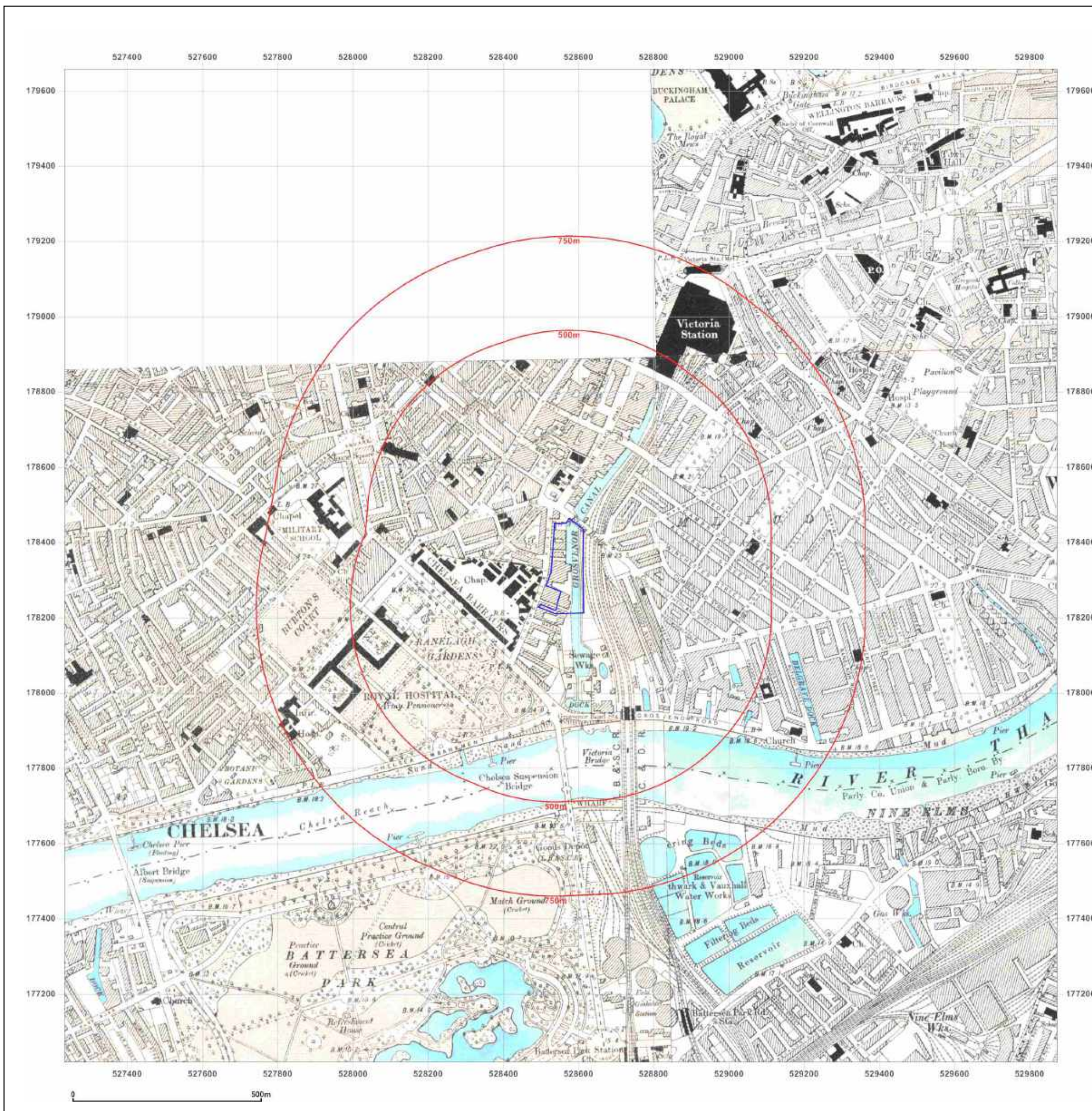


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BRIDGE ESTATE, LONDON,
SW1W 8QX

Client Ref: 257461
Report Ref: GS-6014874
Grid Ref: 528552, 178337

Map Name: County Series

Map date: 1895-1898

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1873
Revised 1895
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1866
Revised 1895
Edition N/A
Copyright N/A
Levelled N/A

Surveyed N/A
Revised 1895
Edition N/A
Copyright N/A
Levelled N/A

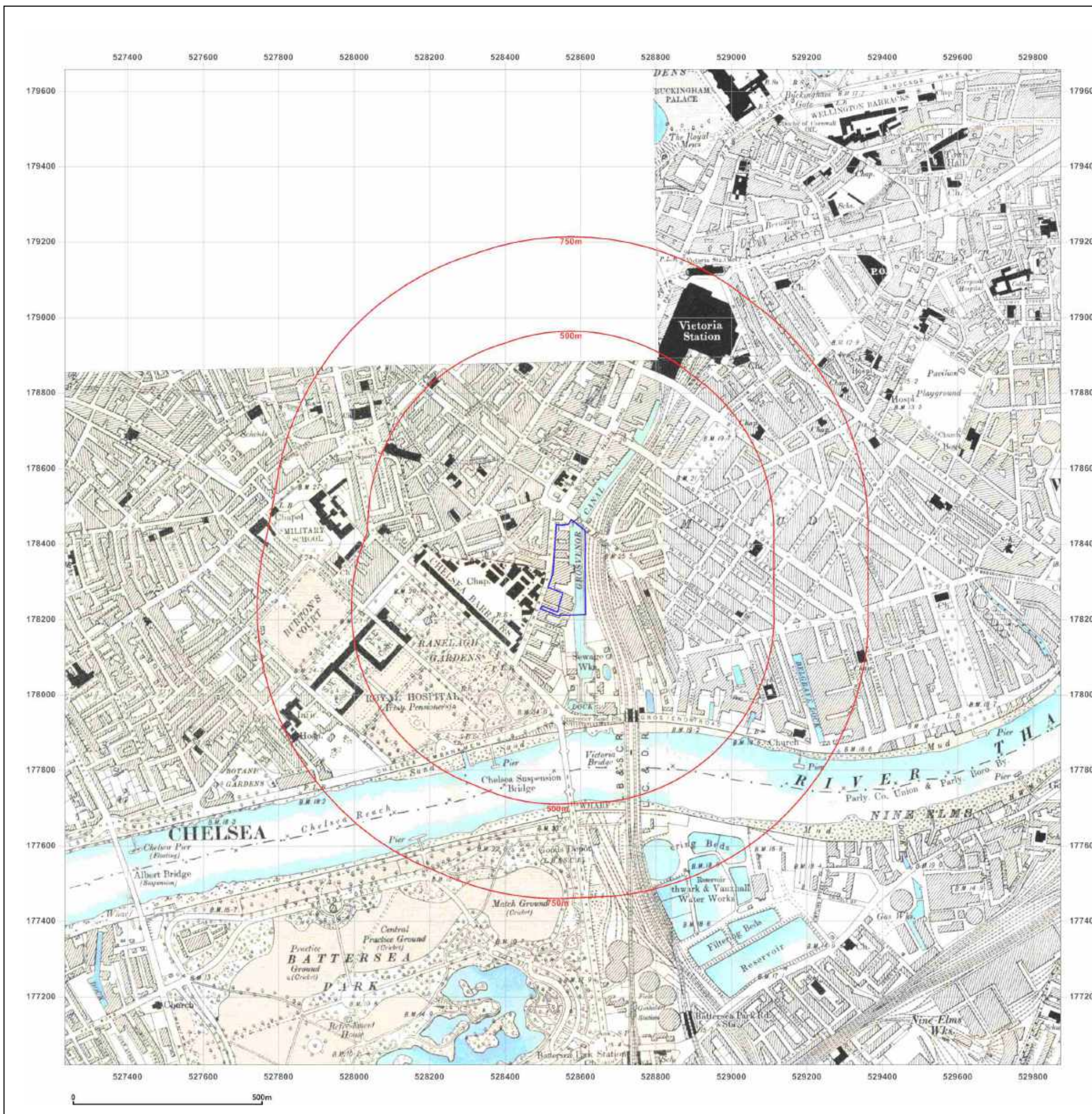


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Production date: 09 May 2019

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Site Details:

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BRIDGE ESTATE, LONDON,
SW1W 8QX

Client Ref: 257461
Report Ref: GS-6014874
Grid Ref: 528552, 178337

Map Name: County Series

Map date: 1920

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1865
Revised 1920
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1872
Revised 1919
Edition 1920
Copyright N/A
Levelled N/A

Surveyed 1867
Revised 1920
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1870
Revised 1914
Edition 1920
Copyright N/A
Levelled N/A

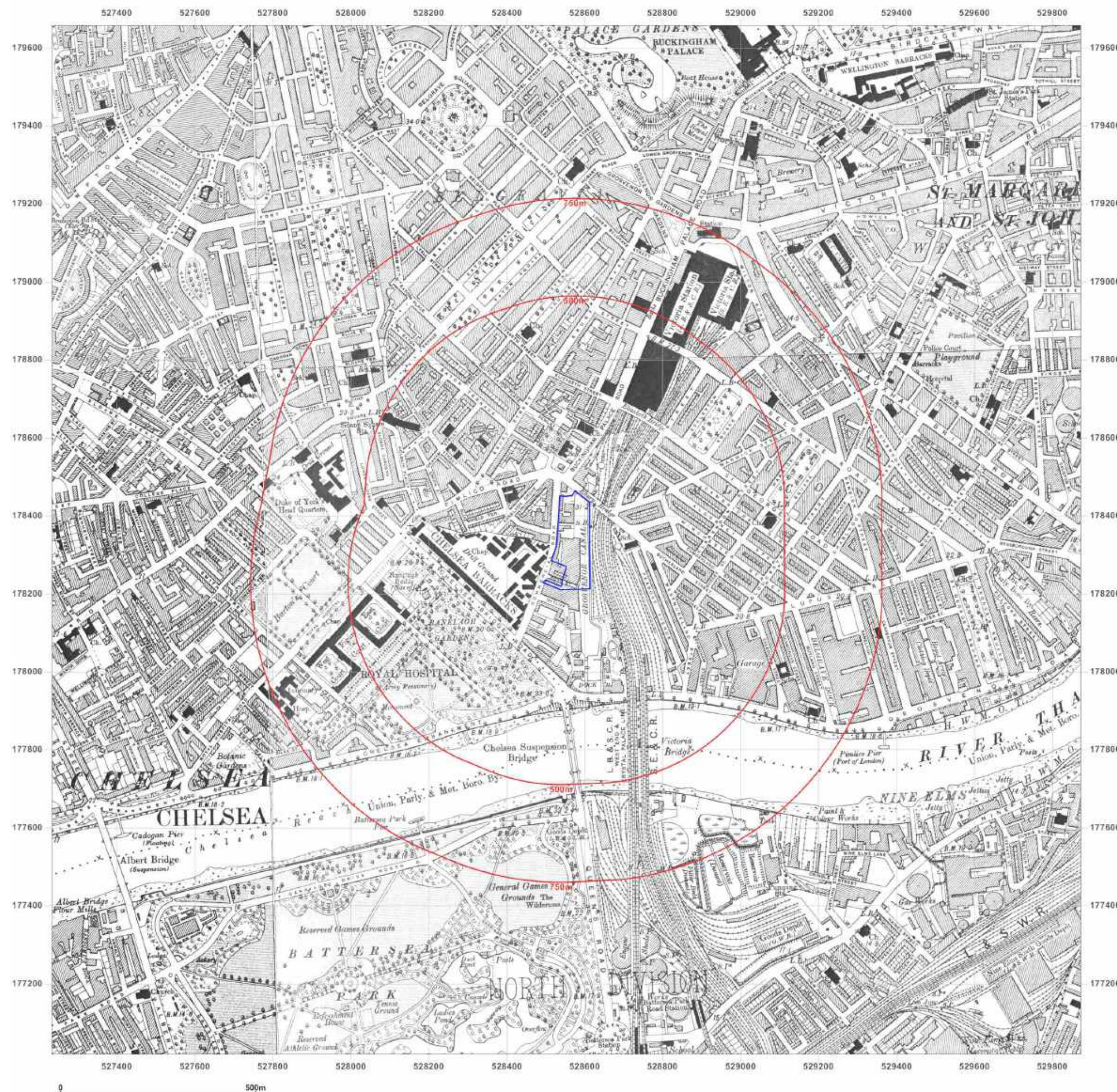


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Production date: 09 May 2019

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SW1W 8QX

Client Ref: 257461
Report Ref: GS-6014874
Grid Ref: 528552, 178337

Map Name: County Series

Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1872
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1867
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1870
Revised 1938
Edition N/A
Copyright N/A
Levelled N/A

