



Elite Cask Limited

**Tŷ Cambria, 29No. Newport
Road, Cardiff**

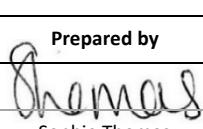
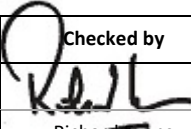
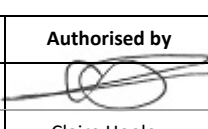
**Desk Study and Preliminary Ground
Investigation Report**



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Tŷ Cambria, 29No. Newport Road, Cardiff

Desk Study and Preliminary Ground Investigation Report

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EXECUTIVE SUMMARY

This report presents the findings of the desk study and exploratory site investigation works undertaken at the site to assess the likely ground conditions and establish if there are any geoenvironmental or geotechnical risks associated with the proposed redevelopment of the site. Pertinent information and conclusions are summarised below.

SITE BACKGROUND INFORMATION	- The site comprises a vacant, multi-storey commercial structure with under-croft car parking to the rear and an area of soft landscaping fronting onto Newport Road. - The existing structures occupy most of the site footprint. An electrical substation is also located within the under-croft parking area. - Anecdotal information indicates that the site originally comprised a multi-storey structure fronting Newport Road, with the addition of a multi-storey extension to the rear of the site in the early 2000s. In addition, it is understood that a partial basement is also present within the original structure fronting Newport Road. Brief history of the site and current/historical land uses on/off site - Available geological mapping records the site to be underlain by Glaciofluvial Sheet Deposits, described as very dense 'sands and gravels' with a varying cobble content to an approximate depth of 4.75mbgl. In turn, the site is reported to be underlain by solid geology of the Mercia Mudstone Group described as red marly clay, grey clay, and red marl. - While no visual evidence of ground subsidence or movement was observed on the ground surface during the site reconnaissance, it is understood that movement of the rear portion of the existing building has been recorded (note that at the time of the site reconnaissance survey this part of the building was scaffolded). - There is evidence of multiple high explosive bombing incidents within close proximity to the site with two areas of structural clearance, potentially the result of bomb damage, being identified within 100m of the site.
INVESTIGATION RATIONALE	Exploratory works were undertaken in order to determine the type and size of the existing foundations.
GEOENVIRONMENTAL SUMMARY	A low to moderate geoenvironmental risk has been identified as a result of the site's development history, observations made during the site reconnaissance, the likely presence of made ground of unknown thickness and chemical composition and the presence of an on-site Secondary Aquifer.
GEOTECHNICAL SUMMARY	- Conventional foundations are considered unlikely to be suitable for the proposed 23 storey building and a piled solution is considered most likely to be suitable. - Based on the very limited available information potential pile resistances have been provided and it is suggested that a single 750mm bored pile installed to 25mbgl may provide a resistance in the region of 4900kN, while a 900mm pile to this depth may provide around 6000kN.
RECOMMENDED FURTHER WORKS	- The Preliminary UXO Risk Assessment undertaken as part of this study, concluded that a Stage 2 Detailed Risked Assessment should be undertaken for the site to further assess the risk to the proposed works, where future intrusive and development works are proposed. - Based upon our current conceptual understanding of the site and the proposed end use, potential Significant Pollutant Linkages have been identified as Human Health (current and future site users and construction workers) from the exposure to contaminants associated with potential made ground and potentially contaminative land uses on site and the migration, ingress and inhalation of ground gas from nearby potentially infilled land, and Controlled Waters (Secondary Aquifers) from potential onsite contaminants of potential concern (CoPC) and subsequent migration to identified groundwater receptors. - Given the assessment presented within this report additional works would be recommended to fully define the geoenvironmental issues associated with the site and would involve an exploratory ground investigation. - Given the scale of the proposed development, a suitable geotechnical intrusive investigation would be recommended to determine the engineering conditions and the constraints associated with the site and to ascertain foundation design parameters for the proposed development.

The above summary should not form the basis for key decisions associated with the proposed development and a full review of the information contained within this report is recommended.

1 INTRODUCTION

1.1 Terms of Reference

1.1.1 TEC has been appointed by Rhomco on behalf of Elite Cask Limited to undertake a Stage 1: Risk assessment, comprising a Desk Study, including walkover survey and initial Ground Investigation of Tŷ Cambria, 29No. Newport Road, Cardiff. All works were undertaken in accordance with our proposal letter dated 26 March 2026 and referenced CH.2603016.001.

1.2 Background

1.2.1 The site comprises an existing multi-storey commercial structure known as 'Tŷ Cambria' located at 29No. Newport Road, in the centre of Cardiff (Figure 1). The site covers an area of approximately ~0.1hectares with the centre of the site situated at approximate National Grid Reference 319055, 176826. The nearest postcode is CF24 0TP.

1.2.2 The proposed development is understood to comprise the demolition of the existing structure to allow the construction of a 23No. storey residential building to provide student accommodation.

1.2.3 The aim of these works is to provide preliminary information on land contamination risk and the anticipated ground engineering conditions and constraints associated with the site with regard to the proposed development.

1.3 Site Objectives

1.3.1 The site objectives and subsequent scope of works undertaken as part of this report are presented below:

- **Tier 1: Preliminary Risk Assessment:** this phase of assessment involves development of an initial conceptual site model, based on desk study research and a site walkover/reconnaissance survey, in order to develop an initial conceptual site model, identify potential contaminant linkages and establish whether or not there are potentially unacceptable risks.
- **Preliminary Ground Engineering:** this phase of assessment comprises a review of publicly available ground engineering and geological information for the site to, in addition to a preliminary ground investigation determine likely preliminary geotechnical parameters.

1.3.2 The above scope of work has been undertaken in accordance with current guidance such as LCRM - *Land contamination: risk management* (Environment Agency, 2025), BS10175:2026, BS5930:2015+A1:2020 and, where appropriate, Eurocode 7 and NHBC Standards/ LABC Technical Manual.

1.3.3 From the outset, sustainability and the potential impact of climate change have been considered, to assist in identification of options to minimise the environmental, social, and economic impacts of the risk assessment approach, with reference to Sustainable Management Practices (SMPs) from Sustainable Remediation Forum UK (SuRF-UK).

2 TIER 1: PRELIMINARY RISK ASSESSMENT

2.1 Introduction

2.1.1 Information for this Tier 1: Preliminary Risk Assessment (PRA) has been obtained from a site reconnaissance survey and a review of a Groundsure® report obtained for the site (Appendix B and Appendix C), together with published available information where relevant.

2.2 Site Setting

2.2.1 A site reconnaissance survey was undertaken prior to commencement of the intrusive ground investigation, by a suitably experienced geoenvironmental consultant from TEC on 06 May 2026. A summary of the observations is presented in Table 2.1. Photographs taken during the site reconnaissance survey are presented in Appendix A.

Table 2.1: Site Details

Feature	Description
Site Location	'Tŷ Cambria' 29No. Newport Road, Cardiff, CF24 0TP. The site covers an area ~0.1hectares with the centre of the site situated at approximate NGR 319055, 176826.
Current Site Use	The site comprises a vacant, multi-storey commercial structure with under-croft car parking to the rear and an area of soft landscaping fronting onto Newport Road. The existing structures occupy most of the site footprint. An electrical substation is also located within the under-croft parking area. Anecdotal information indicates that the site originally comprised a multi-storey structure fronting Newport Road, with the addition of a multi-storey extension to the rear of the site in the early 2000s. In addition, it is understood that a partial basement is also present within the original structure fronting Newport Road.
Site Context	The site is located with a predominantly commercial area.
Site Boundary Features	North Commercial properties along The Parade
	East Commercial properties along Newport Road
	South Commercial properties along Newport Road
	West Commercial properties along Newport Road
Site Topography	The site was noted to generally slope from south-east to north-west, towards the rear of the structure. Available OS mapping indicates the site is situated at approximately ~12mAOD (above Ordnance Datum).
Hard and Soft Landscaping	The majority of the site is occupied by the existing structure with a small area of soft landscaping, comprising shrubs noted along Newport Road.
Trees	Whilst no trees are located within the red line boundary of the site, several mature trees are noted along Newport Road and East Grove.
Fuel, Hazardous Chemicals and Waste Materials Storage	A small metal tank was noted adjacent to the electrical substation within the under-croft parking area. The tank was noted to be in good condition, and no evidence of spillages/ ground surface standing was noted during the reconnaissance.
Asbestos Containing Materials (ACM)	No potential ACM material recorded on the ground surface during the site reconnaissance survey.
Site Drainage	Several manhole and surface water drainage channels were noted onsite during the site reconnaissance. At the time of the site walkover, no areas of standing water were observed on site.
Evidence of Potential Contamination	No visual or olfactory evidence of contamination was noted on site during the reconnaissance survey.
Ground Stability Hazards	While no visual evidence of ground subsidence or movement was observed on the ground surface during the site reconnaissance, it is understood that movement of the rear portion of the existing building has been recorded (note that at the time of the site reconnaissance survey this part of the building was scaffolded).

2.3 Site History

2.3.1 Details of the history of the site and surrounding area, relevant to this preliminary risk assessment, have been obtained through the review of historical Ordnance Survey (OS) mapping. A summary of potentially significant features is recorded in Table 2.2, which should be read in conjunction with the full map extracts contained within Appendix B.

Table 2.2: Historical Features Summary

On Site Features			OS Dates
Earliest available mapping (1880) indicates the presence of a large structure (assumed residential) located in the south-eastern corner, along 'Halswell Terrace' (and later 'Newport Road') with a smaller structure noted in the north-western corner of the site. In addition, areas of soft landscaping and pathways occupy the remaining site areas. By 1901 mapping, additional structures are depicted along the northern boundary of the site with slight alterations noted to the larger structure on 1942 mapping. Mapping from 1952 indicates further alterations to the larger structures, now depicted as '29No.', with the north-eastern structure located along the northern boundary also depicted as 'Grove Garage'.			1880 - 1955
Alterations to the layout of the site, comprising the assumed demolition of the large structure recorded along 'Newport Road' to comprise a new square structure occupying the majority of the southern boundary of the site. Demolition of most of the structures located along the northern boundary of the site, including 'Grove Garage' with a single structure recorded within the north-western corner of the site, now depicted as a 'electrical substation'. The 2010 mapping indicates an extension to the rear of the existing structure, now occupying most of the site, similar to the current layout of the site. Electrical substation remains present on the site.			1953 - 2025
Surrounding Features	Distance	Direction	OS Dates
Tramway	~10m	South	1880 - 1941
Bedford Brewery	~220m	North-east	1880 - 1901
Railway line with associated structures, and embankments	~250m	South-west	1880 - 2025
Electrical substation	~100m	West	1969 - 2003
Garage	~100m	North-west	1969 - 2003

2.4 Geology

2.4.1 A summary of available geological information for the area is provided in Table 2.3.

Table 2.3: Geological Setting

BGS Geological Mapping (Ref. Solid and Drift 1:50,000 map – Cardiff, Sheet 263)			
Geological Unit		Thickness	BGS Description
Made Ground		Unknown	Not recorded on geological mapping but may be present on-site
Superficial Deposits: Glaciofluvial Sheet Deposits		Unknown	Sand and gravel
Solid Geology: Mercia Mudstone Group		Up to 1350m	Dominantly red, less commonly green-grey, mudstones and subordinate siltstones with thick halite-bearing units in some basinal areas. Thin beds of gypsum/anhydrite are widespread; thin sandstones are also present.
BGS Borehole Records ⁽¹⁾			
BGS Reference	Distance/ Direction	Depth (mbgl)	Recorded Strata
ST19NE/243 (A)	Onsite	0.0 – 0.9	Made ground
		0.9 – 2.4	Clay and gravel / gravel and clayey sand
		2.4 – 4.3	Dense sand and gravel
		4.3 – 6.4	Red marly clay / grey clay, red marl
ST19NE/243 (B)	Onsite	0.0 – 1.1	Made ground
		1.1 – 3.4	Clay and gravel / gravel and clayey sand
		3.4 – 4.0	Dense sand and gravel
		4.0 – 6.1	Red marly clay / grey clay, red marl

BGS Estimated Background Soil Chemistry		
Element	Estimated Concentration	Bioaccessible Concentrations
Arsenic	15 mg/kg	-
Lead	100 mg/kg	60 mg/kg
Cadmium	1.8 mg/kg	-
Chromium	60 - 90 mg/kg	-
Nickel	15 - 30 mg/kg	-
BGS Estimated Urban Soil Chemistry (On site)		
Element	Estimated Concentration	Bioaccessible Concentrations
Arsenic	28 mg/kg	4.9 mg/kg
Lead	339 mg/kg	233 mg/kg
Cadmium	0.3 mg/kg	-
Chromium	77 mg/kg	-
Copper	44 mg/kg	-
Nickel	53 mg/kg	-
Tin	7 mg/kg	-
Radon		
Radon Potential	Radon Protection Requirement	
Lower Probability Radon Area (less than 1% of homes are estimated to be at or above the Action Level)	None reported to be required	

Note 1: See Appendix D.

2.5 Hydrogeology

2.5.1 The GroundSure® report and NRW information records the following hydrogeological setting of the site.

Table 2.4: Hydrogeological Setting

Aquifer Status			
Geological Unit	Groundwater Vulnerability/ Aquifer Designation	Aquifer Classification	Potential Hydraulic Gradient Direction
<u>Superficial Deposits:</u> Glaciofluvial Sheet Deposits	High Vulnerability/ Secondary A Aquifer	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.	South (following local topography)
<u>Bedrock Deposits:</u> Mercia Mudstone Group	Medium Vulnerability / Secondary B Aquifer	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. These are generally the water-bearing parts of the former non-aquifers.	-
Groundwater Abstractions			
None recorded within 500m			
Surface Water Abstractions			
1No. recorded within 1km			
Details	Abstraction Use		Distance/ Direction from Site
Unknown (historical)	Animal water & general use in non-farming situations (dated 07/12/2022)		Onsite

Portable Abstractions
None recorded within 1km
Source Protection Zones or Confined Aquifers
None recorded within 500m

2.6 Hydrology

2.6.1 The hydrological setting of the site is summarised in Table 2.5.

Table 2.5: Hydrological Setting

Surface Water Features / Water Network		
None recorded within 250m		
WFD Surface Water Body Catchments		
Name/ Water Body ID	Catchment	Distance/ Direction from Site
Taff (conf Rhondda River to Castle Street) / GB109057027270	Operational – Taff US Cynon Management – South East Valley	On site
WFD Groundwater Bodies		
Name/ Water Body ID	Ratings	Distance/ Direction from Site
SE Valleys Southern Devensian Old Red Sandstone & Triassic Mercia Mudstone	Overall rating – good Chemical – unknown Quantitative – unknown	Onsite

2.7 Flooding

2.7.1 Flooding data from the Groundsure® report for the site is summarised in Table 2.6.

Table 2.6: Additional Environmental Data Summary

Risk of Flooding from Rivers and the Sea	
None recorded within 50m	
Historical Flood Events / Flood Defences / Areas Benefiting from Flood Defences / Flood Storage Areas	
None recorded within 250m	
Flood Zones 2 and 3	
None recorded within 50m	
Surface Water Flooding	
Highest Risk On Site	Highest Risk within 50m
Negligible	1 in 30 year, 0.3m - 1.0m
Groundwater Flooding	
Highest Risk On Site	Highest Risk within 50m
Moderate	Moderate

2.8 Environmental Data

2.8.1 Additional relevant environmental data from the GroundSure® report for the site is summarised in Table 2.7.

Table 2.7: Additional Environmental Data Summary

Landfill Sites		
No current or historical landfills recorded within 500m		
Waste Exemptions		
32No. recorded within 500m, 18No. recorded on site		
Details	Category	Distance/ Direction from Site
Natural Resources Wales/ Test Company / Cambria House / Welsh Company	Deposit of waste from dredging of inland waters (3No.) Use of waste in construction (3No.) Storage of waste in secure place (2No.) Use of waste for a specified purpose Treatment of waste in a biobed or biofilter (2No.) Burying of waste in the open (2No.) Spreading waste on agricultural land to confer benefit (2No.) Treatment of waste aerosol cans Sorting of mixed waste Deposit of waste from a portable sanitary convenience	On site
Industrial Land Use (active)		
19No. significant land uses identified within 250m		
Classification	No. within 250m	Distance/ Direction from Site
Electricity substations	14	Onsite >10m
Vehicle repair, testing and servicing	1	~115m northeast
Construction and tool hire	1	~160m northeast
Airlines and airline services	1	~165m south
Distribution and haulage	1	~165m south
Storage tank	1	~245m north
Licensed Discharges to Controlled Water		
None recorded within 500m		
Pollution Incidents		
2No. recorded within 250m		
Category	Details	Distance/ Direction from Site
Radioactive Substance Authorisation	Cardiff School of Engineering - disposal of radioactive waste	~230m west
Pollution Incidents	Pollutant: oils and fuel (2015) Water impact: not known Land impact: Cat 4 (no impact) Air impact: Cat 4 (no impact)	On site

2.9 Engineering Considerations

2.9.1 Engineering considerations identified from the GroundSure® report for the site are summarised in Table 2.8.

Table 2.8: Engineering Considerations

Ground Stability Hazards						
Hazard	Hazard Potential					
	No Hazard	Negligible	Very Low	Low	Moderate	High
Shrink/swell clays		X				
Running sand			X			
Compressible ground		X				
Collapsible ground			X			
Landslide			X			
Ground dissolution		X				
Coal mining	None recorded on site					
Non-coal mining	None recorded within 1000m					
BGS Recorded Mineral Sites						
None recorded within 500m						

2.10 Regulatory Consultations

2.10.1 Regulatory consultations were undertaken with the relevant departments at Vale of Glamorgan Council with respect to possible environmental issues and ground conditions on-site and in the surrounding area. A summary of the response is provided below in Table 2.9. The full response is presented in Appendix E.

Table 2.9: Regulatory Consultations Summary

Shared Regulatory Services – Vale of Glamorgan Council	- The Council report that there are no landfills, or sites that have been identified by the Council as 'contaminated land' within 500m of the site. - There are no known private water supplied reported within 500m and there are no records of any site investigation in or in proximity to the site. - The Council report that they are not aware of any ground gas problems in the site area. - Information regarding the storage of petroleum hydrocarbons is yet to be received from the Shared Regulatory Services of Vale of Glamorgan Council. Any pertinent information received in due course will be issued under separate cover.
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2.11 Unexploded Ordnance Survey

2.11.1 A Stage 1 Preliminary UXO Risk Assessment was completed for the site by Brimstone Site Investigation, Report reference PRA-26-3052 (Appendix F). A summary of the report is presented below:

- Evidence of multiple high explosive bombing incidents have been recorded within close proximity to the Site from available records.
- Two areas of structural clearance, potentially the result of bomb damage, have been identified within 100m radius of the site, the closest is reported ~40m south-east.
- The assessment concluded that a Stage 2 Detailed Risked Assessment should be undertaken for the site to further assess the risk to the proposed works, where future intrusive and development works are proposed.

2.12 Initial Conceptual Model

2.12.1 In accordance with the Environment Agency Land Contamination: Risk Management Guidance (LCRM), potential source-pathway-receptor contaminant linkages identified from the preliminary risk assessment phase are summarised in the following sections.

2.13 Potential Sources

2.13.1 The source is defined as a contaminant or pollutant that is in, on or under the land and that has the potential to cause harm or pollution. The source can potentially be present on the site or within influence of the site in the case of an off-site source.

2.13.2 Potential sources of contamination identified on and within the vicinity of the site are summarised below:

Potential On-Site Sources

- Localised areas of made ground of unknown chemical composition; and
- Current and historical on-site activities – historical garage ‘Grove Garage’ recorded and current electricity substation and tank recorded on site.

Potential Off-Site Sources

- Potentially contaminative historic land uses including electricity substation, garages, railway lines and embankment. However, given the age, distance and scale of such features, significant migration is considered to be low and therefore, have not been considered future within the assessment.

2.14 Potential Receptors

2.14.1 Receptors are defined as the entity (e.g. human, animal, water, vegetation, building services etc) which has the potential to experience adverse effects from direct or indirect exposure to potentially hazardous contaminants.

2.14.2 Potential receptors identified in relation to the proposed development as part of this preliminary risk assessment are:

- Current/future site users (most sensitive receptor being an adult of college/university age);
- Construction and maintenance workers;
- Controlled waters (Secondary Aquifers); and
- Proposed development/ structures (below ground structures, services and concrete, proposed buildings on site).

2.15 Potential Pathways

2.15.1 Pathways are defined as the route contaminants take from a source to an exposed receptor. The exposure pathways can be direct or indirect transport from one medium to another.

2.15.2 Potential contaminant pathways relevant to the anticipated contaminants, ground conditions and proposed end use (receptors) include:

Human Health

- Dermal contact – Direct skin contact with contaminated soil, dust, or water. Certain contaminants can also be absorbed into the body through skin, or enter directly through open cuts or abrasions;
- Ingestion of contaminated drinking water; and
- Inhalation – inhalation of soil, dust, gases, or vapours which have migrated through the unsaturated zone which may result in short term acute risks of asphyxiation or toxicity, and/or long-term chronic risks to human health.

Controlled Waters

- Infiltration and percolation of contaminants resulting in migration through permeable strata such as the unsaturated zone to the underlying groundwater.
- Migration of mobile/leachable contaminants (e.g. surface spillages) by diffusion, advection, dispersion and capillary transport vertically down through any near surface unsaturated zone until meeting the

groundwater table below, after which free/dissolved phase contaminants may potentially migrate beyond the site boundaries and impact off site receptors; and

- Horizontal migration of leachate causing a potential impact or below the ground along preferential pathways such as drainage pipe bedding or discontinuities and fractures within the underlying strata.

Ground Gases

- Vertical migration of gaseous contaminants through the unsaturated zone within permeable strata, or vertical and horizontal migration through preferential pathways such as fractures and discontinuities within the underlying solid geology.
- Migration of hazardous gases to indoor air through soil and building foundations.

Building Materials/Services

- Contaminated ground: Building materials (such as membranes) can be damaged by direct contact with contaminated ground, especially if mobile groundwater is present;
- Permeation of contaminants: Contamination within soil and groundwater can permeate through water supplies; and
- Explosive risk: Potential risk of fire and/or explosion within structures (both existing and proposed) caused by hazardous gases (for example – methane).

2.16 Hazard Assessment and Risk Estimation

- 2.16.1 As part of the risk assessment process, it is necessary to establish the potential risk from the probability and consequence of the event. Firstly, the magnitude of the probability is considered, and then the extent of the probability is considered. The combination of the consequence and probability is the resulting level of risk.
- 2.16.2 Potential contaminant linkages identified as part of this preliminary risk assessment are summarised in the Initial Site Conceptual Model presented in Table 2.10. References to risk estimations are made in accordance with the methodology presented in CIRIA publication C552 (2001) titled '*Contaminated Land Risk Assessment: A Guide to Good Practice*' and summarised in Appendix G.

Table 2.10: Initial Conceptual Model

Potential Source Location	Potential Hazard/ Source	Potential Receptor	Potential Pathway to Receptors	Potential Consequence of Contaminant Linkage	Potential Probability of Contaminant Linkage	Risk Classification (Risk = Probability x Consequence)
On site	Made ground and potentially contaminative processes (including substation and tank)	Current and future site users and construction workers	Exposure to potential contaminants through ingestion, inhalation and dermal contact.	Medium	Low Likelihood to Likely: Given the development history recorded on site, and observations made during the site reconnaissance, the presence of made ground of unknown thickness and chemical composition, or shallow contaminants on site cannot be discounted at this stage.	Low to Moderate Risk
		Controlled waters (Secondary Aquifers)	Leaching of potential contaminants from made ground and vertical and lateral migration through the saturated zone to controlled waters.	Medium	Low Likelihood: Given the potential presence of made ground of unknown chemical composition and the recorded aquifer status of the underlying strata (Secondary Aquifers), a potential risk to controlled waters, whilst likely to be low, cannot be fully discounted. Notwithstanding this, the presence of the building footprint and hardstanding across the majority of the proposed development area may limit the potential for infiltration and subsequent contaminant migration.	Moderate/Low Risk
		Current and future site users, construction workers and proposed development	Migration, ingress and accumulation of ground gasses.	Severe	Unlikely to Low Likelihood: Made ground, if present at a significant thickness and composition, may act as a potential source of ground gas. Notwithstanding this, given the development history and observations made during the reconnaissance survey, the likelihood of made ground to provide a potential ground gas source is considered to be low.	Moderate risk
On site	Aggressive / contaminated ground	Buildings, materials and services	Contact with potentially aggressive / contaminated materials present within the underlying ground materials	Medium	Low Likelihood to Likely: The potential for aggressive ground associated with sulphate concentrations within the underlying ground materials and/ or the presence of hydrocarbon impacted material cannot be discounted at this stage.	Moderate/Low Risk

3 GROUND ENGINEERING

3.1 Proposed Development

- 3.1.1 The proposed development is understood to comprise the demolition of the existing structure to allow for the construction of a 23No. storey residential structure to provide student accommodation. At this stage no structural information has been made available to TEC and therefore generic recommendations have been provided where possible.

3.2 Potential Geotechnical Hazards

- 3.2.1 The GroundSure report indicates that the hazard for running sand, collapsible ground and landslide, is 'very low' risk, while a 'negligible' risk has been recorded for shrink/swell clay, compressible ground and ground dissolution. In addition, the site is not reported to be located within an area of reported coal mining or within 1km of reported non-coal mining.
- 3.2.2 Available geological mapping records the site to be underlain by Glaciofluvial Sheet Deposits, described by the BGS as 'sands and gravels'. In turn, the site is reported to be underlain by solid geology of the Mercia Mudstone Group described by the BGS as 'dominantly red, less commonly green-grey, mudstones and subordinate siltstones with thick halite-bearing units in some basinal areas. Thin beds of gypsum/anhydrite are widespread; thin sandstones are also present'.
- 3.2.3 BGS records indicate several boreholes on and in proximity to the site, with two boreholes reported within the red-line boundary of the site. The available mapping indicates one borehole to the front of the structure along Newport Road, and the other to the rear of the site.
- 3.2.4 In summary, the ground conditions recorded within these boreholes are very similar, with made ground recorded to 0.9m and 1.1mbgl, underlain by clay and gravel, becoming gravelly and clayey sand to 2.4m and 3.4mbgl. In turn, this material is reported to be underlain by dense sand and gravel to 4.0m and 4.3mbgl. These granular deposits are representative of the reported Glaciofluvial Sheet Deposits. It should also be noted that based upon the information within the borehole logs, these granular Glaciofluvial Sheet Deposits were considered to be difficult to excavate/drill, with up to ~7hours of chiselling recorded to progress through these materials.
- 3.2.5 It should be noted that as part of the borehole record, a letter report from Ground Explorations Ltd, dated January 1962, indicates *"regarding the stratum of "clayey sand" encountered above the red clay or red marls, as you are aware, very high penetration values were recorded in this stratum and this has suggested that the stratum comprises of a soft sandstone. However from the general appearance of the small disturbed samples, and the result of the single sieve analysis, it would appear that the material is a very well graded sand which alone, provided the particles are deposited in a suitable manner, could account for the high penetration values. Nevertheless, there is obviously a possibility that the sand is cemented in some way, although the addition of acid has shown that this is not calcareous cement."*
- 3.2.6 Notwithstanding this, the available borehole logs from the vicinity indicate the presence of dense/very dense, locally clayey, sands and gravels with a varying cobble content. While no SPT data is provided on the on-site logs, the nearby records indicate SPTs reaching effective refusal with 'N' values in excess of 27.
- 3.2.7 Materials considered representative of the reported underlain bedrock geology (Mercia Mudstone Group) was recorded from 4.0m and 4.3mbgl to maximum depths of 6.1m and 6.4mbgl. The Mercia Mudstone Group was typically recorded as red marly clay, grey clay, and red marl.
- 3.2.8 The Ground Explorations Ltd letter also states *"the term rock marl has been used to denote a very hard marl, but by normal rock standards of course, the material could be counted as no more than a soft rock."* SPT data from the nearby borehole records suggest SPT 'N' values in excess of 50.

3.3 Existing Foundations

- 3.3.1 A foundation exposure pit (FP01) was advanced at the approximate location as agreed on site during the works with Shear Design, located adjacent to an existing column located within the under-croft car park.
- 3.3.2 The foundation pit recorded the presence of existing concrete, assumed to be a pad foundation, at approximate ~0.56m below the current under-croft level and whilst the full thickness of the concrete pad

could not be determined during these works, it was noted to extend to a depth of at least ~1.25m below the under-croft ground level. The presumed pad was observed to be some 2.0m by 2.8m in plan. The location of the foundation pit detailed within the photographs presented in Appendix A and a sketch of FP01 is presented in Figure 2.

- 3.3.3 It should be noted that while no visual evidence of ground subsidence or movement was observed on the ground surface during the site reconnaissance, it is understood that movement of the rear portion of the existing building has been recorded (note that at the time of the site reconnaissance survey this part of the building was scaffolded).

3.4 Likely Foundation Requirements

- 3.4.1 The Standard Penetration Test (SPT) 'N' results undertaken within the superficial sands and gravels (present at the site to a depth of around 4.75mbgl) suggest a shear strength, ϕ' , to be in excess of 42° and an assumed $c' = 0\text{kN/m}^2$.
- 3.4.2 In the absence of strength data from the underlying Mercia Mudstone an assumed undrained strength of 450kN/m^2 has been taken to model an extremely weak rock.
- 3.4.3 Based on the recommendations provided in BS8002:2015, it is suggested that a bulk density of 21kN/m^3 may be appropriate for the granular superficial materials. While a bulk density of 20.0kN/m^3 may be appropriate for the underlying Mercia Mudstone (BGS Research Report RR/01/02).
- 3.4.4 As a result of the height of the proposed building (up to 23No. storeys) and the likely associated column loads, potentially up to 12000kN , it is considered that a piled foundation may be appropriate. It should be noted that the proximity of adjacent structures will need to be carefully considered when choosing the most appropriate pile type and methodology and it is suggested that a specialist piling contractor should be consulted regarding the piling options and detailed design of the most appropriate option. However, it is anticipated that based on the available limited data, a bored pile system would be appropriate for the site. It should be noted that the presence of cobble and potentially boulders within the sands and gravels should be taken into account when determining the most appropriate pile type.
- 3.4.5 Following the recommendations given in Eurocode 7 and when assuming the estimated strength parameters given above, a single 750mm bored pile installed to 25mbgl is likely to provide a resistance in the region of 4900kN while a 900mm pile to this depth may provide around 6000kN .
- 3.4.6 Initial pile capacities are summarised below:

Table 3.1: Indicative Pile Bearing Resistances

Pile diameter	Pile Resistance		
	20mbgl	25mbgl	30mbgl
750mm	3800kN	4900kN	6000kN
900mm	4700kN	6000kN	7350kN

3.5 Preliminary Geotechnical Recommendations

- 3.5.1 Based upon the findings of this desk study, the scale of the proposed development and the anticipated ground conditions, it is recommended that an appropriate geotechnical investigation be undertaken to ascertain underlying ground conditions and foundation design parameters for the proposed development.

4 RECOMMENDED FURTHER WORKS

4.1.1 Based upon our current conceptual understanding of the site and the proposed end use, the main Significant Pollutant Linkages identified are considered as follows:

- Human Health (current and future site users and construction workers) – exposure to contaminants associated with potential made ground and potentially contaminative land uses on site through the ingestion, inhalation, and dermal contact pathways.
- Controlled Waters (Secondary Aquifers) – risk to controlled waters from potential onsite contaminants of potential concern (CoPC) and subsequent migration to identified groundwater receptors.
- Human Health (future site end users and on site structures) – migration, ingress and inhalation of ground gas from nearby potentially infilled land.