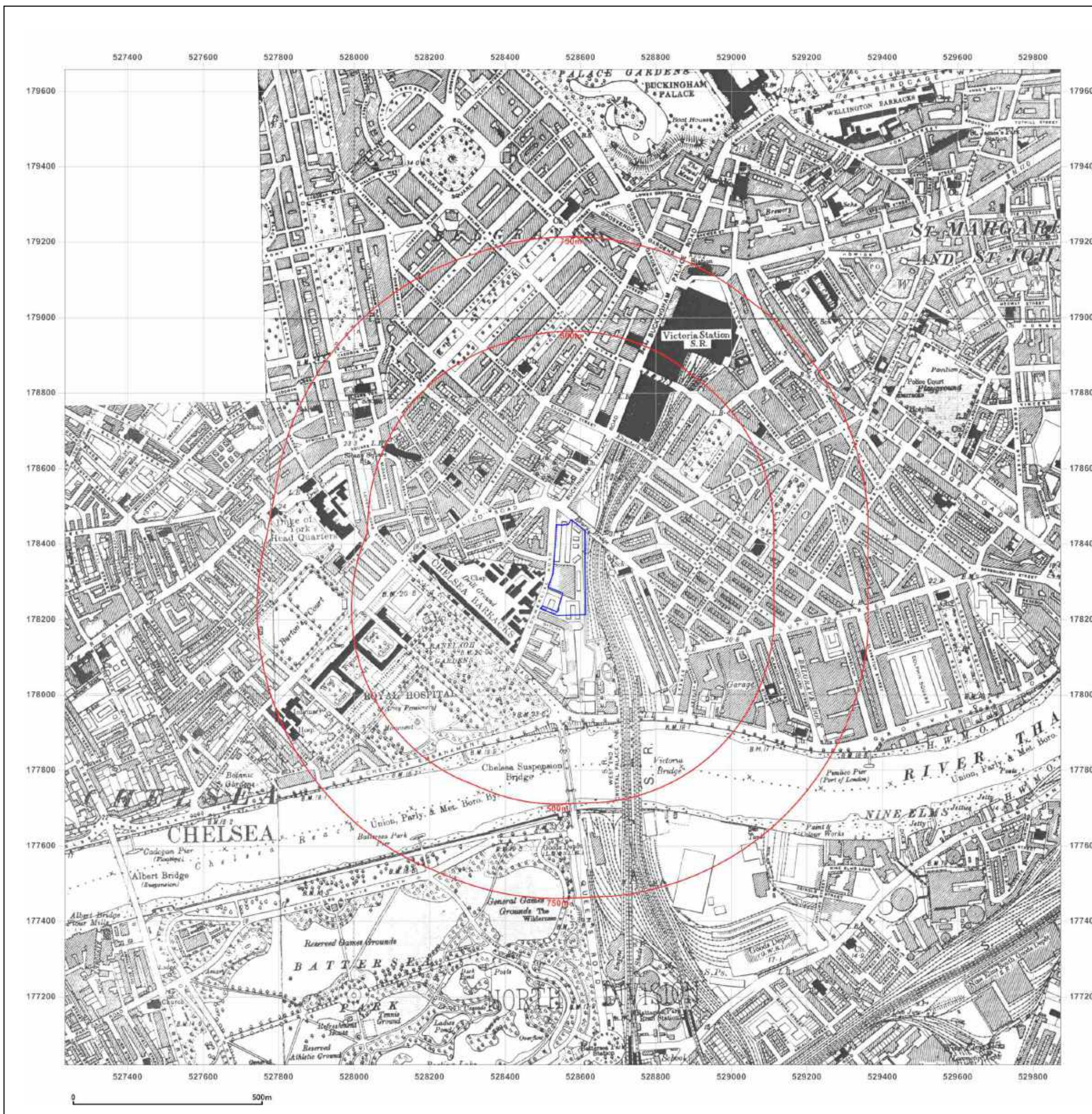


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Production date: 09 May 2019

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Site Details:

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BRIDGE ESTATE, LONDON,
SW1W 8QX

Client Ref: 257461
Report Ref: GS-6014874
Grid Ref: 528552, 178337

Map Name: Provisional

Map date: 1948

Scale: 1:10,560

Printed at: 1:10,560



Surveyed N/A
Revised 1948
Edition N/A
Copyright N/A
Levelled 1921

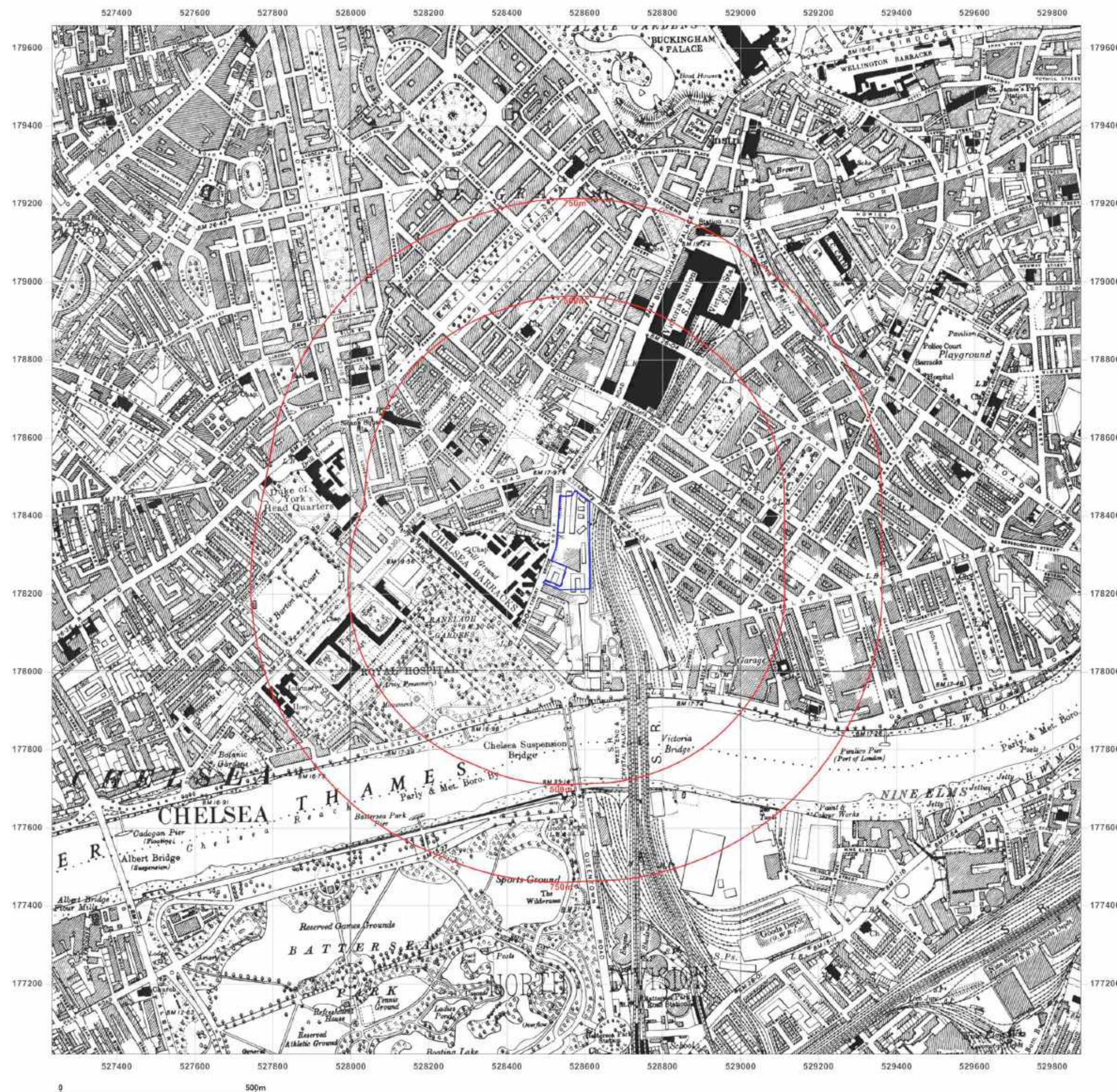


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Production date: 09 May 2019

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SW1W 8QX

Client Ref: 257461
Report Ref: GS-6014874
Grid Ref: 528552, 178337

Map Name: Provisional

Map date: 1955

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1955
Revised 1955
Edition N/A
Copyright N/A
Levelled N/A

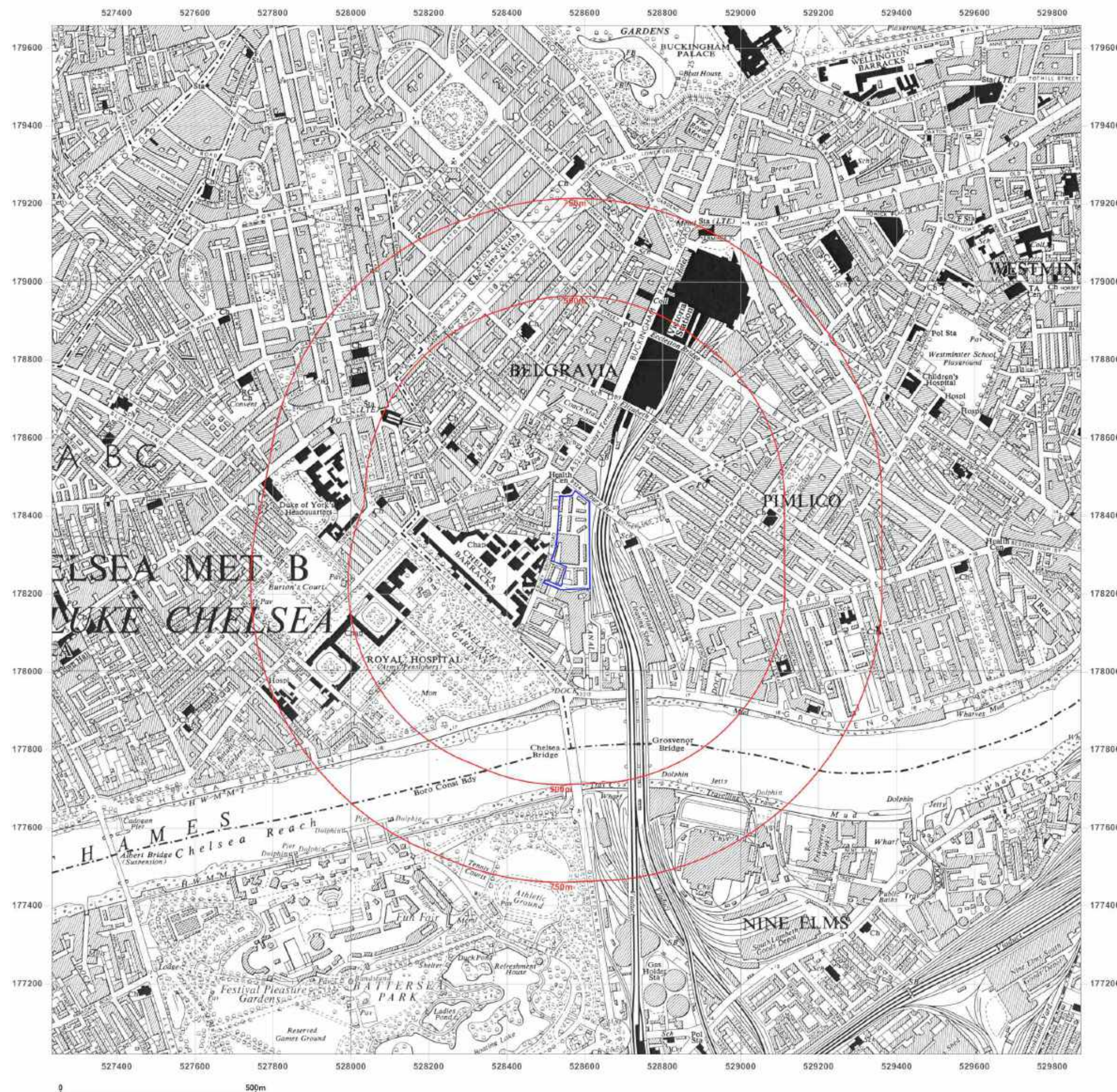


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SW1W 8QX

Client Ref: 257461
Report Ref: GS-6014874
Grid Ref: 528552, 178337

Map Name: Provisional

Map date: 1967

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1967
Revised 1967
Edition N/A
Copyright N/A
Levelled N/A