4.2 Geoenvironmental Risk Management Recommendations

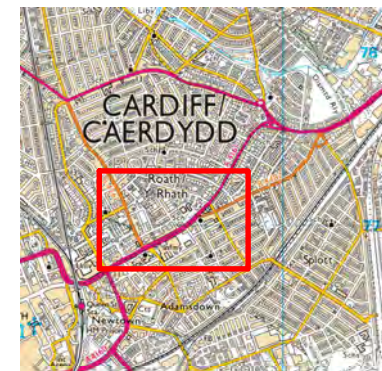
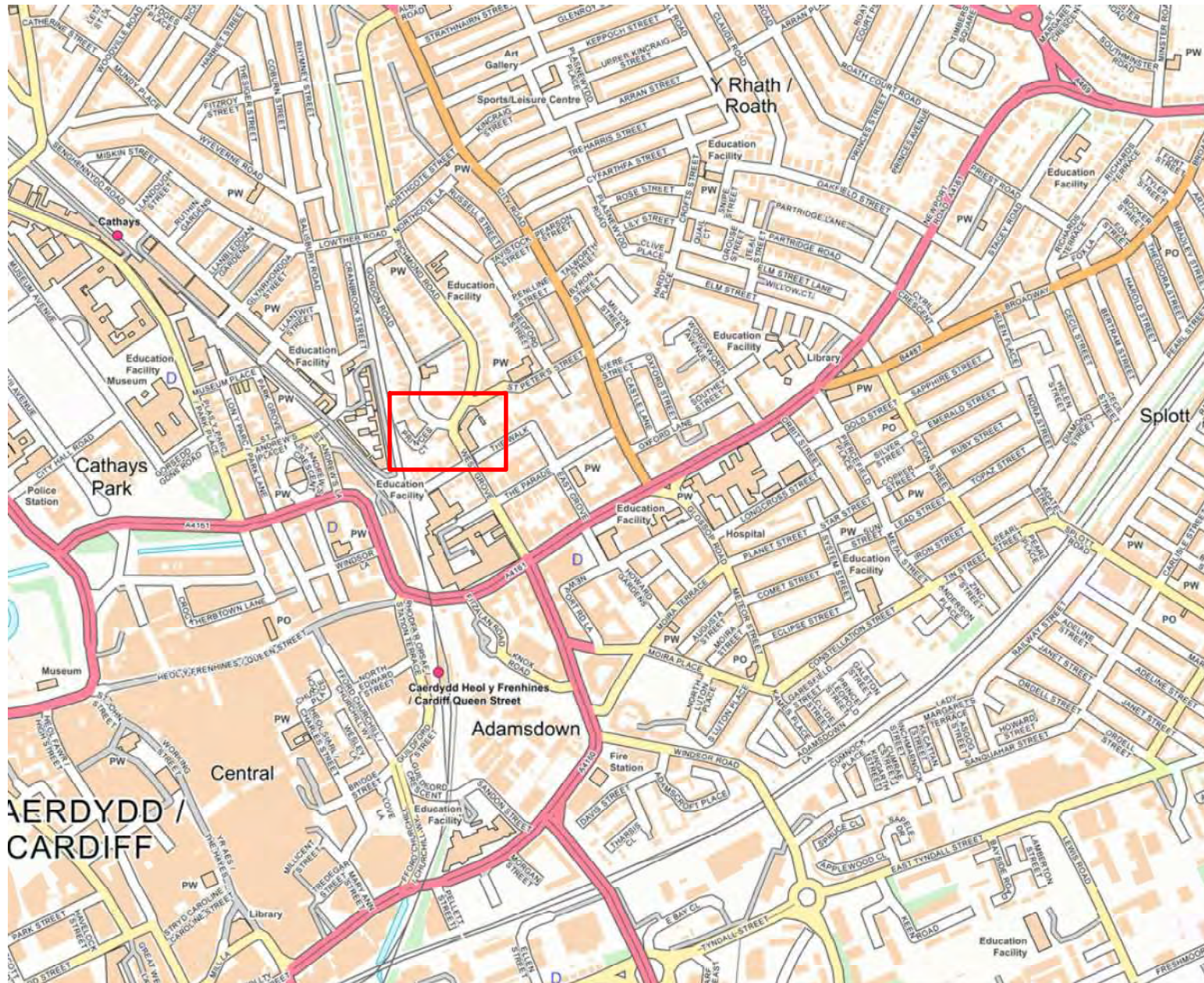
4.2.1 Given the assessment presented within this report additional works would be recommended to fully define the geoenvironmental issues associated with the site in relation to the proposed development. This phase of assessment would involve refinement of the site conceptual model developed as part of the preliminary risk assessment based on the findings of an exploratory ground investigation.

4.3 Geotechnical Risk management Recommendations

4.3.1 Given the scale of the proposed development, the potential presence of made ground and the anticipated ground conditions, a suitable geotechnical intrusive investigation would be recommended to confirm the engineering conditions and the constraints associated with the site and to ascertain foundation design parameters for the proposed development.

TEC

Figures and Drawings



Key:



Approximate Site Location

Ty Cambria, Newport Road, Cardiff

Figure 1:
Site Location Plan

Project No. 2603016.001

Scale: N/A

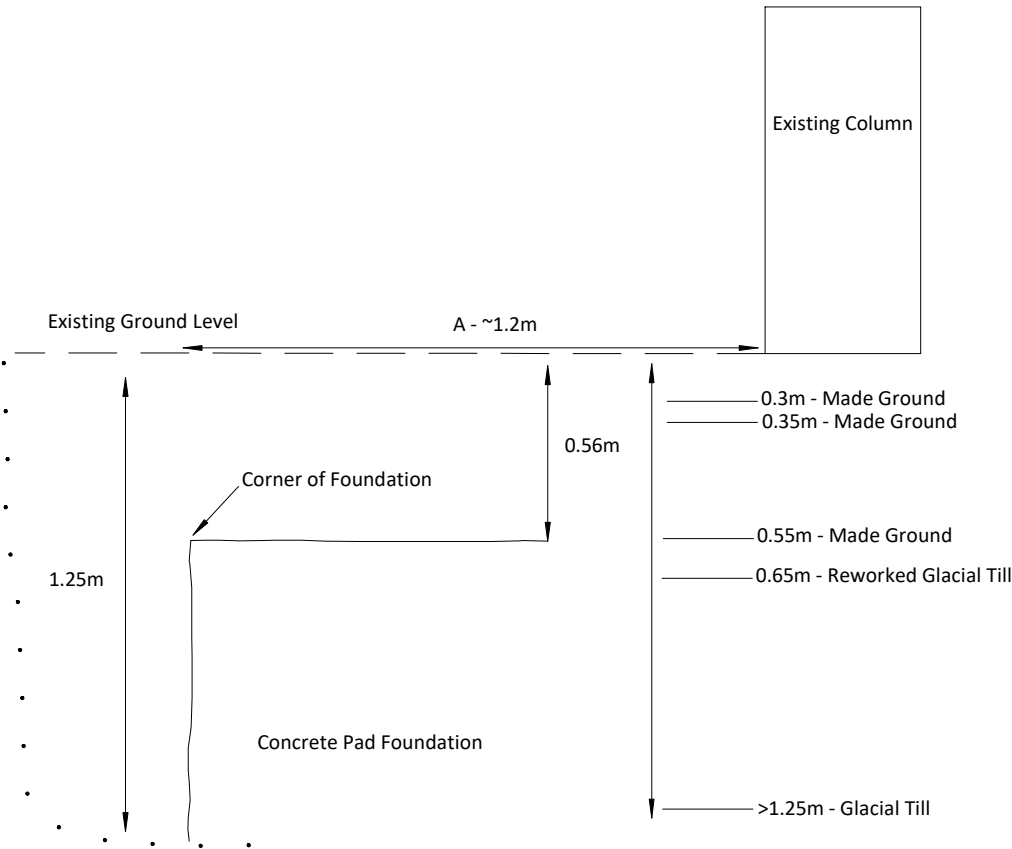
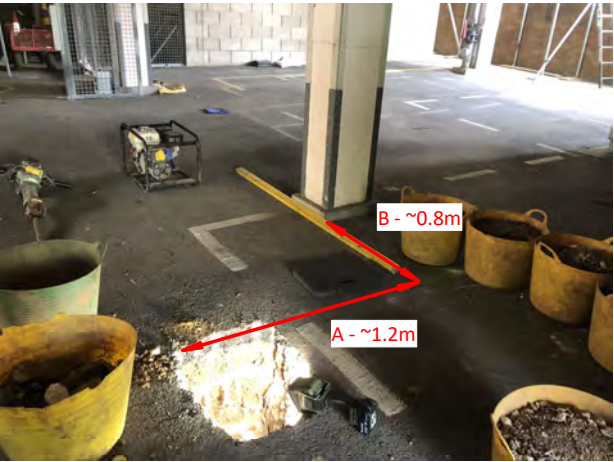
Date: June 2026

Version: -



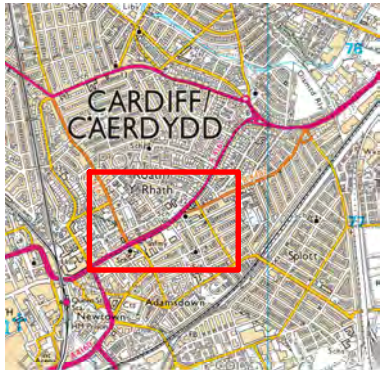
TEC
Cardiff House
Cardiff Road
Barry
Vale of Glamorgan
CF63 2AW
www.tecon.co.uk
01458 555148
info@tecon.co.uk

Foundation Exposure - FP01



ENCOUNTERED MATERIAL:

- 0.0 - 0.3mbgl: Black tarmacadam hardstanding (0.15m) over reddish brown slightly clayey gravelly sand. Gravel of chert, mudstone, siltstone and limestone. (MADE GROUND)
- 0.3 - 0.35mbgl: Yellowish brown to light brown sand with plastic sheeting at 0.3mbgl. (MADE GROUND)
- 0.35 - 0.55mbgl: Reddish brown to dark brown slightly silty gravelly sand. Gravel of limestone, siltstone and sandstone. (MADE GROUND)
- 0.55 - 0.75mbgl: Reddish brown slightly gravelly silty clay. Gravel of fine to medium subrounded chert and siltstone. (REWORKED GLACIAL TILL)
- 0.75 - >1.25mbgl: Light brown to reddish brown slightly clayey gravelly sand with low cobble content. Gravel of medium to coarse and cobbles of subangular to subrounded sandstone and rare chert. (GLACIAL TILL)



Ty Cambria, Newport Road, Cardiff

Figure 2:
Foundation Exposure - FP01

Project No. 2603016.001

Scale: N/A

Date: June 2026

Version: -



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Appendix A

Site Photographs



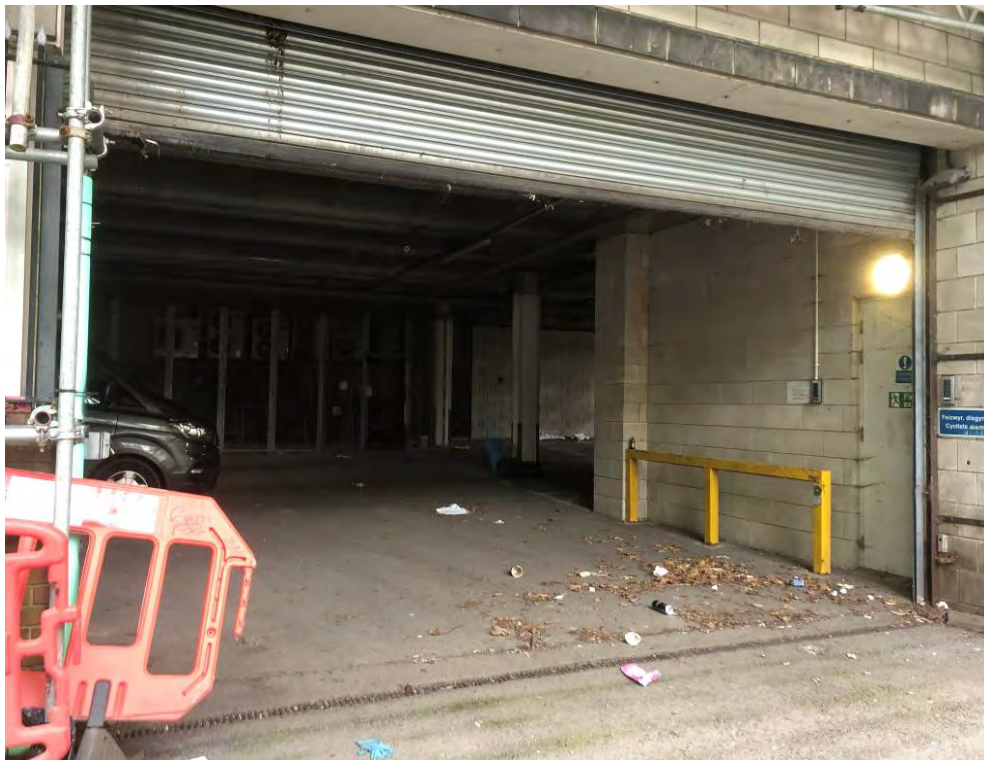
Photograph 1: View of Tŷ Cambria, facing north from Newport Road.



Photograph 2: View of Tŷ Cambria, facing south-west from East Grove.



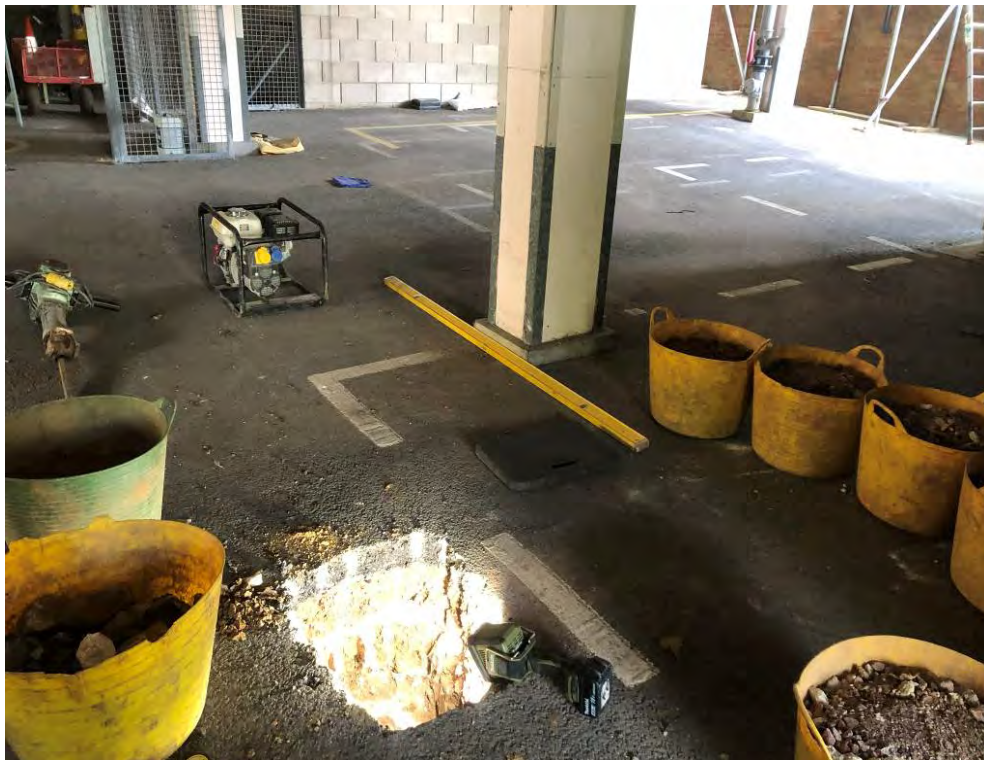
Photograph 3: View of Tŷ Cambria with substation structure, facing south-east from the access road to the north of the site.



Photograph 4: View of current access to undercroft parking area, from access road to the north of the site.



Photograph 5: View of substation outlet and tank located within the existing undercroft parking at the site.



Photograph 6: View of the location of FP01.



Photograph 7: View of corner of pad foundation encountered within FP01 at ~0.58mbgl.



Photograph 8: View of ground materials encountered within FP01.

Appendix B

Historical Maps

Site details:	TY CAMBRIA HOUSE, 29 NEWPORT ROAD, CARDIFF
Client ref:	2603016.001 - Ty Cambria House, Newport Road,
Report ref:	GS-YRW-63H-LE5-I69
Grid ref:	319055.1, 176826.65
Production date:	11 May 2026

Map name:	500 Scale Town Plans
Map date:	1880
Scale:	1:500
Printed at:	1:1,000



Date: 1880 Surveyed: 1880
Date: 1880 Surveyed: 1880

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Site details:

TY CAMBRIA HOUSE, 29
NEWPORT ROAD, CARDIFF

Client ref:

2603016.001 - Ty Cambria
House, Newport Road,

Report ref:

GS-YRW-63H-LE5-I69

Grid ref:

319055.1, 176826.65

Production date:

11 May 2026

Map name:

County Series

Map date:

1880-1882

Scale:

1:2,500

Printed at:

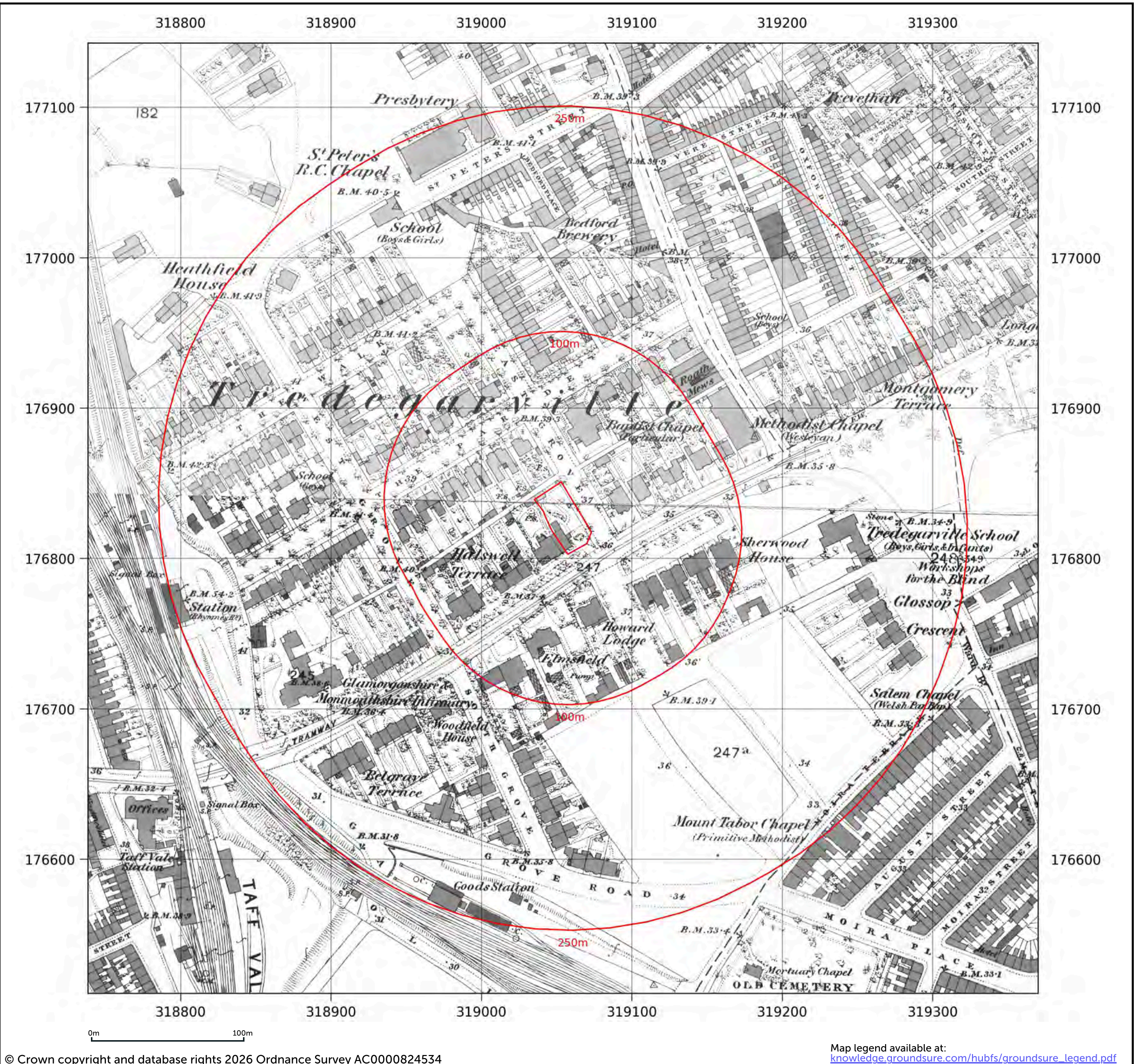
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Date: 1880
Surveyed: 1880
Revised: 1880

Date: 1882
Surveyed: 1882
Revised: 1882



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Site details:	TY CAMBRIA HOUSE, 29 NEWPORT ROAD, CARDIFF
Client ref:	2603016.001 - Ty Cambria House, Newport Road,
Report ref:	GS-YRW-63H-LE5-I69
Grid ref:	319055.1, 176826.65
Production date:	11 May 2026

Map name:	County Series
Map date:	1901
Scale:	1:2,500
Printed at:	1:2,500



Date: 1901 Surveyed: 1901 Revised: 1901
Date: 1901 Surveyed: 1901 Revised: 1901

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Site details: TY CAMBRIA HOUSE, 29
NEWPORT ROAD, CARDIFF
Client ref: 2603016.001 - Ty Cambria
House, Newport Road,
Report ref: GS-YRW-63H-LE5-I69
Grid ref: 319055.1, 176826.65
Production date: 11 May 2026

Map name: County Series
Map date: 1920
Scale: 1:2,500
Printed at: 1:2,500



Date: 1920
Surveyed: 1920
Revised: 1920

Date: 1920
Surveyed: 1920
Revised: 1920

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Site details: TY CAMBRIA HOUSE, 29
NEWPORT ROAD, CARDIFF
Client ref: 2603016.001 - Ty Cambria
House, Newport Road,
Report ref: GS-YRW-63H-LE5-I69
Grid ref: 319055.1, 176826.65
Production date: 11 May 2026

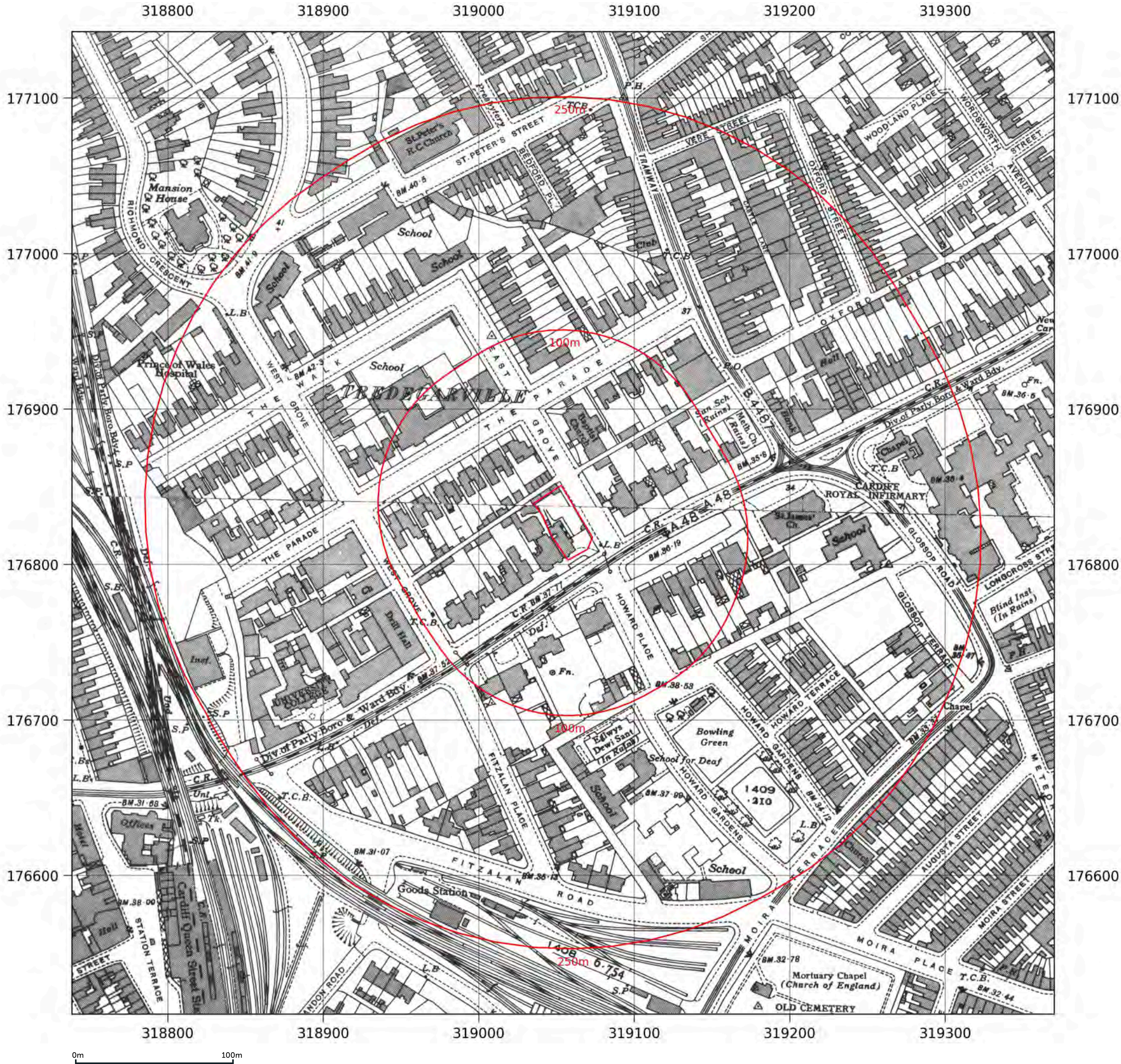
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Surveyed: 1941
Revised: 1941

Date: 1942
Surveyed: 1942
Revised: 1942

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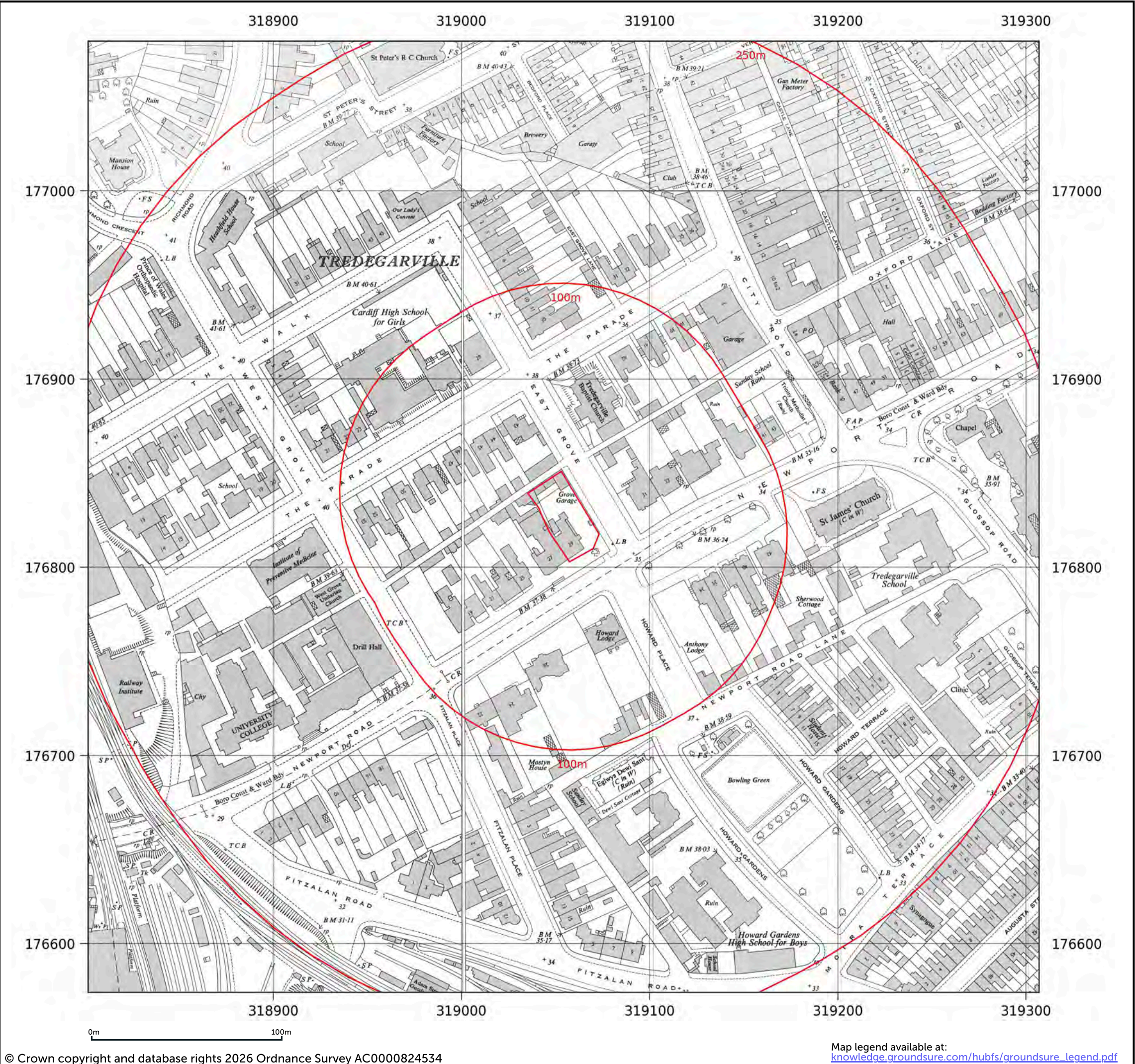
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House, Newport Road,
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Production date: 11 May 2026

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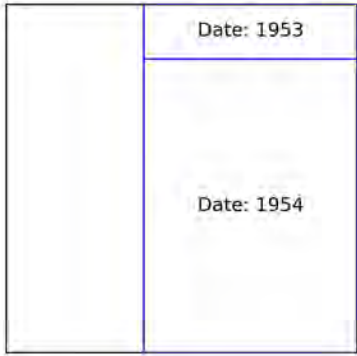
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Date: 1953 Surveyed: 1953 Revised: 1953 Levelled: 1948	Date: 1953 Surveyed: 1953 Revised: 1953 Levelled: 1948

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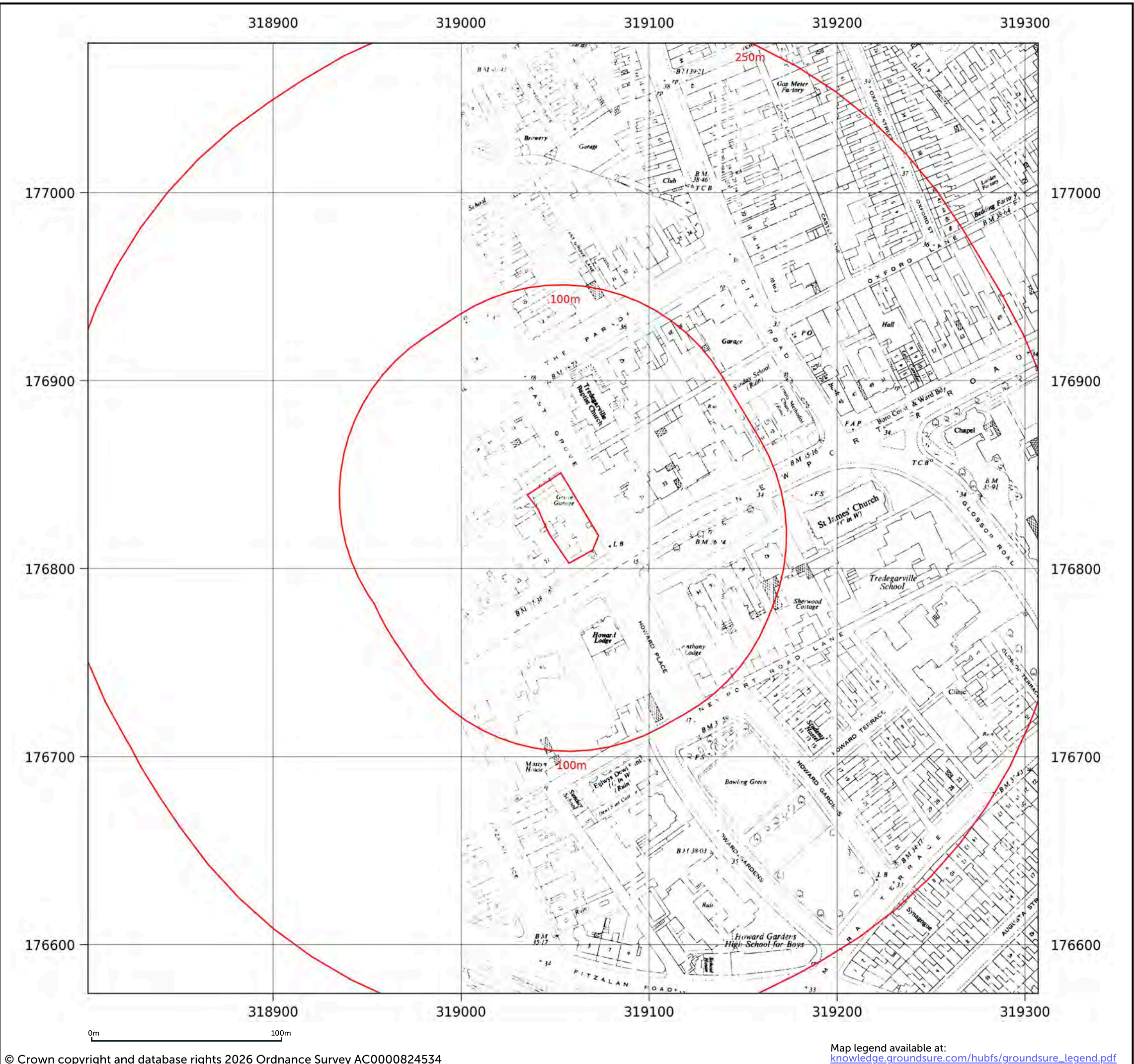


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Client ref: 2603016.001 - Ty Cambria House, Newport Road,
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Grid ref: 319055.1, 176826.65
Production date: 11 May 2026

Map name: National Grid
Map date: 1953-1954
Scale: 1:1,250
Printed at: 1:2,000



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Site details: TY CAMBRIA HOUSE, 29
NEWPORT ROAD, CARDIFF
Client ref: 2603016.001 - Ty Cambria
House, Newport Road,
Report ref: GS-YRW-63H-LE5-I69
Grid ref: 319055.1, 176826.65
Production date: 11 May 2026

Map name: National Grid
Map date: 1952-1955
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Printed at: 1:2,500