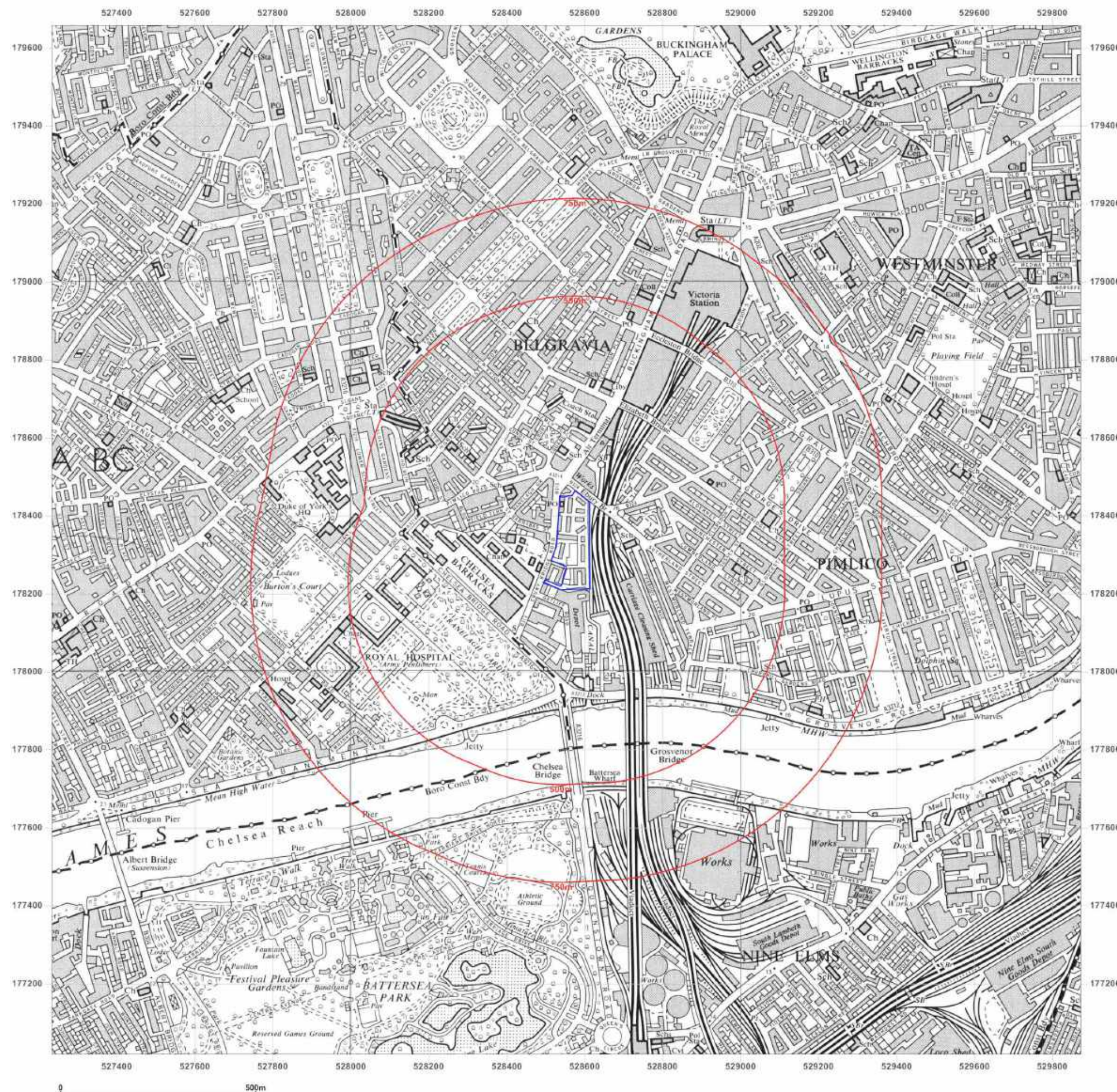


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SW1W 8QX

Client Ref: 257461
Report Ref: GS-6014874
Grid Ref: 528552, 178337

Map Name: National Grid

Map date: 1973

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1973
Revised 1973
Edition N/A
Copyright N/A
Levelled N/A

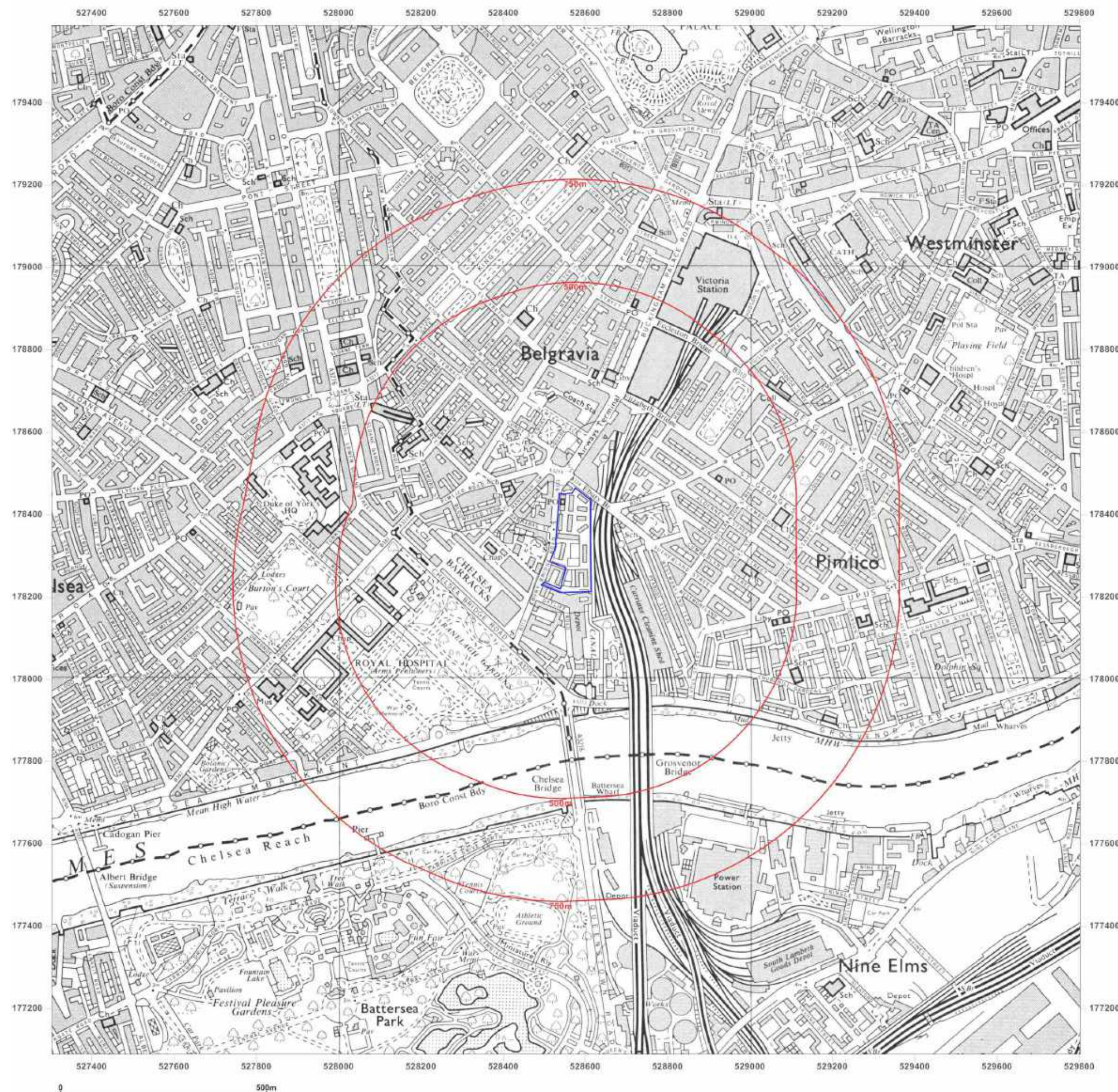


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SW1W 8QX

Client Ref: 257461
Report Ref: GS-6014874
Grid Ref: 528552, 178337

Map Name: National Grid

Map date: 1985

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1984
Revised 1985
Edition N/A
Copyright N/A
Levelled N/A

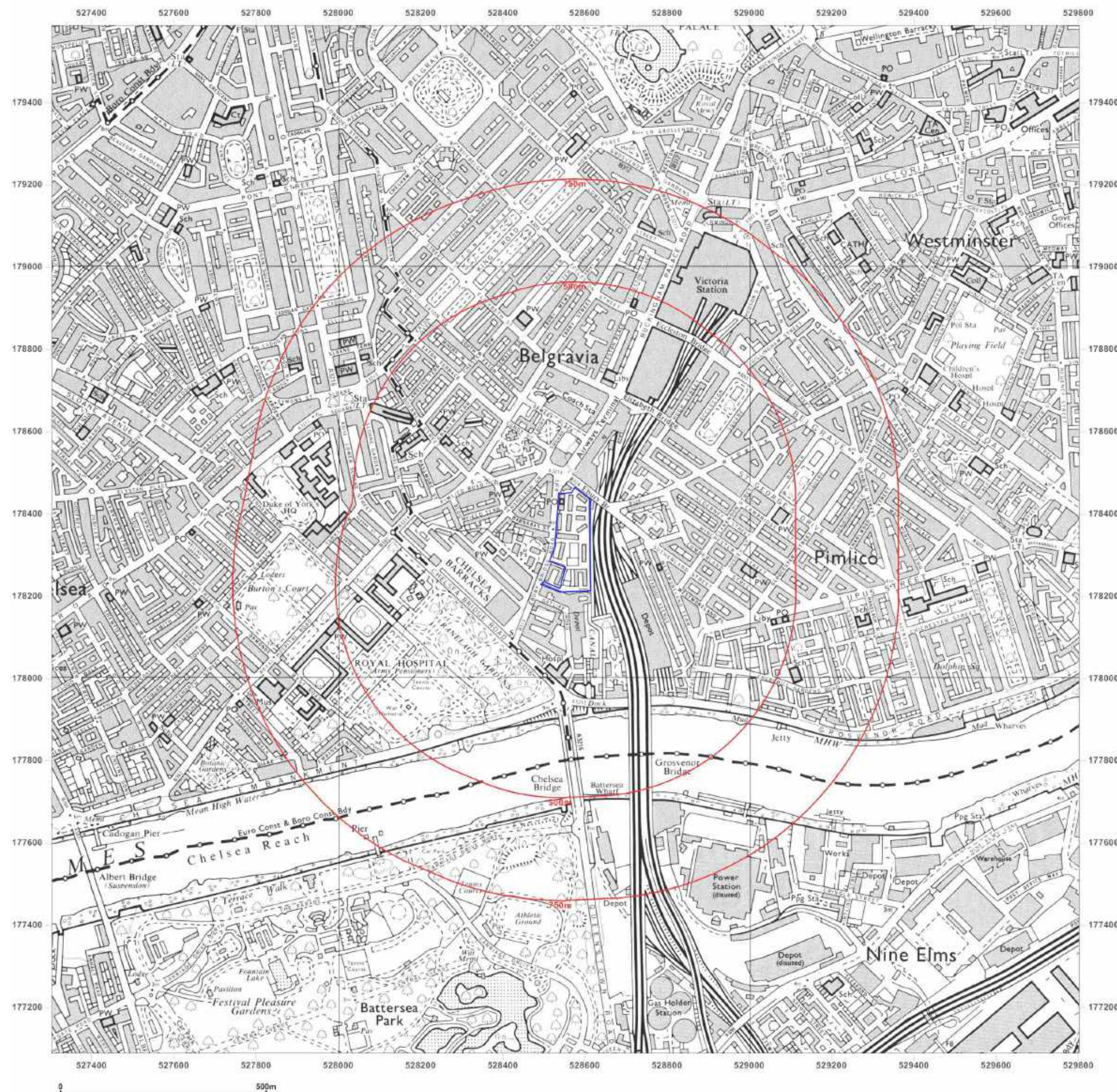


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SW1W 8QX

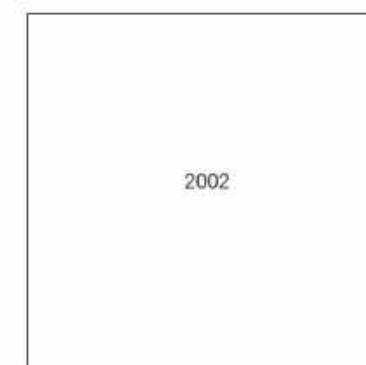
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Report Ref: GS-6014874
Grid Ref: 528552, 178337