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Date: 1955 Surveyed: 1953 Revised: 1953 Edition: 1955 Levelled: 1948	Date: 1955 Surveyed: 1953 Revised: 1953 Edition: 1955 Levelled: 1948

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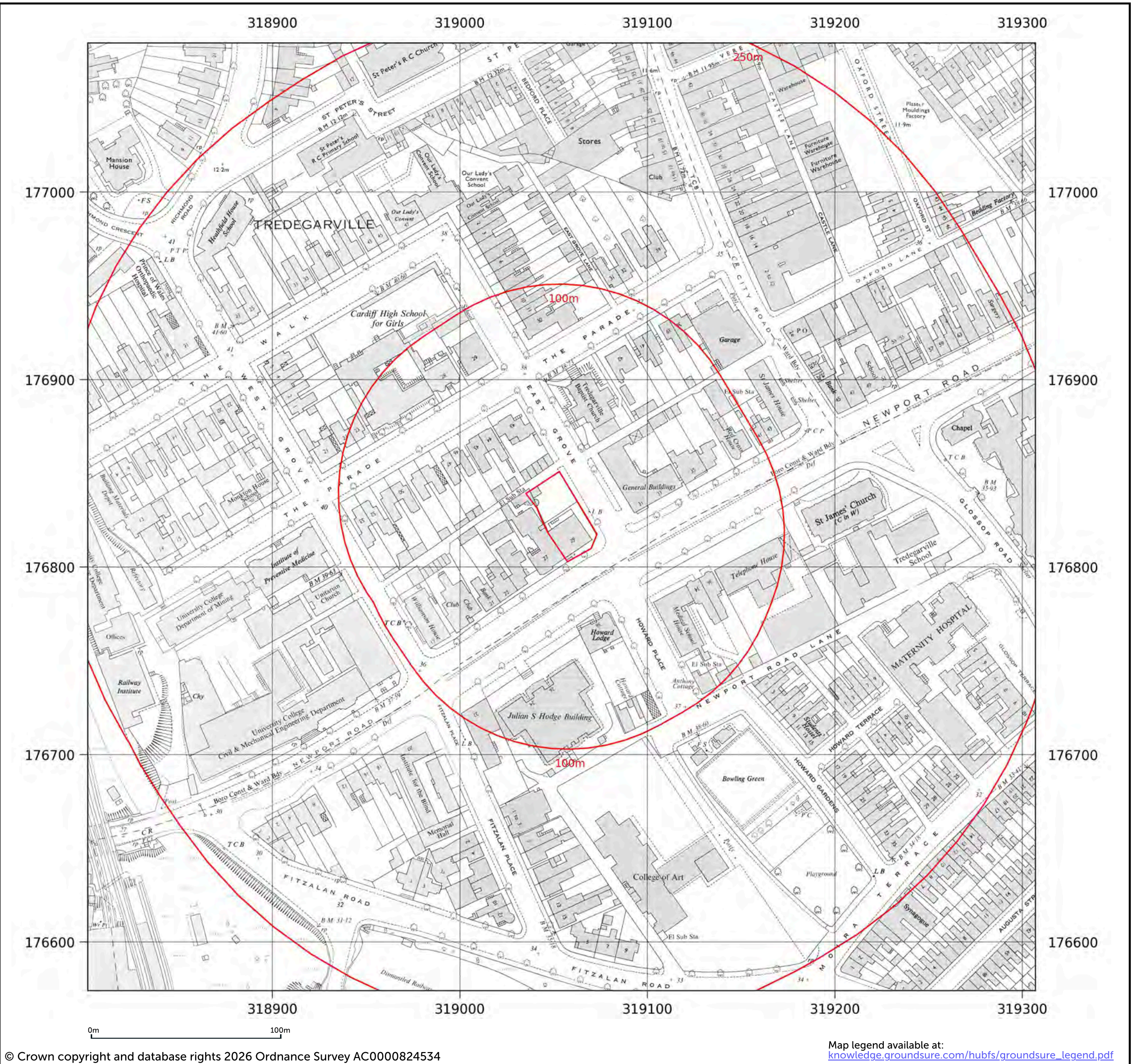
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NEWPORT ROAD, CARDIFF
Client ref: 2603016.001 - Ty Cambria
House, Newport Road,
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Grid ref: 319055.1, 176826.65
Production date: 11 May 2026

Map name: National Grid
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Printed at: 1:2,000



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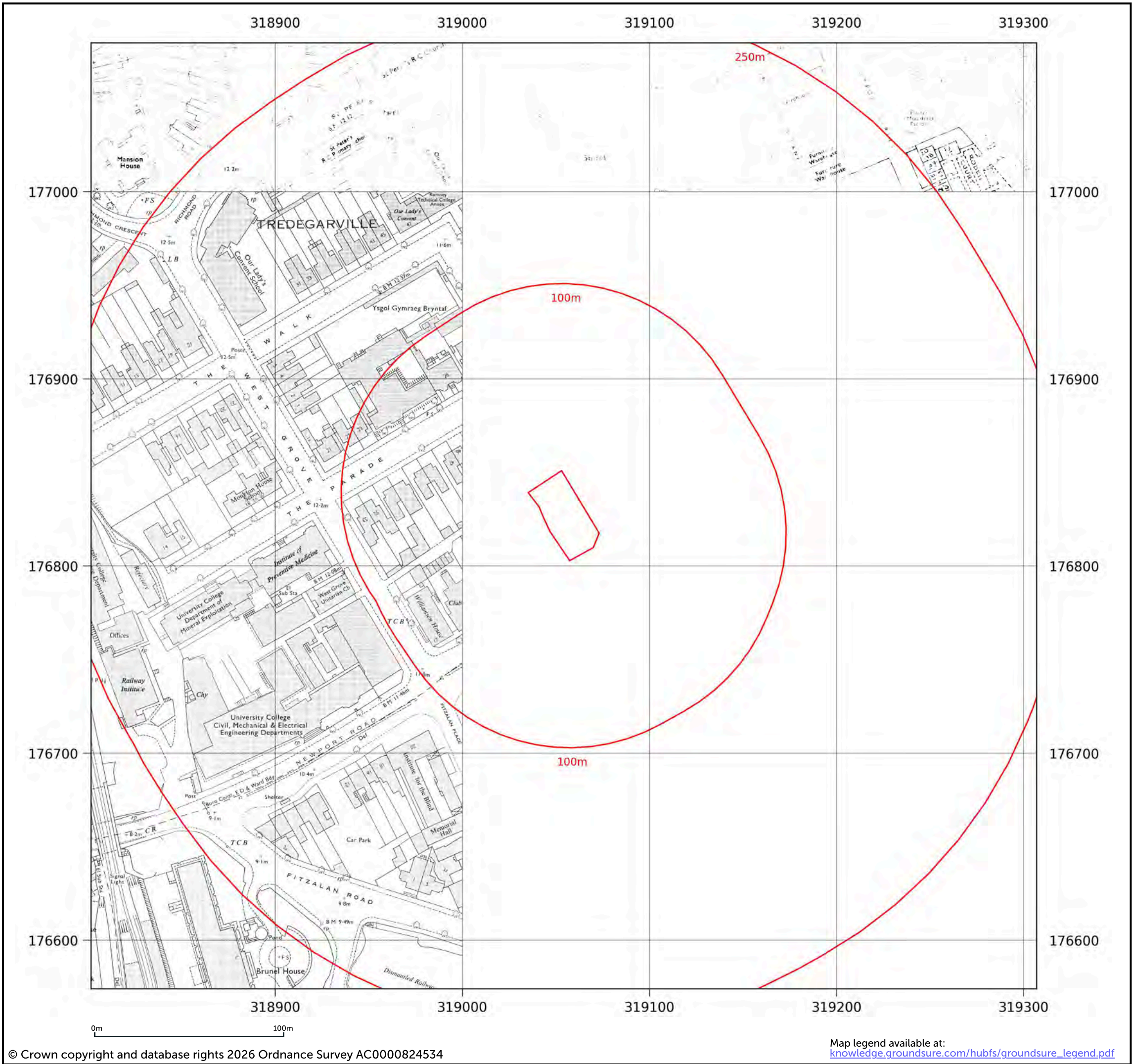
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NEWPORT ROAD, CARDIFF
Client ref: 2603016.001 - Ty Cambria
House, Newport Road,
Report ref: GS-YRW-63H-LE5-I69
Grid ref: 319055.1, 176826.65
Production date: 11 May 2026

Map name: National Grid
Map date: 1973-1977
Scale: 1:1,250
Printed at: 1:2,000



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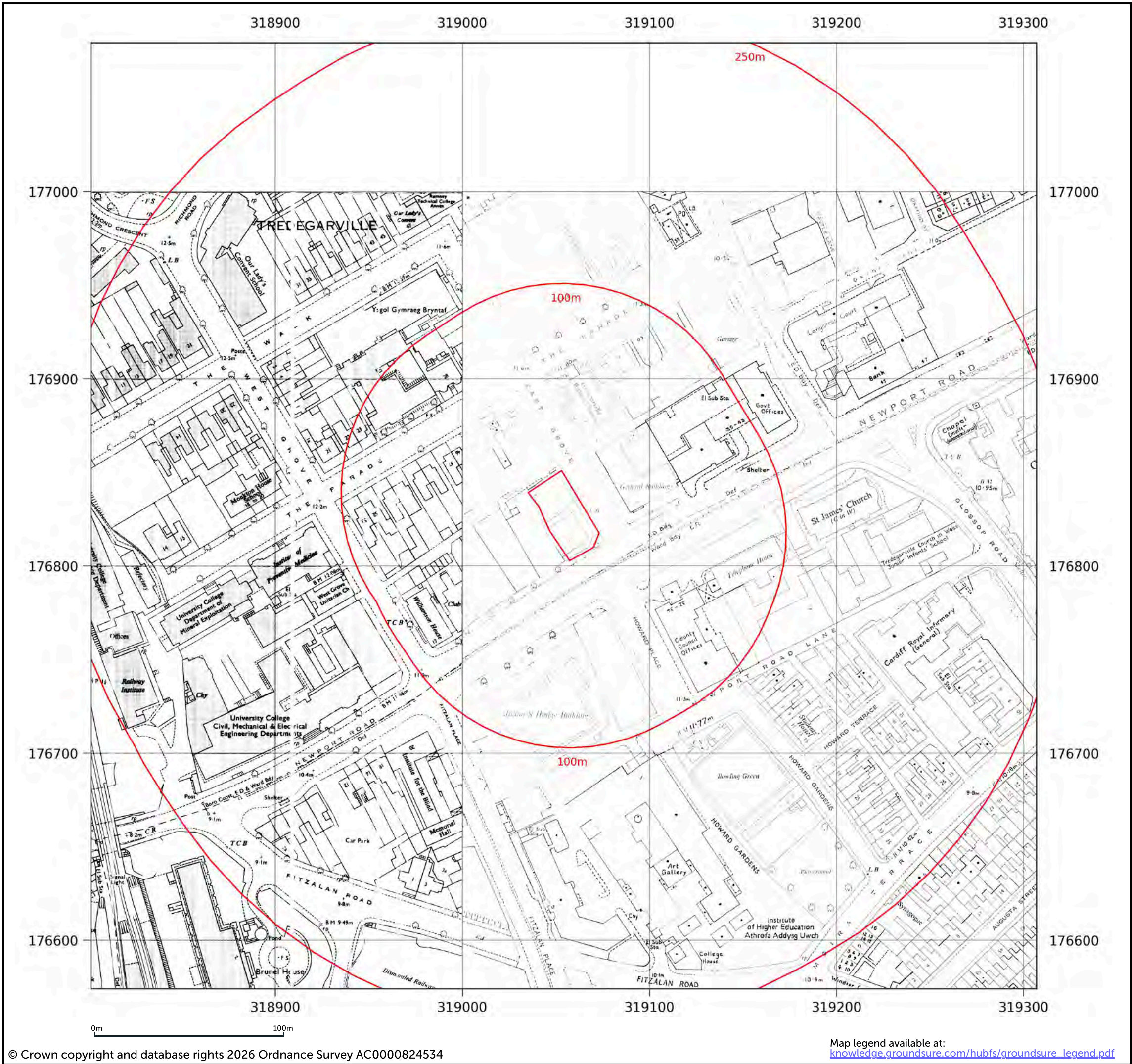


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NEWPORT ROAD, CARDIFF
Client ref: 2603016.001 - Ty Cambria
House, Newport Road,
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Grid ref: 319055.1, 176826.65
Production date: 11 May 2026

Map name: National Grid
Map date: 1978-1983
Scale: 1:1,250
Printed at: 1:2,000



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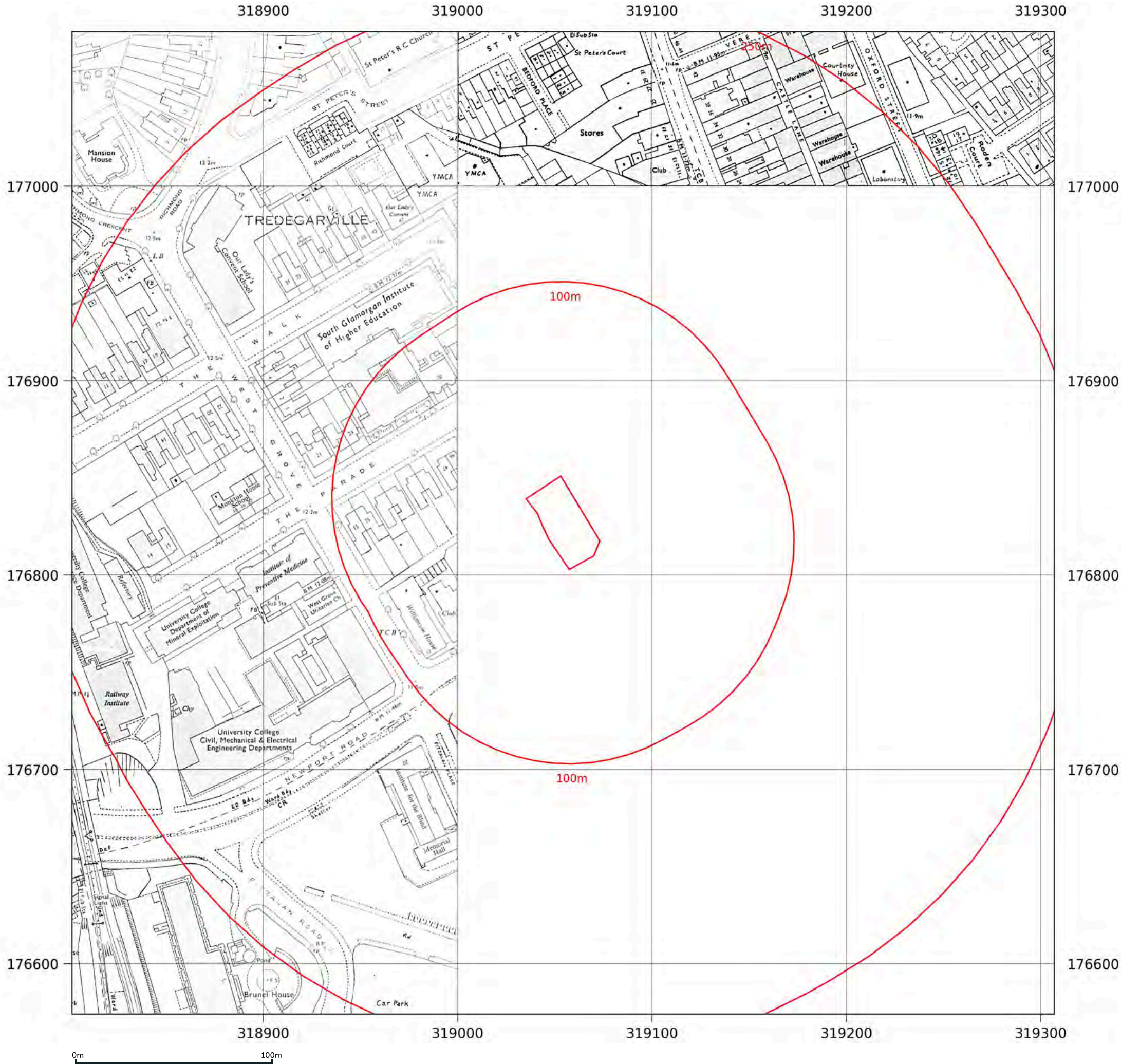
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Client ref: 2603016.001 - Ty Cambria
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Production date: 11 May 2026

Map name: National Grid
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Printed at: 1:2,000