Map Name: 1:10,000 Raster

Map date: 2002

Scale: 1:10,000

Printed at: 1:10,000

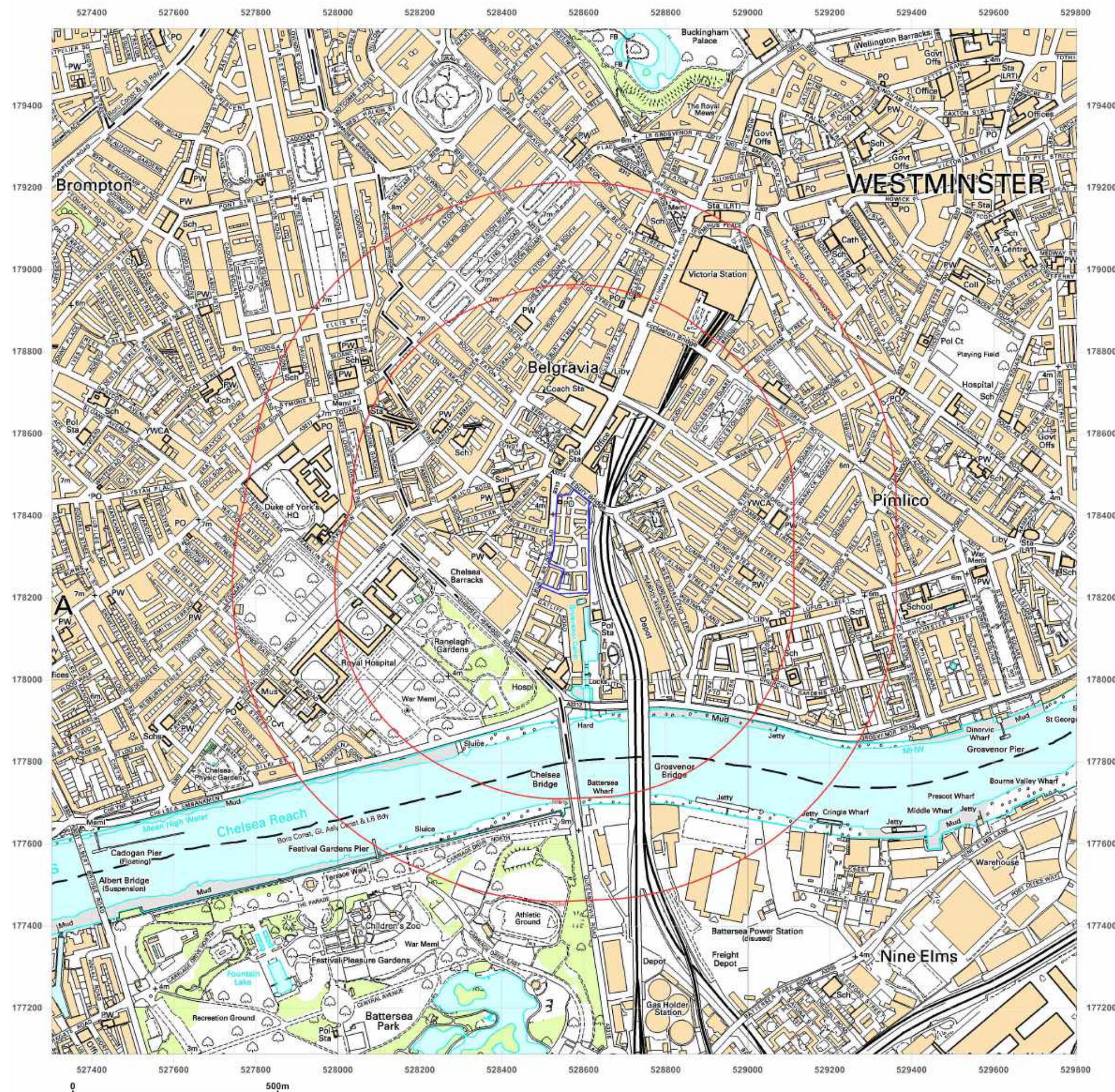


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SW1W 8QX

Client Ref: 257461
Report Ref: GS-6014874
Grid Ref: 528552, 178337

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000



2010

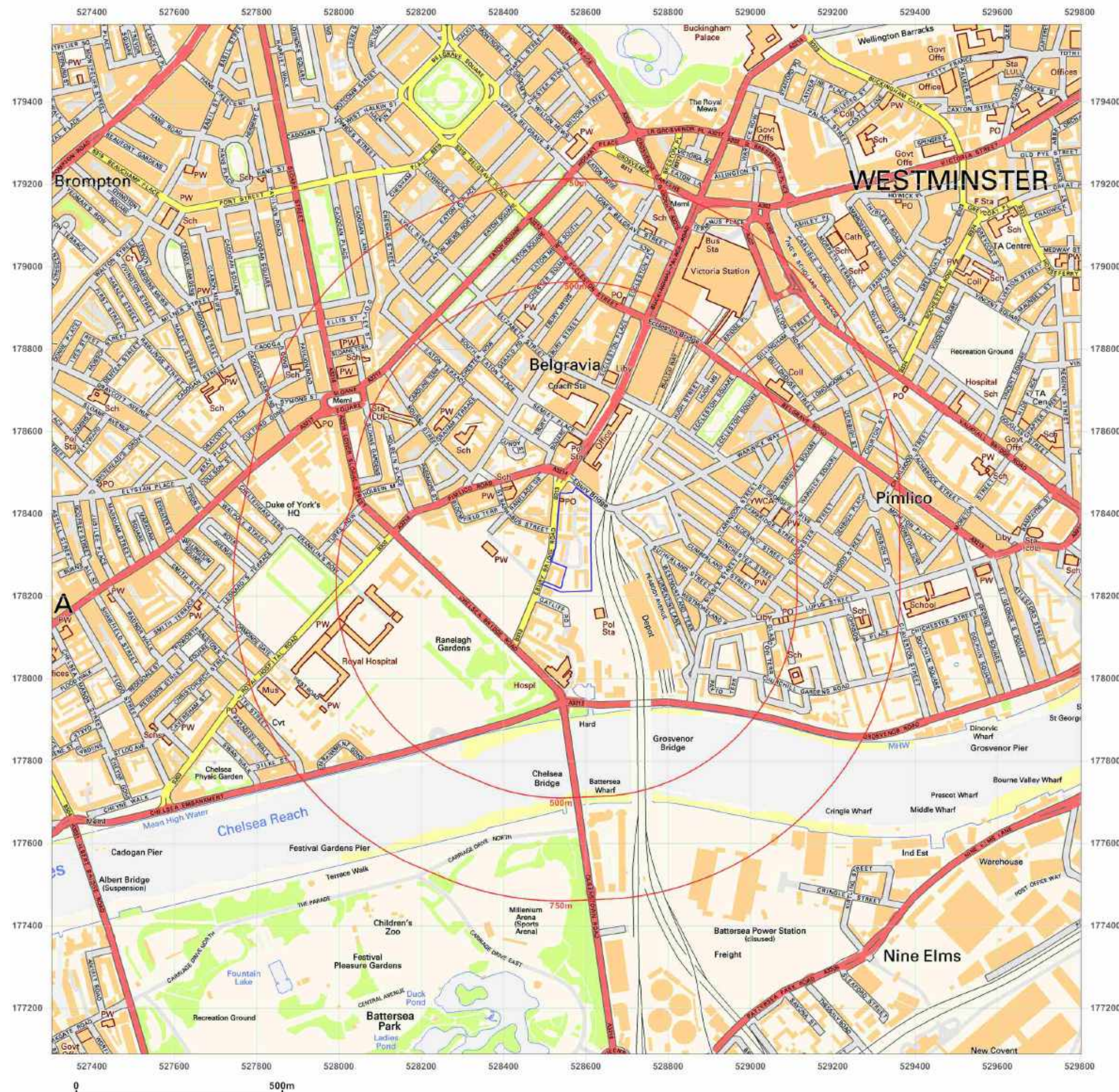


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Fire Insurance Plans

**Address**

STREET RECORD, EBURY BRIDGE ESTATE, LONDON, SW1W 8QX

Your reference

257461

Groundsure reference

GS-6014875

Date

09/05/2019

Grid reference

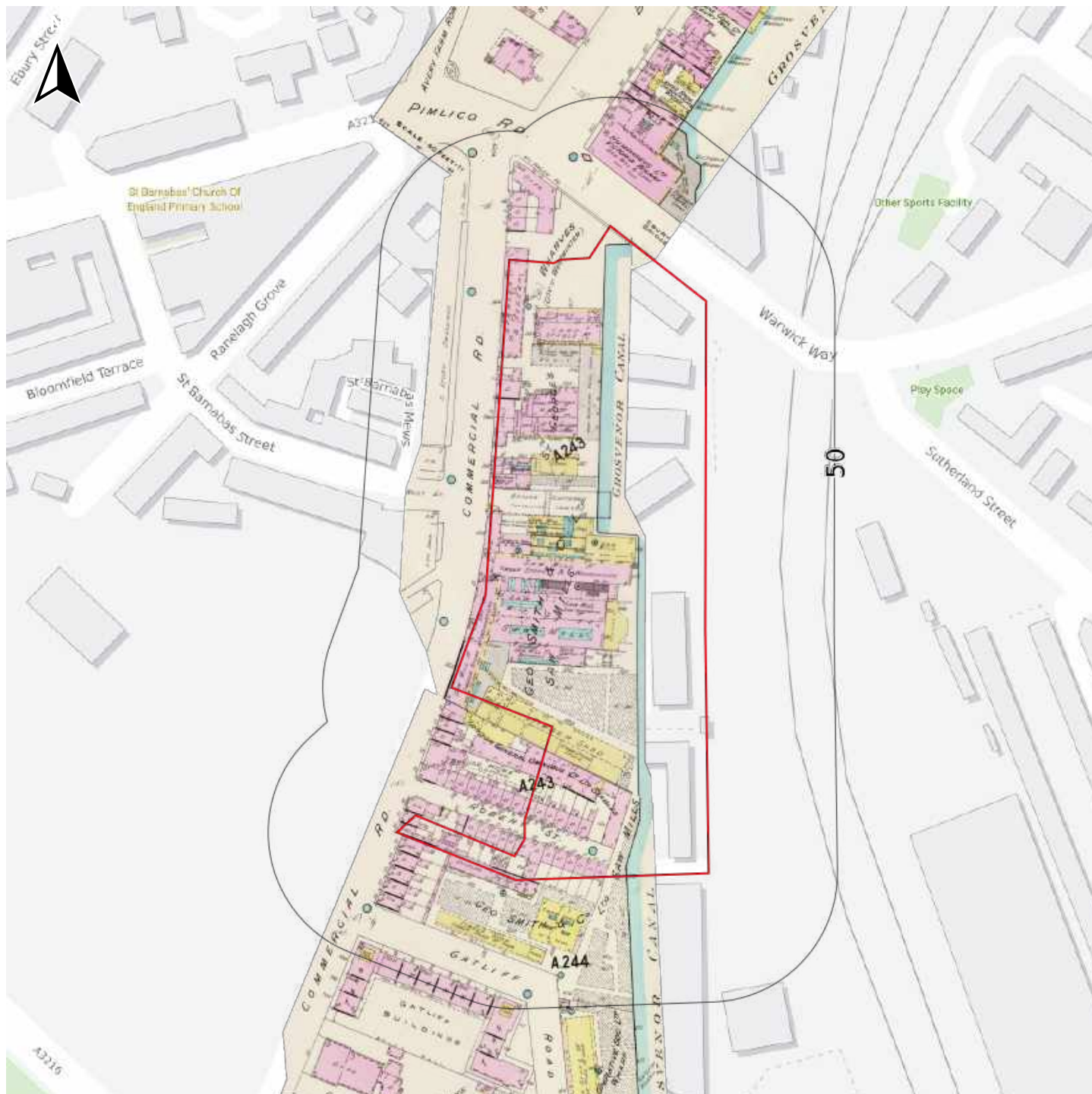
528570 178337



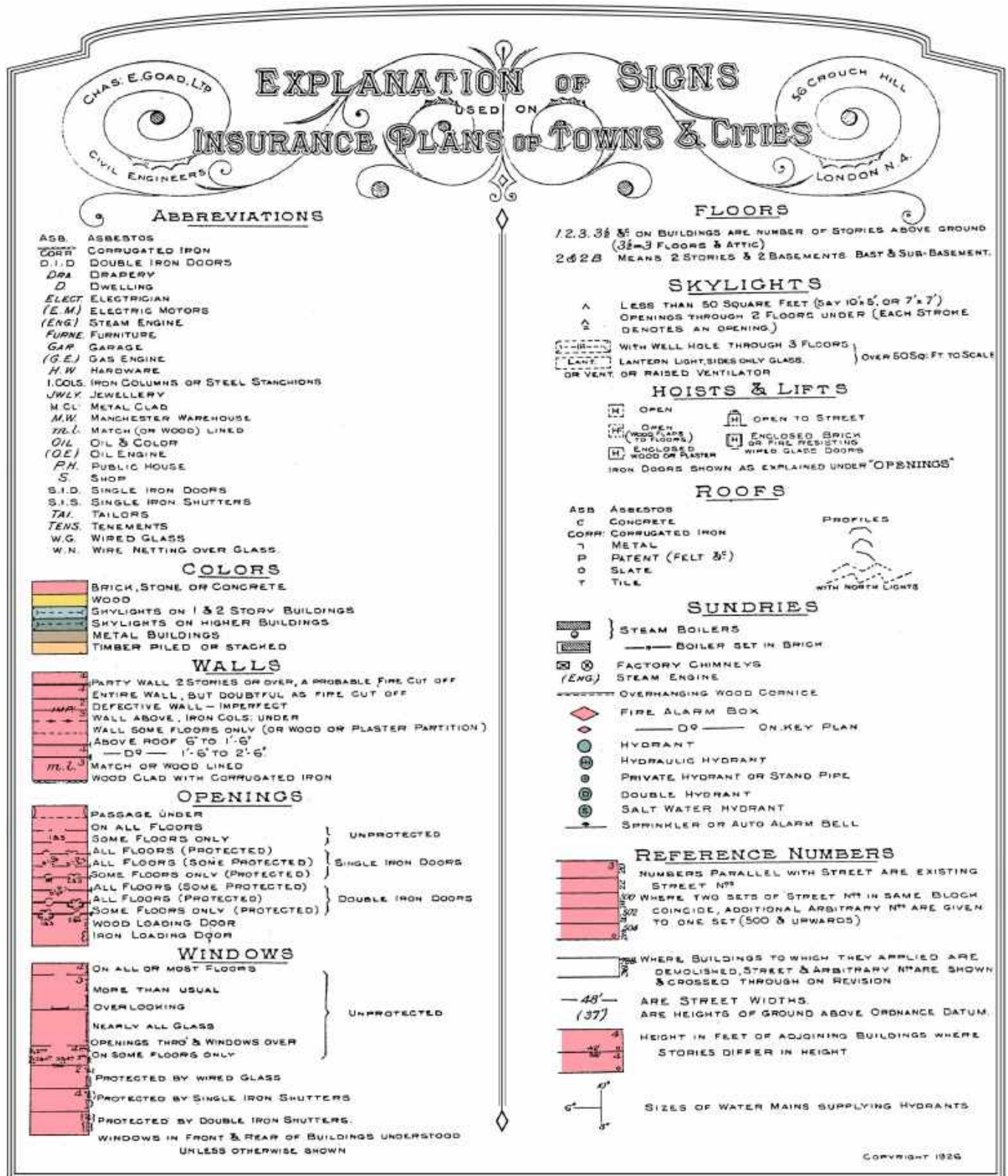
Contact us with any questions at:
info@groundsure.com
08444 159 000

Groundsure Reference: GS-6014875
Your reference: 257461
GridReference: 528570 178337
Date: 09/05/2019

1901, 1901, 1901 London, 3-plan composite



Legend



Further Information

This report contains all Goad plans available for your chosen location. Where plans cover only part of the mapped area, modern background mapping has been included for additional context.