Date: 1985 Surveyed: 1985 Revised: 1985 Copyright: 1985	Date: 1984 Surveyed: 1961 Revised: 1984 Copyright: 1984 Levelled: 1961
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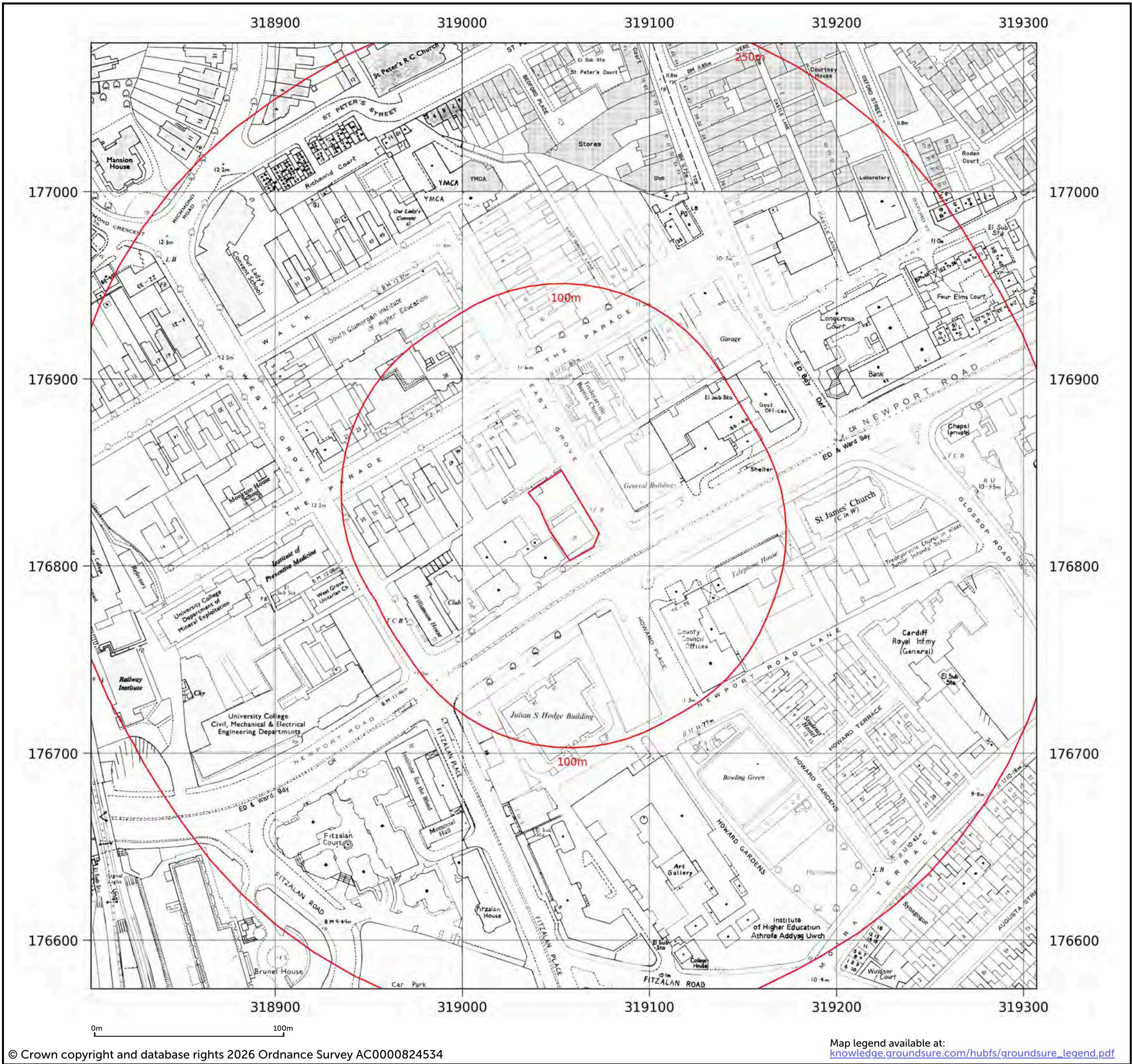
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NEWPORT ROAD, CARDIFF
Client ref: 2603016.001 - Ty Cambria
House, Newport Road,
Report ref: GS-YRW-63H-LE5-I69
Grid ref: 319055.1, 176826.65
Production date: 11 May 2026

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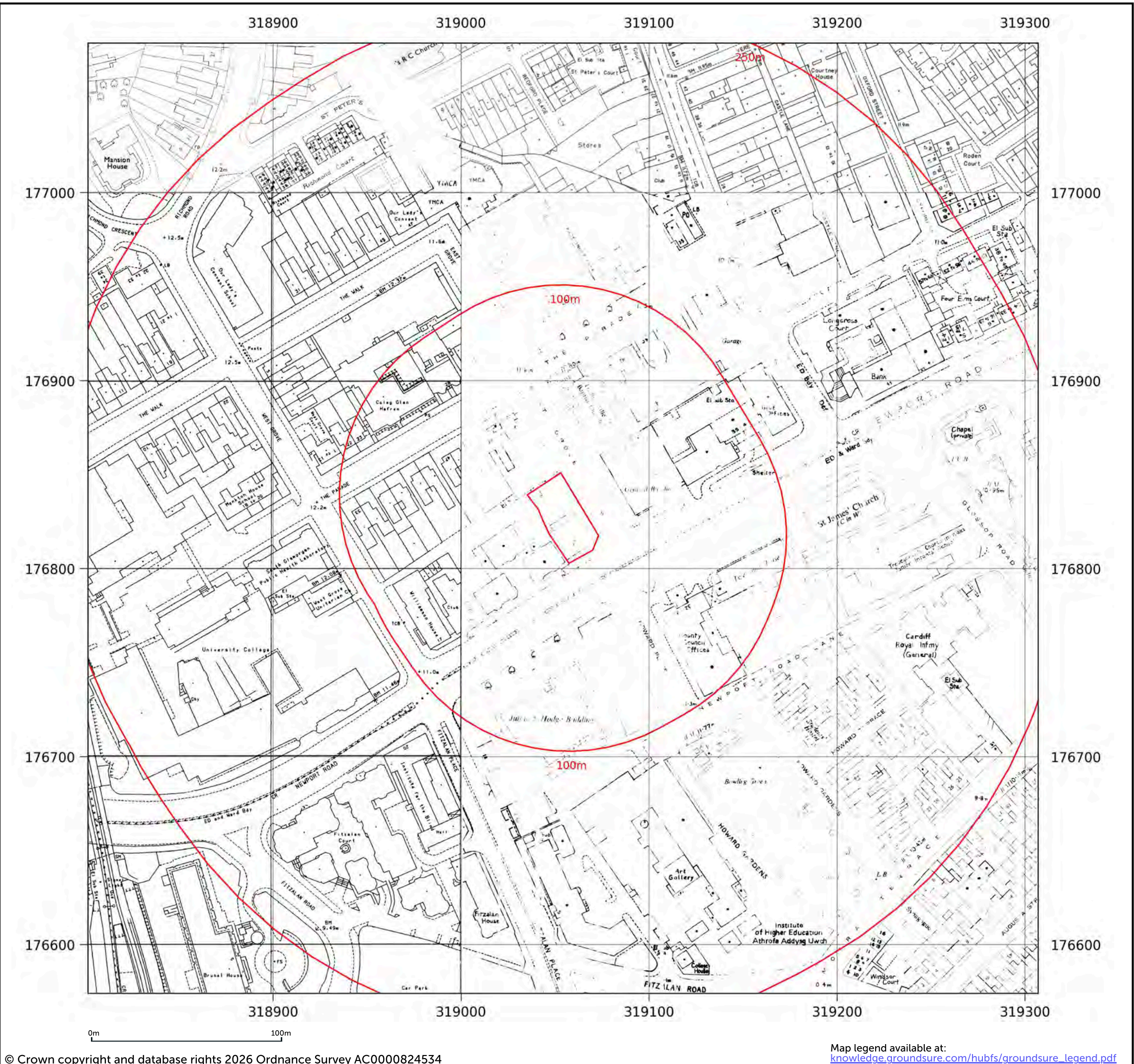
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Client ref: 2603016.001 - Ty Cambria House, Newport Road,
Report ref: GS-YRW-63H-LE5-I69
Grid ref: 319055.1, 176826.65
Production date: 11 May 2026

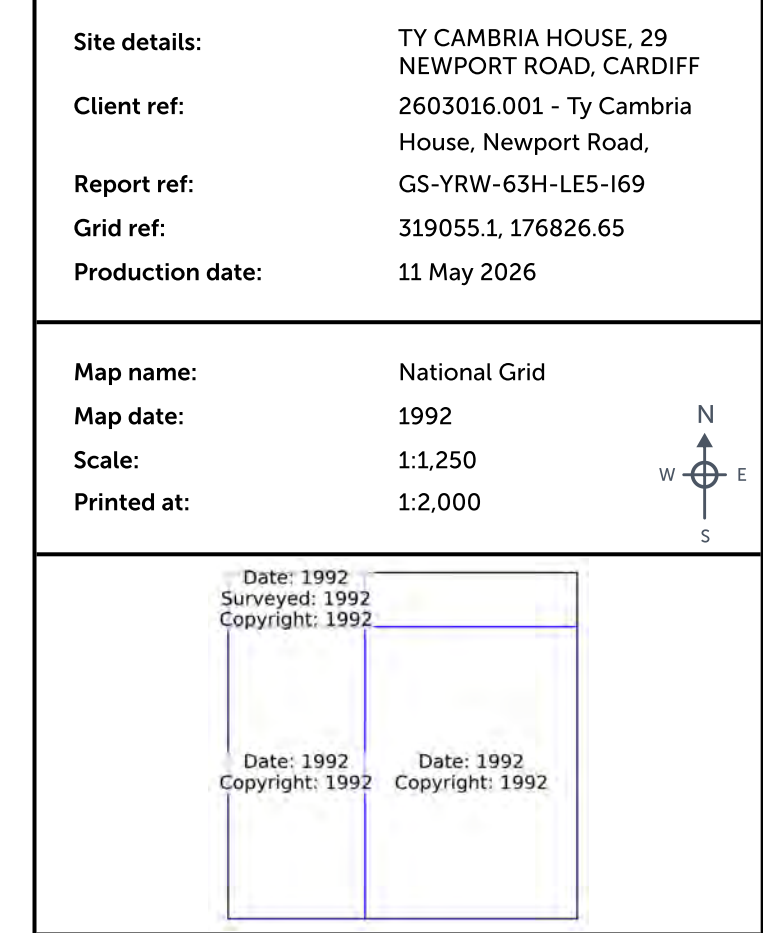
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Date: 1991 Surveyed: 1953 Revised: 1976 Copyright: 1991	Date: 1990

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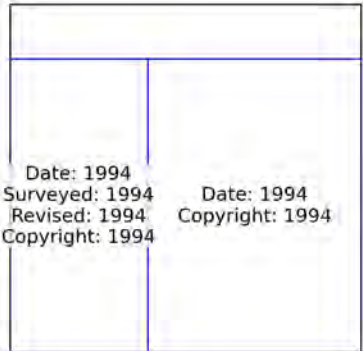


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LOCATION INTELLIGENCE

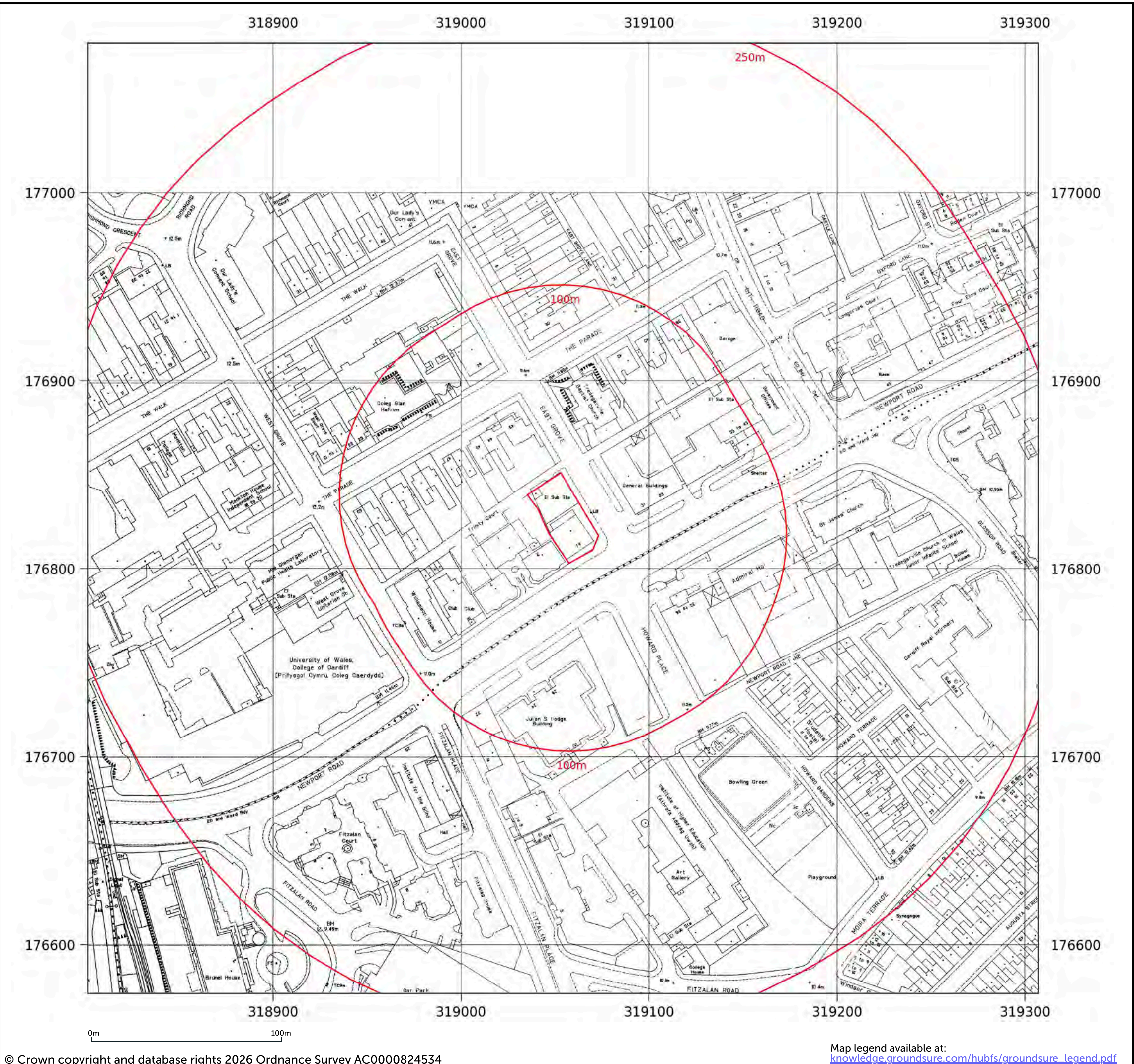
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Licensed Data

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NEWPORT ROAD, CARDIFF
Client ref: 2603016.001 - Ty Cambria
House, Newport Road,
Report ref: GS-YRW-63H-LE5-I69
Grid ref: 319055.1, 176826.65
Production date: 11 May 2026

Map name: National Grid
Map date: 1994
Scale: 1:1,250
Printed at: 1:2,000



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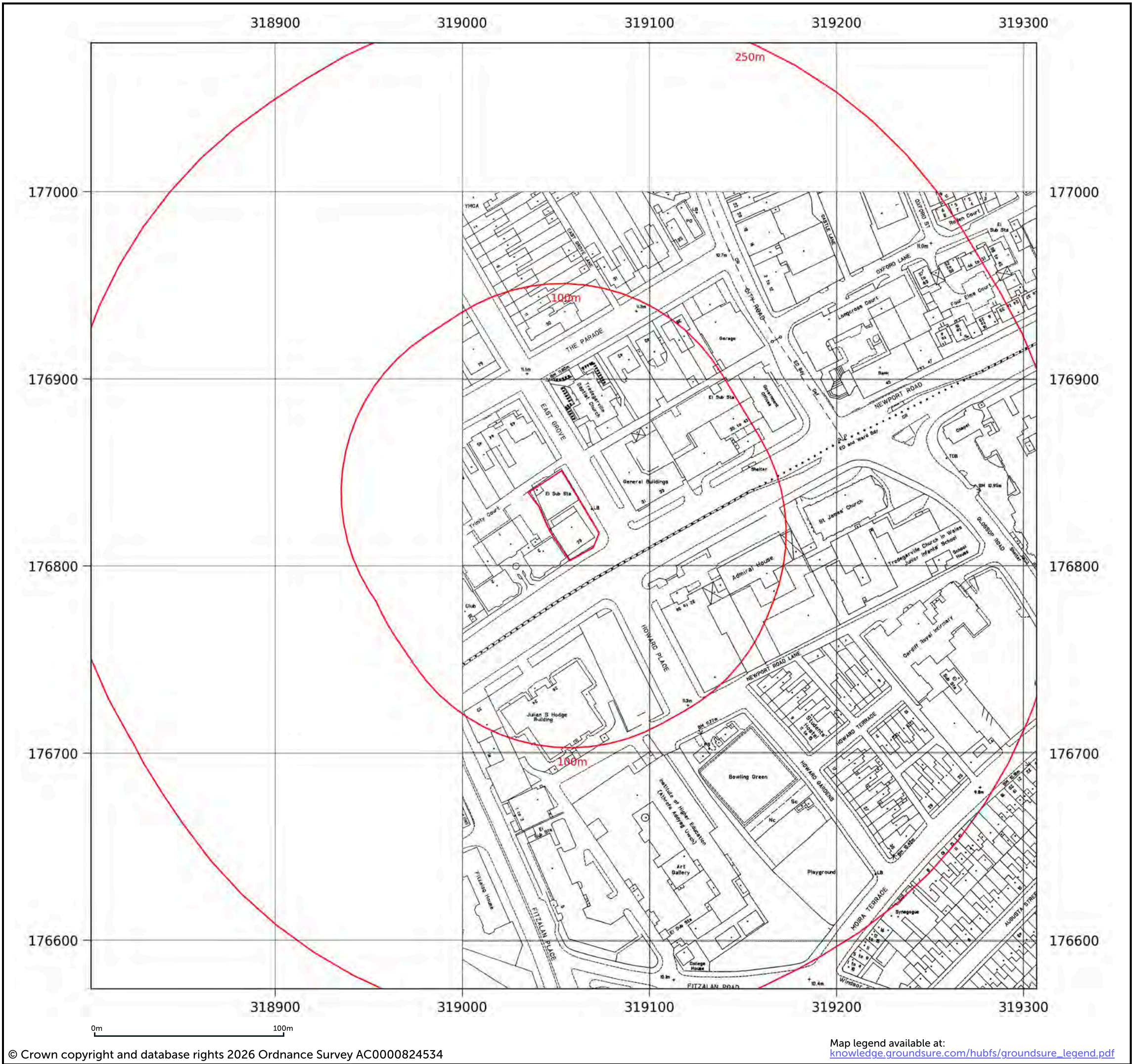
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House, Newport Road,
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Grid ref: 319055.1, 176826.65
Production date: 11 May 2026

Map name: National Grid
Map date: 1994
Scale: 1:1,250
Printed at: 1:2,000



Date: 1994
Surveyed: 1994
Revised: 1994
Copyright: 1994

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Site details: TY CAMBRIA HOUSE, 29
NEWPORT ROAD, CARDIFF

Client ref: 2603016.001 - Ty Cambria
House, Newport Road,

Report ref: GS-YRW-63H-LE5-I69

Grid ref: 319055.1, 176826.65

Production date: 11 May 2026

Map name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250



Date: 2003

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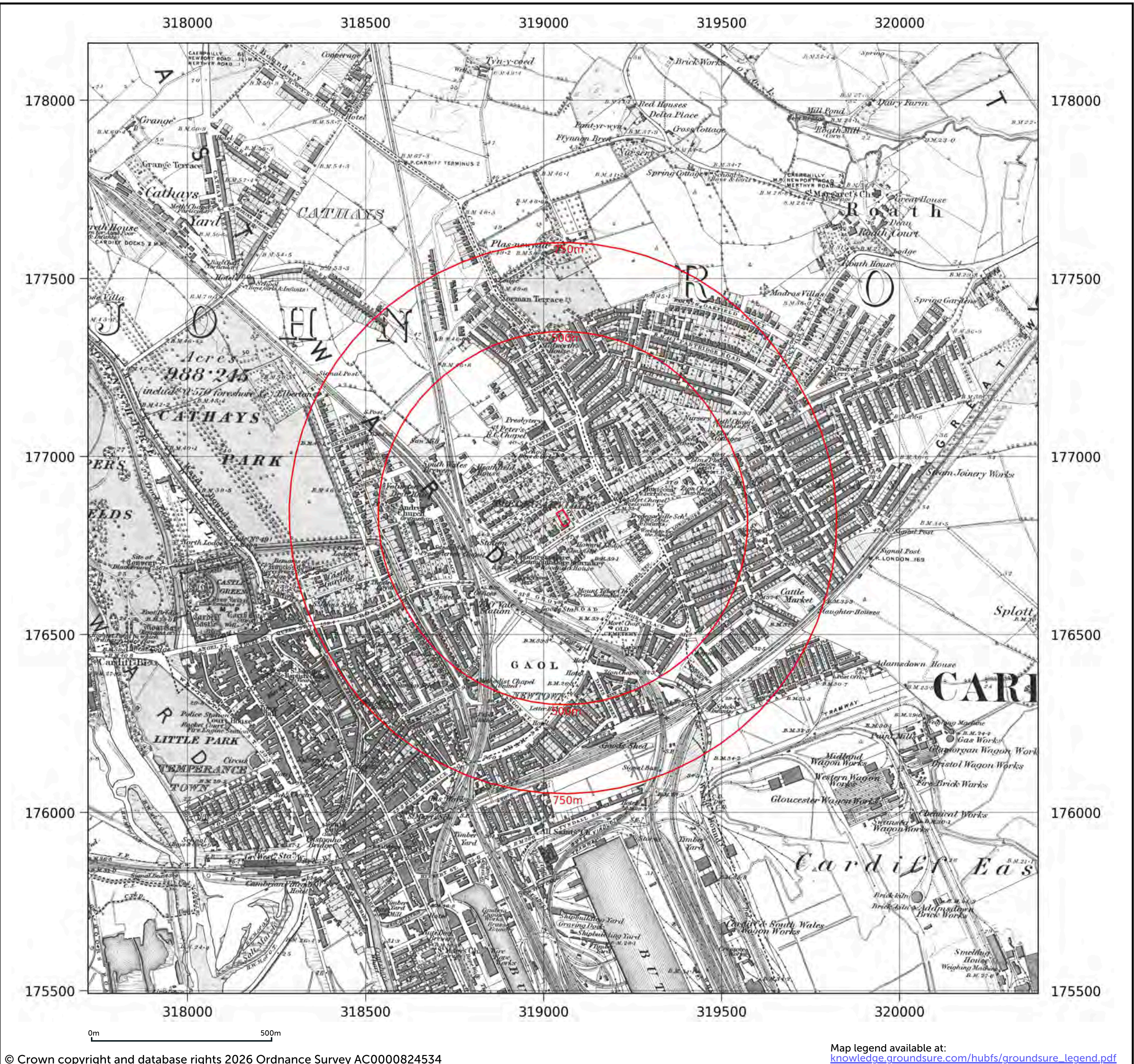
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NEWPORT ROAD, CARDIFF
Client ref: 2603016.001 - Ty Cambria
House, Newport Road,
Report ref: GS-YRW-63H-LE5-I69
Grid ref: 319055.1, 176826.65
Production date: 11 May 2026

Map name: County Series
Map date: 1881
Scale: 1:10,560
Printed at: 1:10,560



Date: 1881
Surveyed: 1881
Revised: 1881

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Map name:	County Series
Map date:	1899
Scale:	1:10,560
Printed at:	1:10,560

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info@groundsurre.com
 01273 257 755

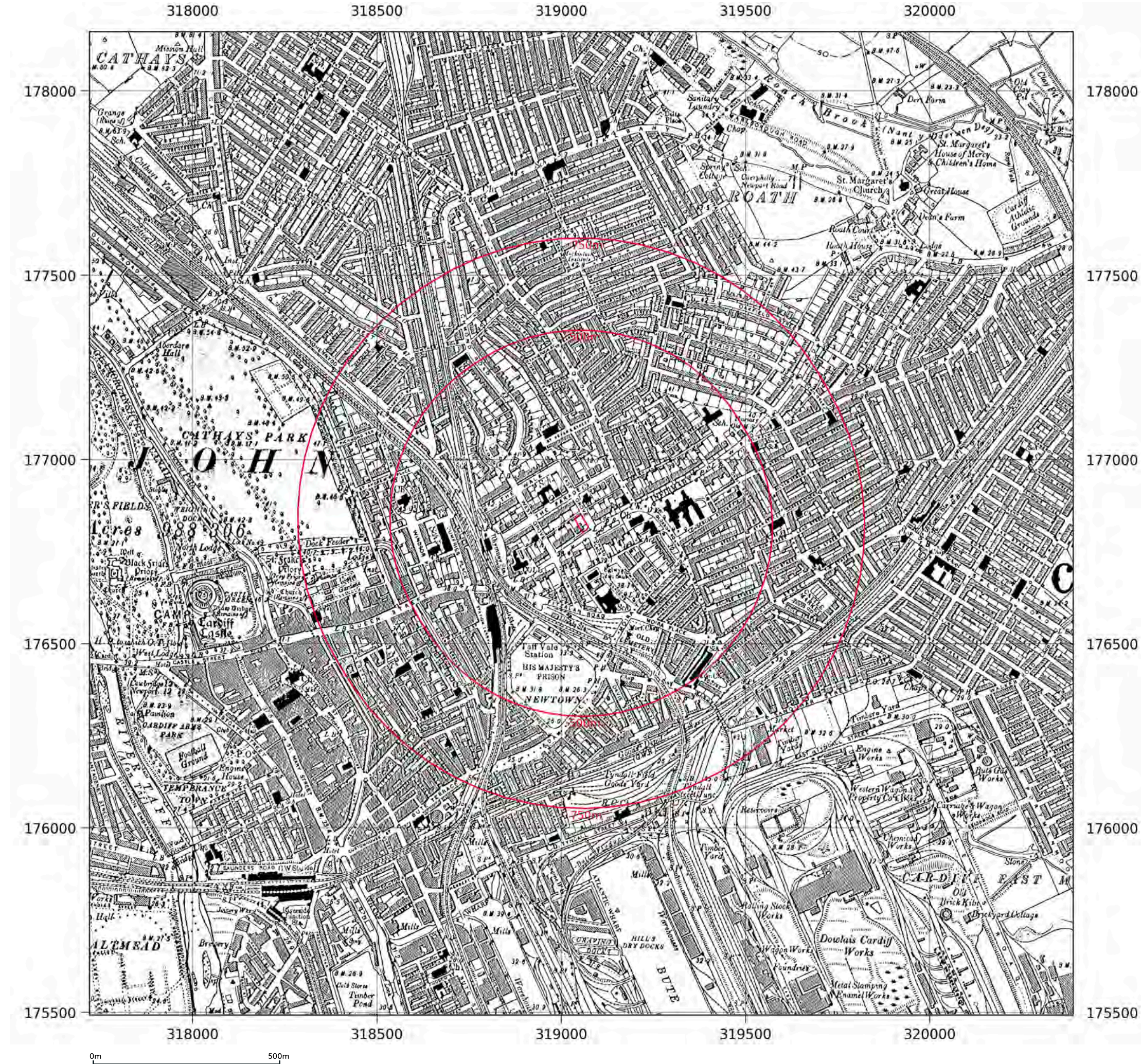
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NEWPORT ROAD, CARDIFF
Client ref: 2603016.001 - Ty Cambria
House, Newport Road,
Report ref: GS-YRW-63H-LE5-I69
Grid ref: 319055.1, 176826.65
Production date: 11 May 2026

Map name: County Series
Map date: 1901
Scale: 1:10,560
Printed at: 1:10,560



Date: 1901
Surveyed: 1880
Revised: 1899
Edition: 1901

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Site details:

TY CAMBRIA HOUSE, 29
NEWPORT ROAD, CARDIFF

Client ref:

2603016.001 - Ty Cambria
House, Newport Road,

Report ref:

GS-YRW-63H-LE5-I69

Grid ref:

319055.1, 176826.65

Production date:

11 May 2026

Map name:

County Series

Map date:

1916

Scale:

1:10,560

Printed at:

1:10,560

Date: 1916
Surveyed: 1878
Revised: 1916

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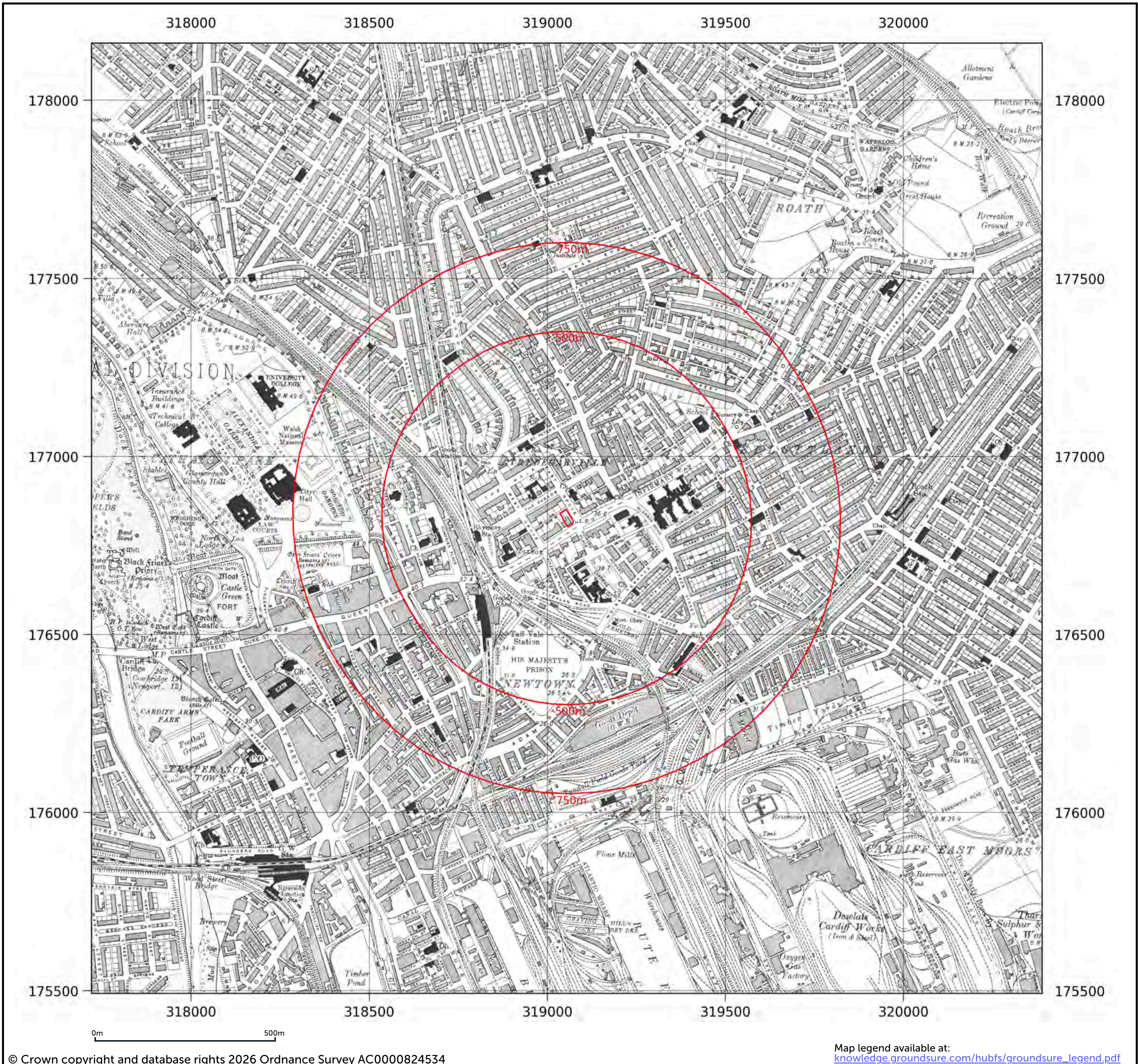
Site details: TY CAMBRIA HOUSE, 29
NEWPORT ROAD, CARDIFF
Client ref: 2603016.001 - Ty Cambria
House, Newport Road,
Report ref: GS-YRW-63H-LE5-I69
Grid ref: 319055.1, 176826.65
Production date: 11 May 2026