Charles E. Goad

Goad plans were originally produced as Fire Insurance Plans (F.I.Ps) by Charles E. Goad Ltd. in the late 19th century. In addition to showing the materials used in building construction and the location of water supplies, the maps show the location of particular fire hazards such as chemical storage and processing areas, ovens and other such areas which are of interest to contaminated land practitioners. The first plans appeared in 1886, and by 1896 the collection comprised 73 volumes of plans for 37 cities. By 1912 the collection had grown to 124 volumes across 57 cities, though following this there was no significant expansion to new towns. Many cities saw significantly expanded coverage between 1928 and 1935, and regular revision of plans continued until the 1970s.

The maps were produced for the most important towns and cities in Great Britain at a scale of 1:480 (1 inch to 40 feet). Coverage for these towns varies according to the town's relative importance at the time, from an industrial and social perspective. All maps shown in this report are north-orientated and seamlessly stitched together with other maps of a similar age. Gaps in the mapping are filled in with contemporary mapping to provide a clear location context for the study site.

Contact Us

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info@groundsure.com

08444 159 000

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Appendix C

Westminster City Council
environmental search repot



City of Westminster

Sachin Gosai
Ove Up Partners
13 Fitzroy Street,
London,
W1T 4BQ

This matter is being dealt with by: Mark
Walshe
Regulatory Support Team 1 Environmental
Sciences
Direct line: (020) 7641 3137
Email: mwalshe@westminster.gov.uk
My ref: 19/19221/EE1CL

Date: 21st May 2019

Dear Sir

Environmental Information on Ebury Bridge Estate

Thank you for your request for a search on environmental matters regarding the above property. I acknowledge the receipt of £100 for a printed set of historic maps and other Westminster wide environmental information.

Information on possible contaminative past uses is available from Ordnance Survey historical maps. We have reproduced these from 1870, 1890, 1910, 1950 and 1970 for your site. A map is also supplied with the potentially contaminative uses derived from these source maps.

See attached map for historical uses within 100 metres and key for details.

In Westminster there are no Special Sites registered under the Environmental Protection Act 1990 78R-T, and none where notices have been served under Part

IIA Section 78. As yet the Council has not produced a schedule of land that will require further assessment under the Environmental Protection Act 1990, Part IIA. Currently the Council's contaminated land inspection strategy is at the site prioritisation stage and we currently have no timescales on this.

For details, regarding planning documents associated with the development or nearby properties, please visit the council's [planning explorer](#).

The information contained in this letter has been obtained from Council's records. However no guarantee is given for its accuracy or whether land is suitable for the purpose required. The Council does not accept any legal liability for any loss or damage arising from the supply of this information and you are strongly advised to make further enquiries.

Possible sources of information are:

Westminster Archives: 10 St Ann's Street, London SW1P 2DE
Phone – 020 7641 5180

London Metropolitan Archives: 40 Northampton Road, London EC1R 0HB
Phone – 020 7332 3820

Petroleum Officers: London Fire & Emergency Planning Authority
20 Albert Embankment, London SE1 7SD
Phone – 020 7582 3811

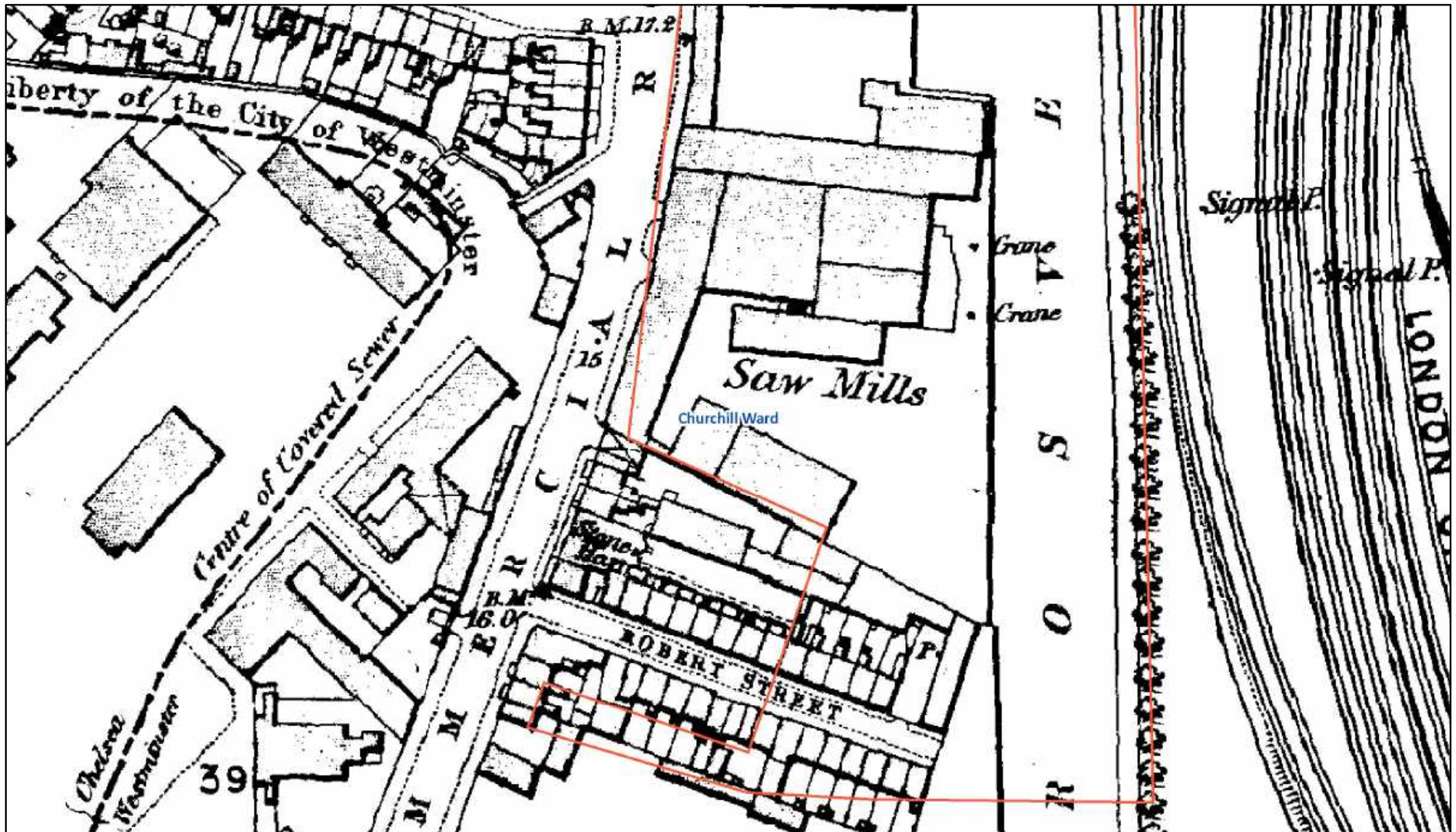
Environment Agency: Hatfield Office, 2 Bishops Square Business Park
St Albans Road West, Hatfield, Herts AL10 9EX
Phone – 01707 632 3000

Thank you for your enquiry and if you require any clarification on the maps please contact me.

Yours faithfully

Mark Walshe
Environmental Health Enforcement Officer

current 1870 A map



21/05/2019 17:58:22

Areas

Override 1



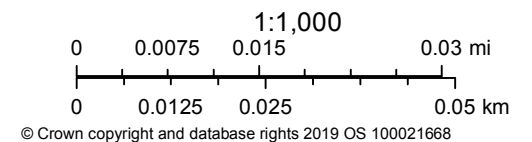
Red: Band_1



Green: Band_1



Blue: Band_1



current 1870 b map



21/05/2019 17:59:22

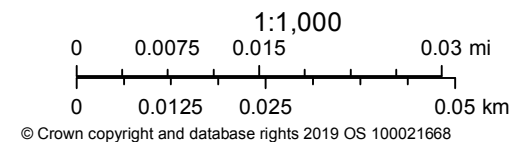
Areas

Override 1

Red: Band_1

Green: Band_1

Blue: Band_1



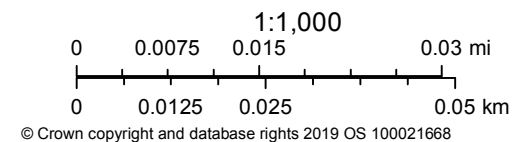
current 1890 A map



21/05/2019 17:57:43

Areas

-  Green: Band_1
 -  Blue: Band_1
 -  Red: Band_1
- Override 1



current 1890 b map



21/05/2019 18:04:39

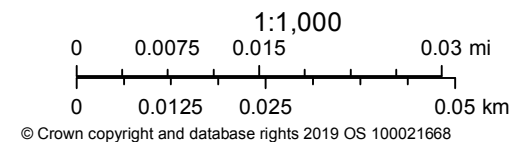
Areas

Override 1

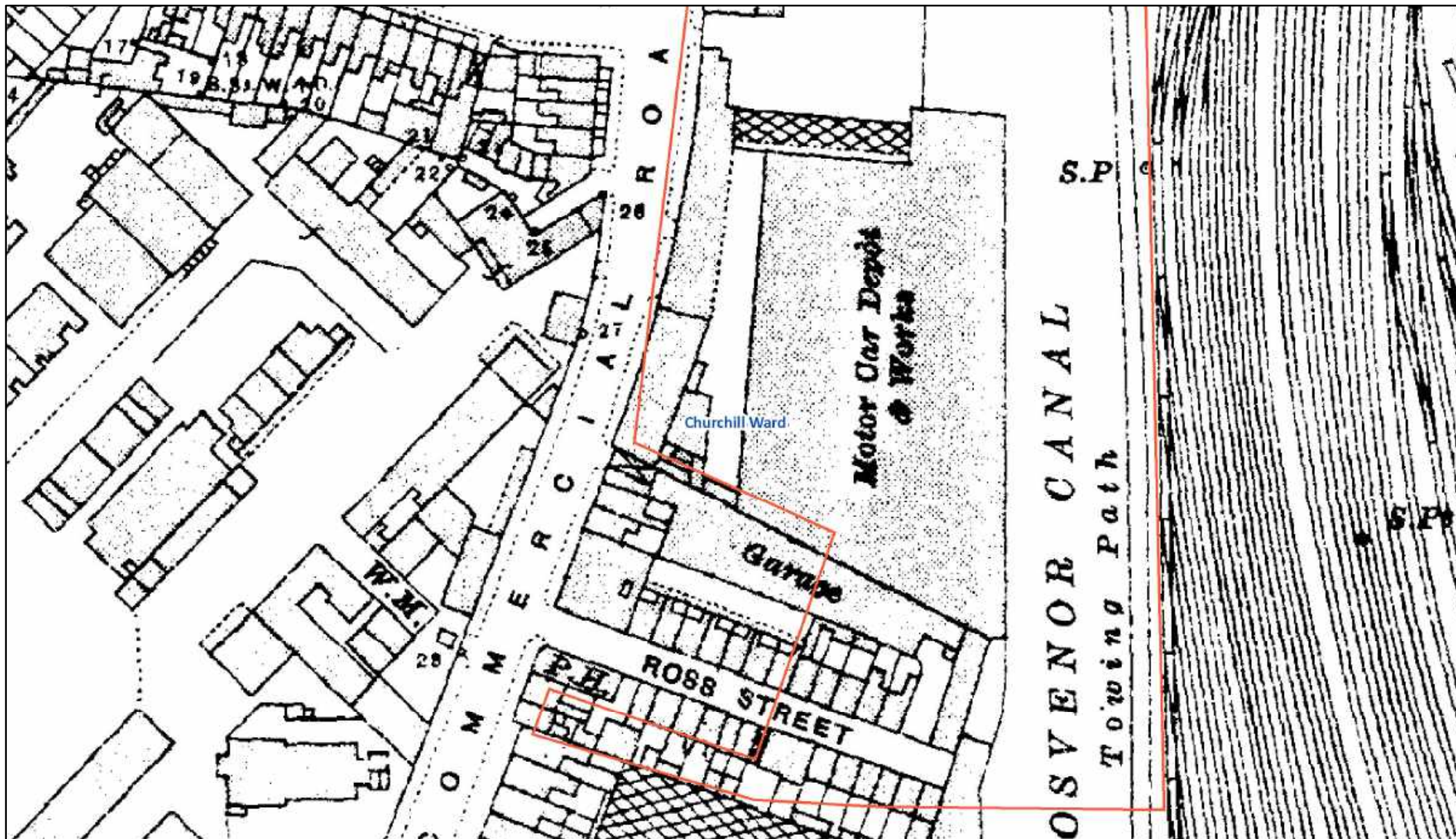
Red: Band_1

Green: Band_1

Blue: Band_1



current 1910 A map



21/05/2019 17:57:03

Areas

Override 1



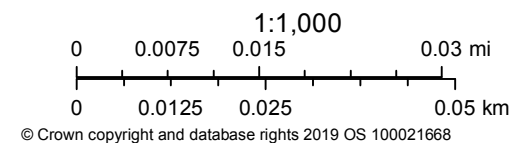
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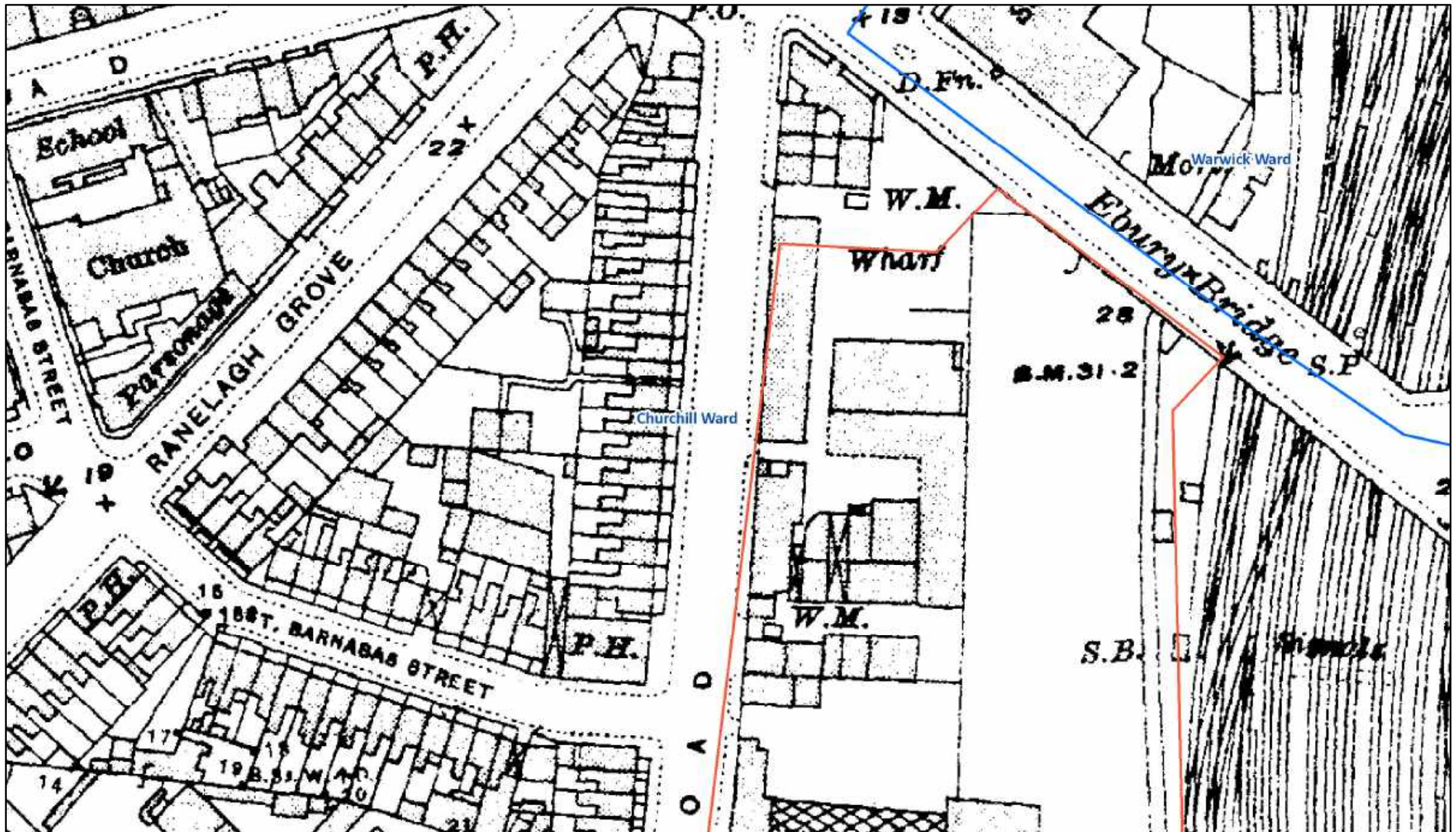
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Blue: Band_1



current 1910 b map



21/05/2019 18:03:01

Areas

Override 1



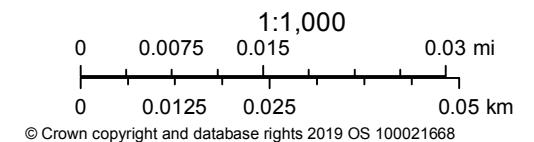
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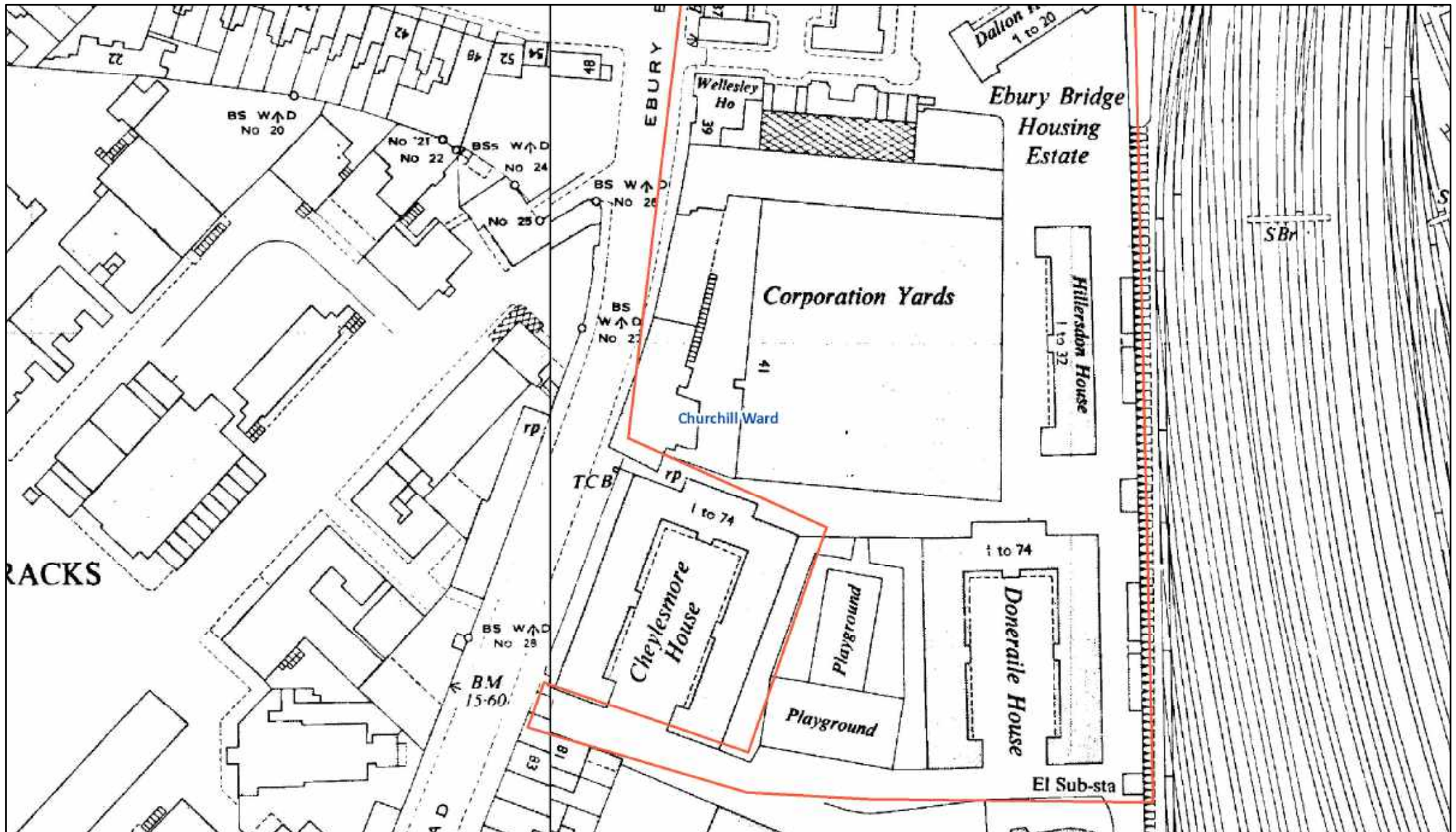
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Blue: Band_1



current 1950 A map



21/05/2019 17:56:16

Areas

Override 1



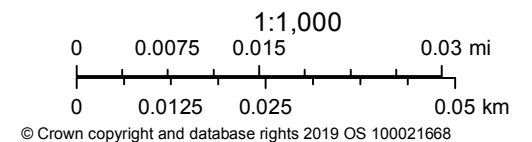
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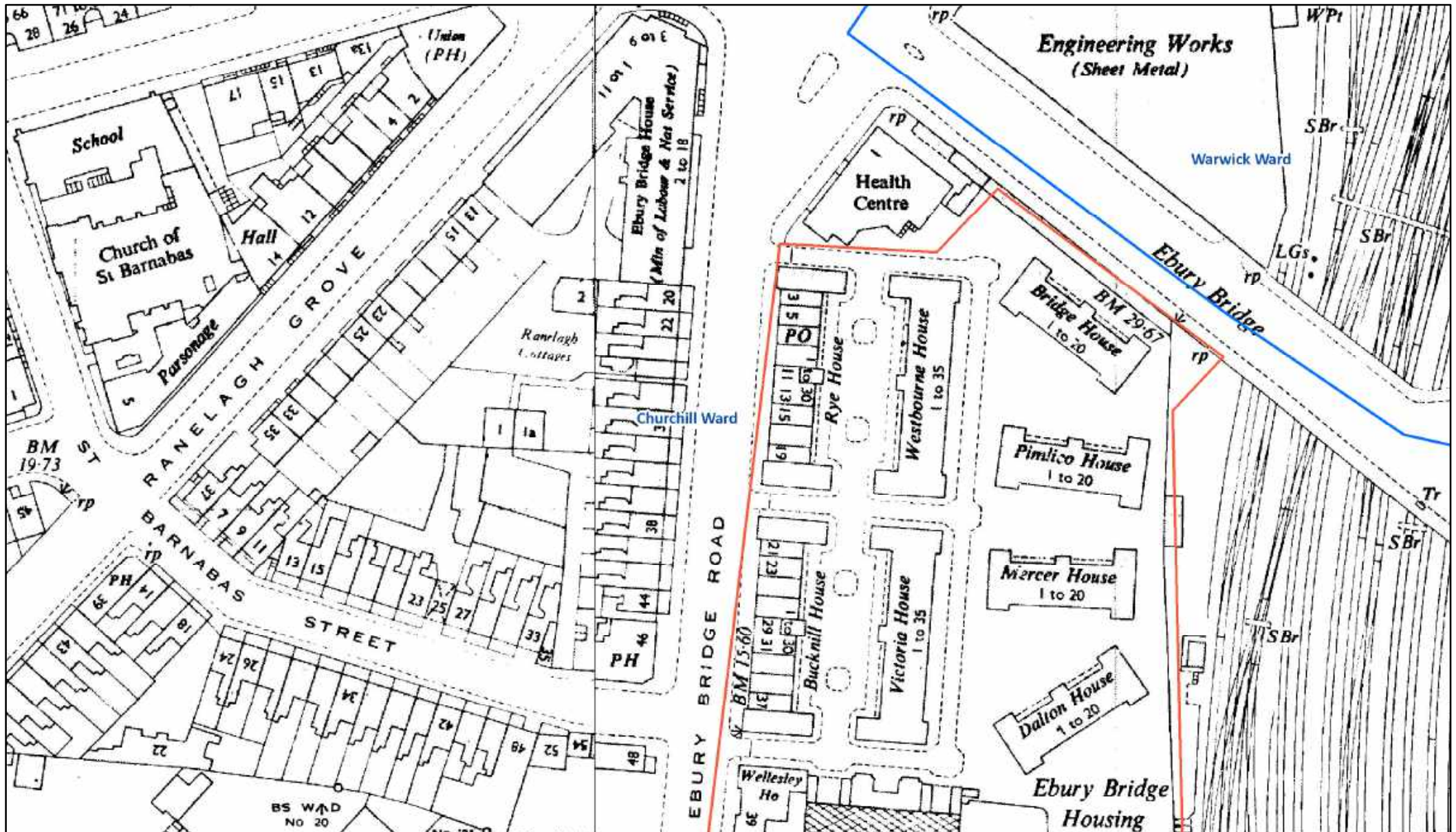
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Blue: Band_1



current 1950 b map



21/05/2019 18:03:43

Areas

Override 1



Red: Band_1



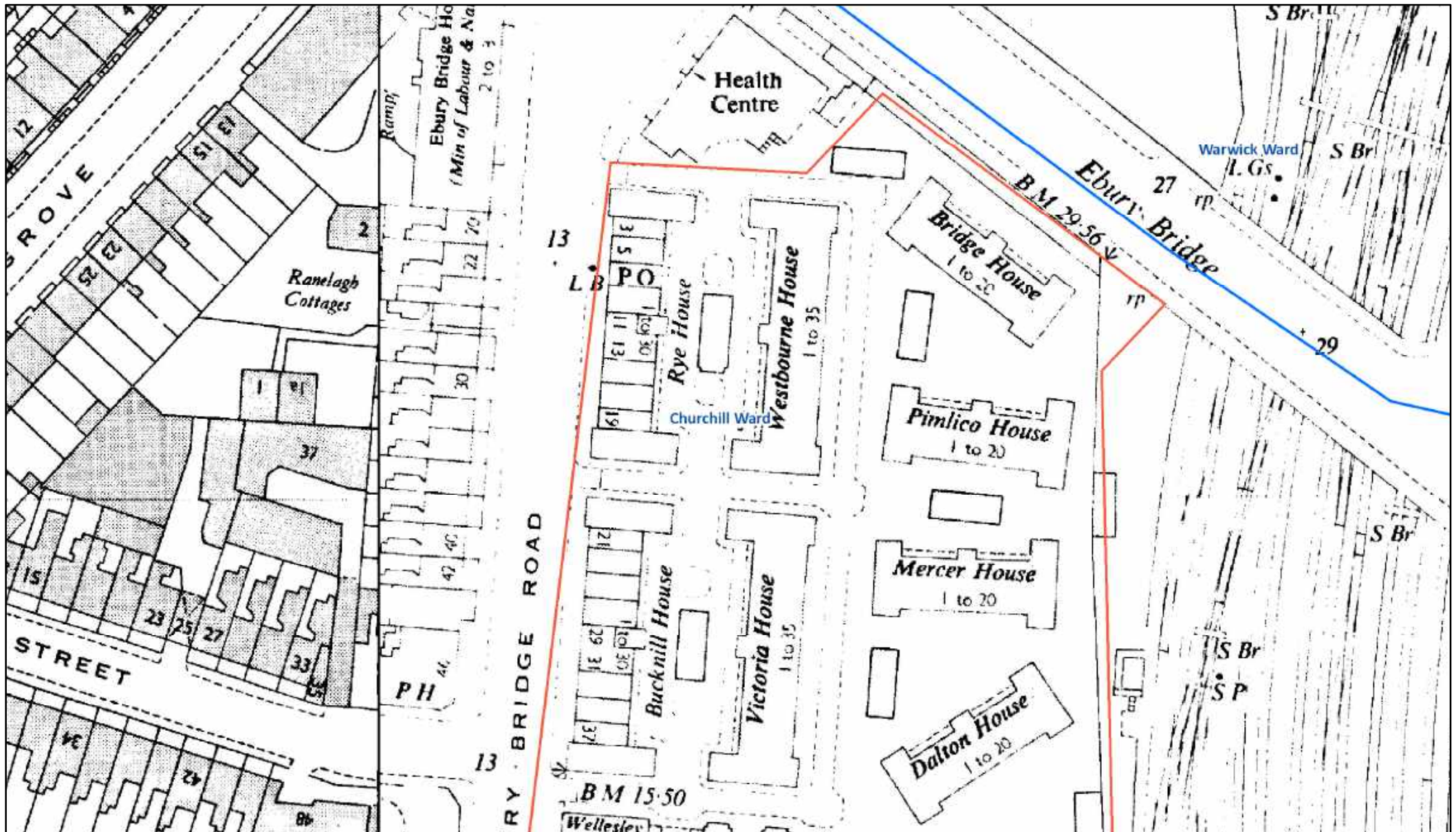
Green: Band_1



Blue: Band_1



current 1970 map



21/05/2019 17:54:02

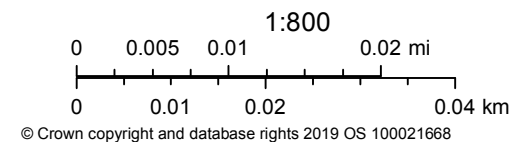
Areas

Override 1

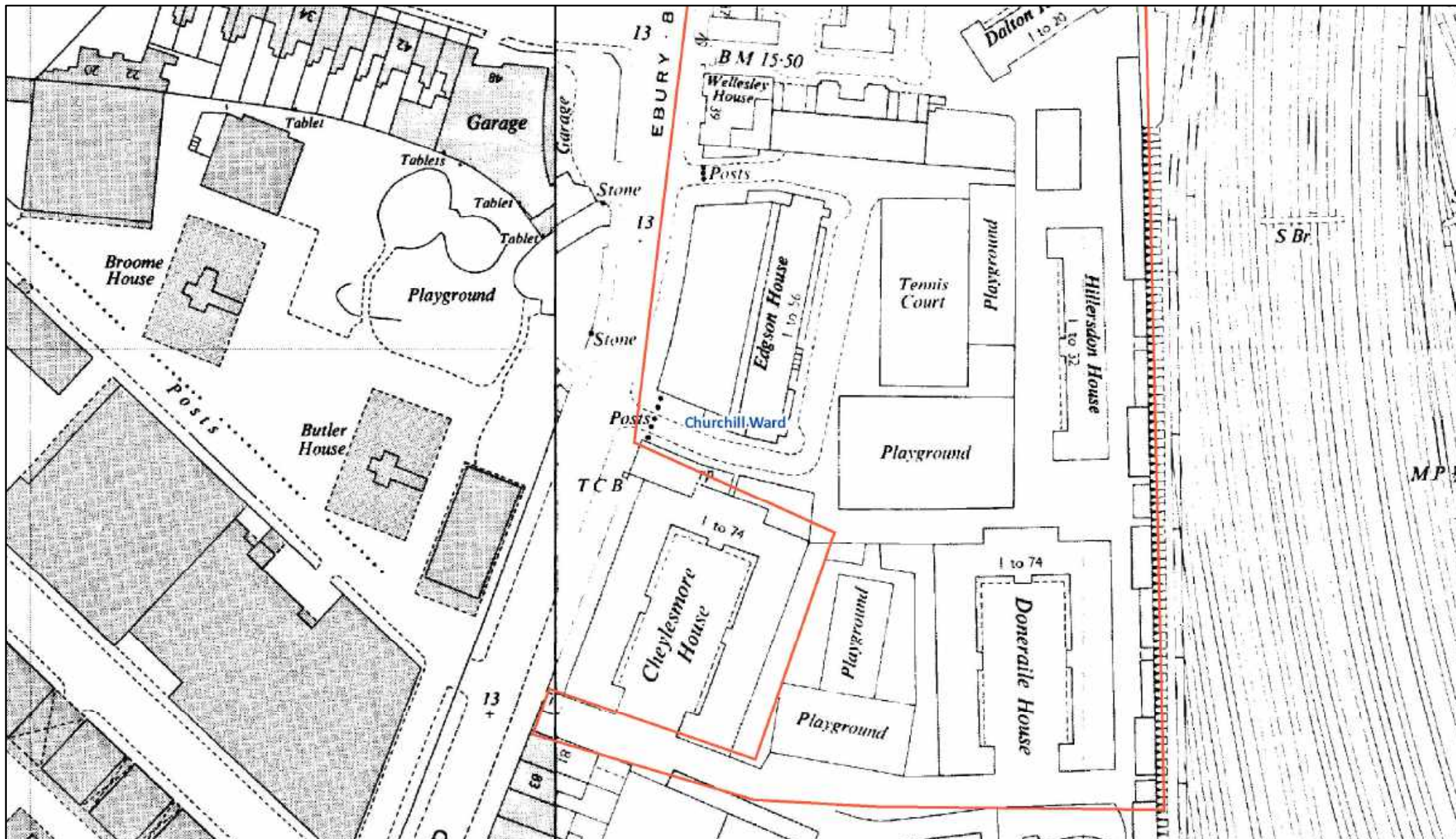
Red: Band_1

Green: Band_1

Blue: Band_1



current 1970 A map



21/05/2019 17:55:23

Areas

Override 1



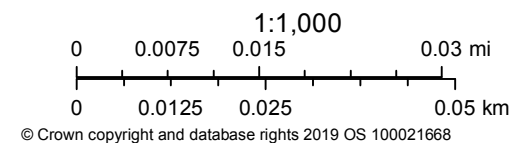
Red: Band_1



Green: Band_1



Blue: Band_1




current

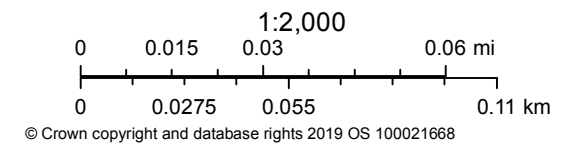


21/05/2019 17:53:11

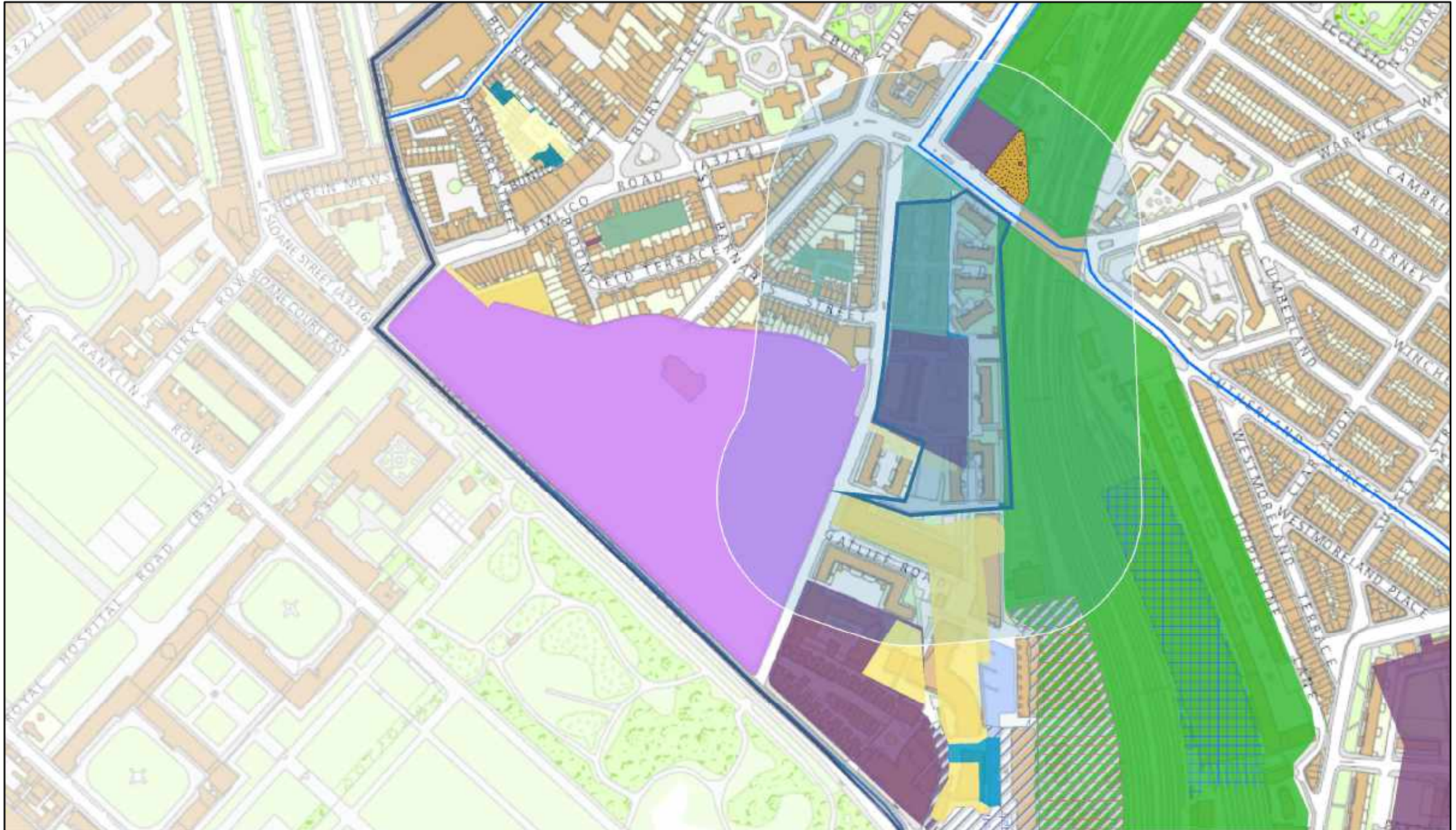
Areas

Override 1


 Borough Boundary - Mask

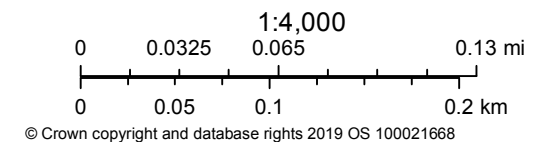


Historical use map within 100 metres



21/05/2019 18:12:43

 Borough Boundary - Mask




Key to historic use map


☐

☒ Contaminated Land Sources - 1870


☐




Blacksmith




Brewery




Burial Ground




Carriage Works




Cement Works




Coach Factory




Coal Storage




Distillery




Docks




Drycleaners and Laundries




Engineering Works




Gas Works




Gravel Pit




Hospital




Industry Unspecified




Iron Foundry




Lead Works




Printing Works




Public Buildings - Defence




Railway Land




Stone Works



Timber Works



Warehouse




Zoo


☐

☒ Contaminated Land Sources - 1890


☐




Blacksmith




Brewery




Carriage Works




Cement Works




Chimney




Coal Storage




Distillery




Docks




Drycleaners and Laundries




Electricity Substation




Engineering Works




Gas Works




Hospital




Industry Unspecified




Infilled Canal




Public Buildings - Defence




Railway Land




Vehicle Depot



Warehouse




Waste Management



Zoo

▼ ☒ Contaminated Land Sources - 1910

-  Blacksmith
-  Brewery
-  Chimney
-  Coal Storage
-  Distillery
-  Docks
-  Electricity Substation
-  Engineering Works
-  Garage
-  Gas Works
-  Hospital
-  Industry Unspecified
-  Printing Works
-  Public Buildings - Defence
-  Railway Land
-  Telephone Exchange
-  Vehicle Depot
-  Waste Management
-  Zoo

▼ ☒ Contaminated Land Sources - 1990

-  Docks
-  Electricity Substation
-  Electricity Substation Large
-  Hospital
-  Industry Unspecified
-  Public Buildings - Defence
-  Railway Buildings
-  Railway Engineering
-  Railway Land
-  Railway Ventilation
-  Sewage Treatment Works
-  Utilities Unspecified
-  Warehouse
-  Waste Management
-  Zoo

Appendix D

Site Reconnaissance and
photographs

Appendix D Site reconnaissance report

ARUP

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Project title Ebury Bridge Estate

Job number

266923

cc

File reference

Prepared by Sachin Gosai

Date

16 April 2019

Subject Appendix C Site Reconnaissance Report

Introduction

A site reconnaissance of the Ebury Bridge Estate, was undertaken on the 16th April 2019 by two representatives from the Arup contaminated land team as part of the commission with Westminster City Council to prepare a Preliminary Risk Assessment and inform the design of a ground investigation.

The site reconnaissance has been undertaken in general accordance with BSI 10175:2011+A1:2013 Investigation of potentially contaminated sites – Code of practice and CLR11. The objectives of the site reconnaissance were to:

- Verify information on the site collated during the desk study;
- Collect additional information about the site, its environs and any potential contaminants, pathways and receptors;
- Record observations of aspects of the site and its environs not revealed by the desk study; and
- Collect information that will assist in the planning of any subsequent phases of field investigation (for example any constraints to access).

This site reconnaissance report is provided as an appendix to the ground contamination preliminary risk assessment. The pertinent items identified by the reconnaissance are summarised and assessed in the report.

The buildings adjacent to Ebury Bridge Road each contained a single level of basement. Edgson House is scheduled for demolition, and full access to the basement was gained. In Rye and Bucknill Houses the basement was split into individual commercial premises, including an estate management office which was inspected. Other commercial premises, including the dry cleaners were not accessed.

Within the other buildings the ground floor level incorporated residential flats, access was limited to the internal stairwells.

Appendix D Site reconnaissance report

266923

16 April 2019

Site details

	Description
Site name:	Ebury Bridge Estate
NGR:	528583, 178352
Site area:	1.9ha
Weather:	Warm and overcast
Site bounded to the:	
North:	Ebury Bridge
East:	Network rail access road (beyond a 3m high brick wall) to British Transport Police, located offsite to the south east. the mainline railway lines servicing London Victoria Station were located beyond the access road (running north to south) parallel with the eastern boundary of the site.
South:	Residential properties.
West:	Ebury Bridge road with the Chelsea Barracks site on the other side and a former petrol garage, now used as a carwash, but seemingly little change in configuration (forecourt and manhole covers in place)..
Topography:	The site is broadly flat, with levels ranging from 4.1 to 4.5mOD.
	Ebury Bridge is at higher level, approximately 2m, higher than the site.
Access to site:	Site is accessed via Ebury Bridge Road.
Access restrictions	At the time of the visit, Edgson house was under the control of the demolition contractor and the boundary of this area was hoarded.

Site uses

	Description
Current site use	<p>13 residential tower blocks. Most of the existing buildings were constructed between 1929-1938. Edgson House was constructed by 1953. Five of the buildings remain fully occupied by residents. A further three buildings are partially occupied, and three have been fully vacated. The recreational park (including a children's play area) and sports pitch (MUGA) are in the central part of the site and remain open and in operation.</p> <p>Two of the buildings fronting Ebury Bridge Road, Rye and Bucknill Houses, have commercial units on the ground floor and basements including a dry cleaner, commercial offices, retail and several cafes.</p> <p>Small basements exist beneath Bucknill and Rye Houses along with two underground plant rooms (containing electrical equipment and possibly a pump) adjacent to Victoria and Westbourne Houses.</p>
Potentially contaminative land uses:	
Electrical sub-station	Two substations are present on site in the southeast corner and on the eastern boundary. A large electricity substation is present offsite to the north side of Ebury Bridge.
Commercial premises	The buildings predominantly comprised residential apartments from the ground floor except for the basement and ground floor of Rye House and Bucknill House. Commercial uses included small commercial premises comprising: office space (property services, Ebury Regeneration Base), take-away and café, retail (newsagent, pharmacist, salon, interiors)

Appendix D Site reconnaissance report

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16 April 2019

	Description
Dry cleaners	A small 'dry cleaners' (Choice) is located on the ground floor of Bucknill House. It is anticipated that shop includes the single basement level. There is a potential for chemical storage in the shop. Access to the shop was not gained at the time of the walkover.
Plant rooms	Two small below ground plant rooms were located adjacent to the main entrance to Victoria and Westbourne Houses. The spaces were of masonry construction with an access hatch in the roof, approximately 1m above external ground level. It was not possible to enter the spaces, but from hatch level the space appeared to contain electrical cupboards, and possibly a pump (there was a slight odour of lubricating oil), no tanks, chemical or fuel storage were observed at the time of the walkover. The flooring comprised a concrete slab.
Lock-up garages	Lock-up style garages were in the centre of the site to the north of Hillesdon House. The garages were single-storey masonry structures with a concrete slab. They appeared to be secure and well-maintained, there was no evidence of fuel spillage or staining of the ground externally. The garages were not accessed.
Evidence of previous uses?	A bricked-up archway showing the width of the former Grosvenor Canal is located on the northern boundary beneath Ebury Bridge.
Visible evidence of contamination:	No significant visible evidence of contamination was observed onsite.



Selected photographs

No.	Photo	Description
1		View of Edgson House under demolition looking north.

Appendix D Site reconnaissance report

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No.	Photo	Description
2		View of access road and recreational area with Edgson House in the background from the looking north from outside Donneraile House.
3		Courtyard within Donneraile House.

Appendix D Site reconnaissance report

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No.	Photo	Description
4		Dalton House on the left, Wellesley House on the east and Hillserdon House in from. View from the north.
5		Retaining wall supporting Ebury Bridge, with the infilled archway from when the canal existed.

Appendix D Site reconnaissance report

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No.	Photo	Description
6		<p>View down the spine of the site from the northern boundary. Bridge, Pimlico and Mercer houses are in view on the left and Westbourne and Victoria houses are on the east.</p>
7		<p>Parking garages in the centre of site and softstanding area adjacent to Dalton House.</p>

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No.	Photo	Description
8	 A photograph showing the corner of a red brick building. A white door is visible on the right side of the corner, with a small red sign above it. A concrete path leads from the foreground towards the door. To the right of the path is a grassy area. In the background, another brick wall and some trees are visible.	Electricity substation on eastern boundary adjacent to Dalton House.
9	 A photograph of a courtyard area. A red brick building with white window frames is on the left. A large tree stands in the center of the courtyard. In the foreground, there is a grassy area and a concrete path. Several bicycles are parked on the right side of the courtyard. A low brick wall separates the grassy area from the path.	Soft standing between Pimlico and Bridge Houses.

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No.	Photo	Description
10		Carparking area opposite recreational area.
11		MUGA pitch to be retained.

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No.	Photo	Description
12		Car wash and former filling station on Ebury Bridge Road.
13		View of access road along the eastern boundary of site and the railway lines from Ebury Bridge.

Appendix D Site reconnaissance report

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No.	Photo	Description
14		View inside underground plant room adjacent to Westbourne house.

DOCUMENT CHECKING			
	Prepared by	Checked by	Approved by
Name	Sachin Gosai	Jeff Widd	
Signature	SG	JW	

J3 Environment Agency consultation response

From: [REDACTED]
Sent: 07 January 2020 15:50
To: [REDACTED]
Subject: [External] HNL 155814 JH -- RE: 191218/JP02: Ebury Environmental Search Report [Filed 08 Jan 2020 11:44]

Dear Eleanor

Enquiry regarding: Ebury Environmental data requested 1km buffer zone

Thank you for your enquiry which was received on 4 December 2019.

We respond to requests under the Freedom of Information Act 2000 and Environmental Information Regulations 2004.

Our records show that the site is within 1km of an area that was reviewed by our Groundwater and Contaminated Land team:

CL/01415 – Victoria Bus Garage, Gillingham Street, SW1
CL/01278 – Grosvenor Road, Waterside, Western Pumping Station, London, SW1V 1LW

These were in response to a planning applications. We advise you to contact the local council who will hold further details, along with any remediation reports.

Please be aware that we only consider risks to groundwater. The local council's Environmental Health Department is responsible for risks to other receptors (for example human health, property and ecology) and should be contacted for further information.

The site is not designated as a Special Site under Part IIa of the EPA 1990. The Environment Agency only regulates Special Sites. The local council regulates all other contaminated land sites and maintains the Contaminated Land Strategy. Please contact the relevant local authority for further information.

We have only one historic landfill site in the 1km area, see the attached spreadsheet for details. Please note that the site was pre agency so we hold very little details please contact the contaminated land team of the local authority for more details.

You can list all the waste permitted sites in an area via our public register available here: <https://environment.data.gov.uk/public-register/view/index> Attached is a spreadsheet of permitted sites within 1km of the site.

Please find attached a spreadsheet of redacted pollution incidents.

We hold no additional contaminated land / historic site information.

Please refer to [Open Government Licence](#) which explains the permitted use of this information.

Please get in touch if you have any further queries. If you want us to review the information we have sent, please contact us again within two months from the date of this email.

Yours sincerely



Did you know that the Environment Agency publishes most of its data via www.data.gov.uk? Using this site, you can search for our data alongside other environmental data providers from local authorities or from DEFRA (the Department of the Environment, Fisheries and Rural Affairs).

Pronouns: he/him/his ([why is this here?](#))



The Love Water campaign is raising awareness of how people, wildlife and plants depend on a healthy water environment.

Find out more www.water.org.uk/love-water



Water pollution incidents

Sign up to email alerts of incidents affecting your local watercourse

bit.ly/HNLwaterincidents



From: [REDACTED]

Sent: 04 December 2019 15:45

Subject: Ebury Environmental Search Report

Hi [REDACTED]

You have previously been in contact with my colleagues regarding Edgson House. I am writing to request an Environment Agency Environmental Search Report for the Ebury development site as per the attached boundary. Please will you confirm the cost of this service?

We are looking for information within 1000km of the area regarding landfill data, potentially contaminated sites, permits, pollution incidents etc. I would be grateful if you could answer the following questions:

- Does the EA hold any ground investigation information for the site or surrounding area?
- Does the EA have records of tanks for fuel storage at the site or surrounding area?
- Does the EA hold any historic maps of the site or surrounding area?
- Does the EA hold any information on pollution incidents at the site or immediately adjacent with an impact to groundwater or surface water?
- Are there any designated contaminated sites in the surrounding area? Has the site been determined, investigated or prioritised itself?
- Does the EA hold any records of remediation on the site or in the immediate surrounding area?
- Does the EA hold any historic trade directory or land use records for the site or the immediate surroundings?

We look forward to receiving your response and any relevant information that you can provide.

Best regards,

[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]