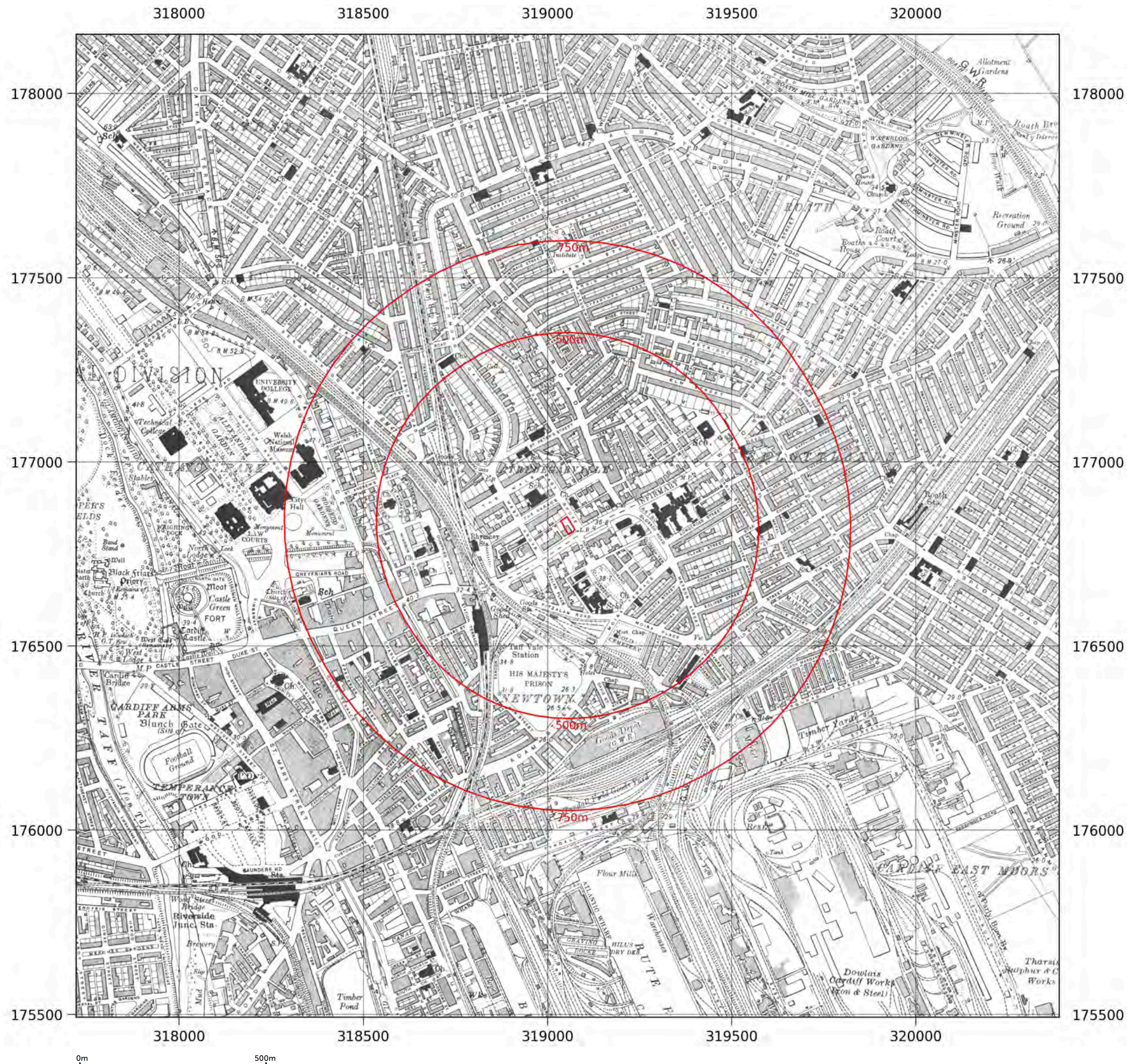
Map name: County Series
Map date: 1922
Scale: 1:10,560
Printed at: 1:10,560



Date: 1922
Surveyed: 1878
Revised: 1922

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Site details:	TY CAMBRIA HOUSE, 29 NEWPORT ROAD, CARDIFF
Client ref:	2603016.001 - Ty Cambria House, Newport Road,
Report ref:	GS-YRW-63H-LE5-I69
Grid ref:	319055.1, 176826.65
Production date:	11 May 2026

Map name:	County Series
Map date:	1938
Scale:	1:10,560
Printed at:	1:10,560



Date: 1938
Surveyed: 1878
Revised: 1938

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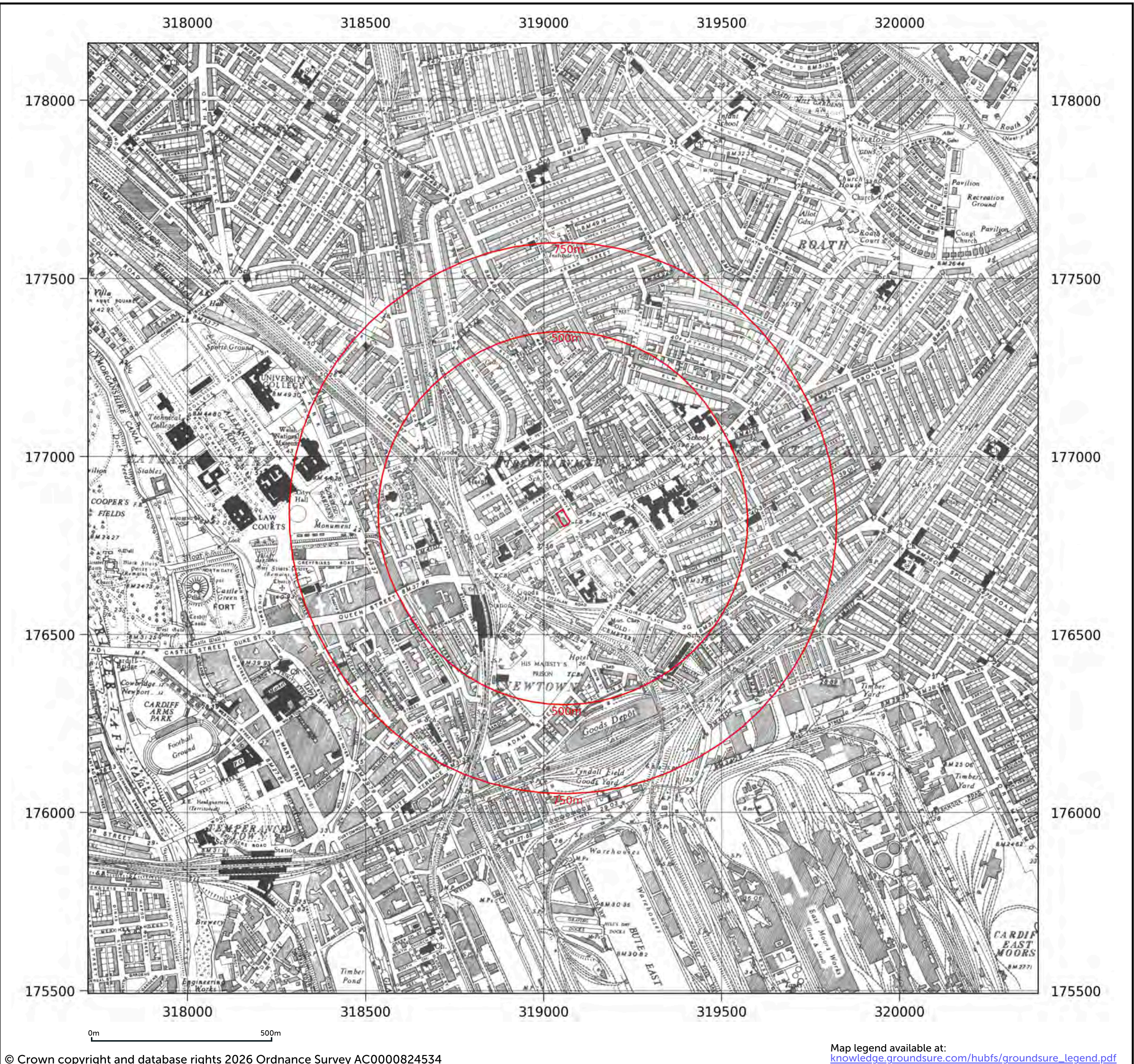
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Client ref:	2603016.001 - Ty Cambria House, Newport Road,
Report ref:	GS-YRW-63H-LE5-I69
Grid ref:	319055.1, 176826.65
Production date:	11 May 2026

Map name:	County Series
Map date:	1947
Scale:	1:10,560
Printed at:	1:10,560



Date: 1947 Surveyed: 1878 Revised: 1947

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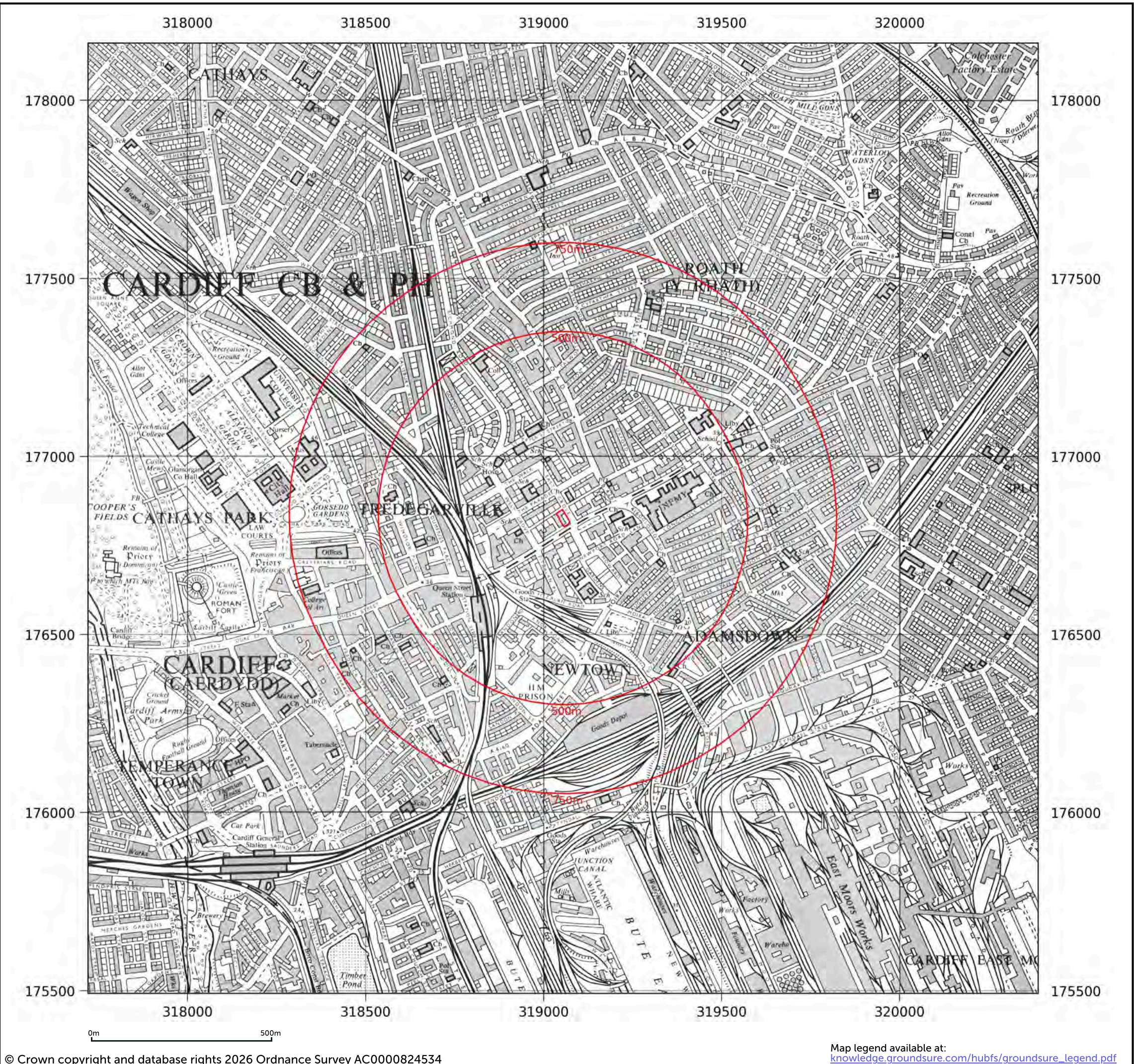
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Client ref:	2603016.001 - Ty Cambria House, Newport Road,
Report ref:	GS-YRW-63H-LE5-I69
Grid ref:	319055.1, 176826.65
Production date:	11 May 2026

Map name:	Provisional
Map date:	1964-1965
Scale:	1:10,560
Printed at:	1:10,560



Date: 1965 Revised: 1963 Edition: 1965 Copyright: 1965	Date: 1964 Surveyed: 1964 Revised: 1964
---	---

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Site details:	TY CAMBRIA HOUSE, 29 NEWPORT ROAD, CARDIFF
Client ref:	2603016.001 - Ty Cambria House, Newport Road,
Report ref:	GS-YRW-63H-LE5-I69
Grid ref:	319055.1, 176826.65
Production date:	11 May 2026

Map name:	National Grid
Map date:	1973
Scale:	1:10,000
Printed at:	1:10,000



Date: 1973 Surveyed: 1973 Revised: 1973	Date: 1973 Surveyed: 1972 Revised: 1973
---	---

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Site details:

Client ref:

Report ref:

Grid ref:

Production date:

TY CAMBRIA HOUSE, 29
NEWPORT ROAD, CARDIFF

2603016.001 - Ty Cambria
House, Newport Road,

GS-YRW-63H-LE5-I69

319055.1, 176826.65

11 May 2026

Map name:

Map date:

Scale:

Printed at:

National Grid

1984-1987

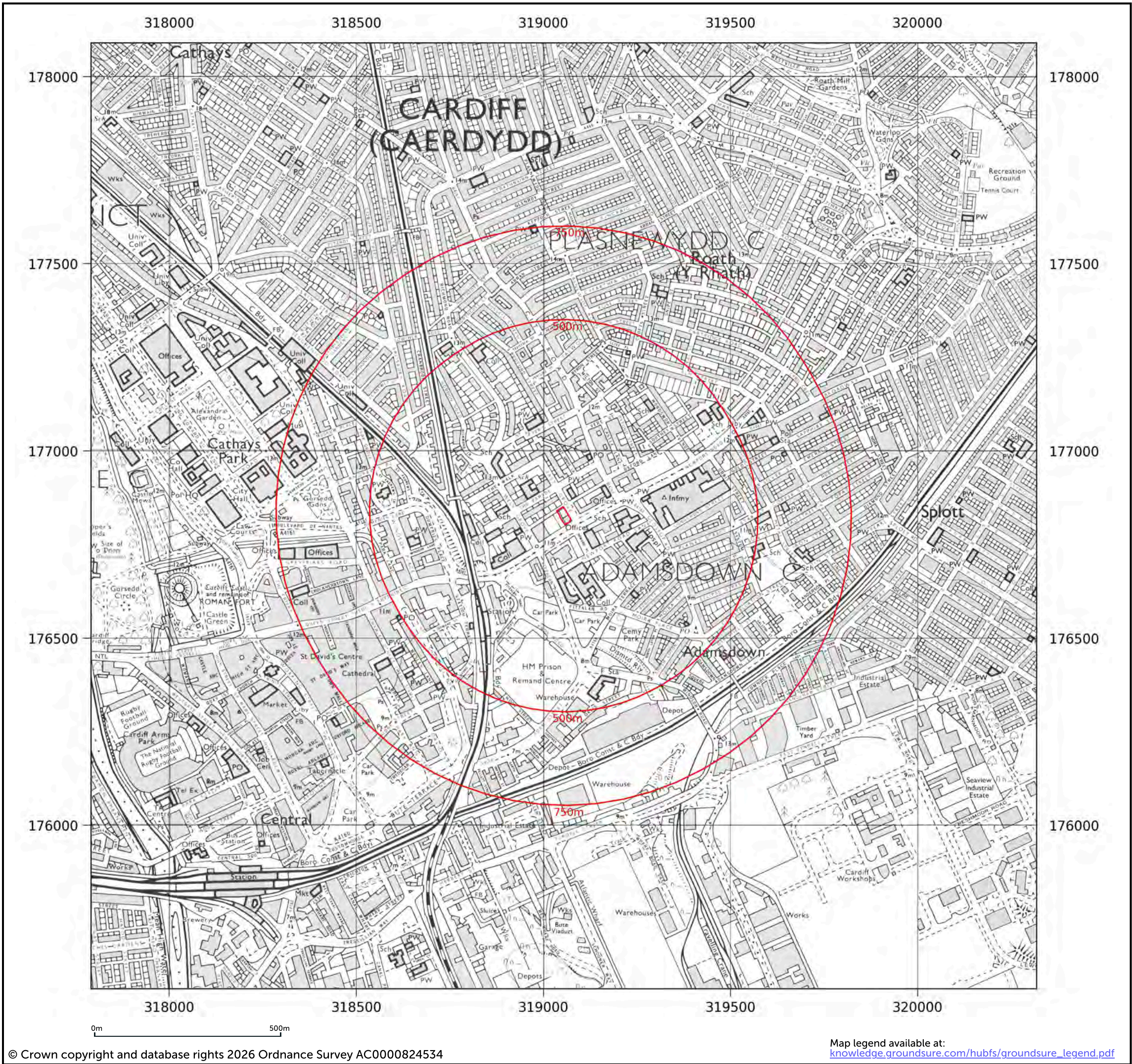
1:10,000

1:10,000

Date: 1984
Surveyed: 1984
Revised: 1984

Date: 1987
Surveyed: 1983
Revised: 1987

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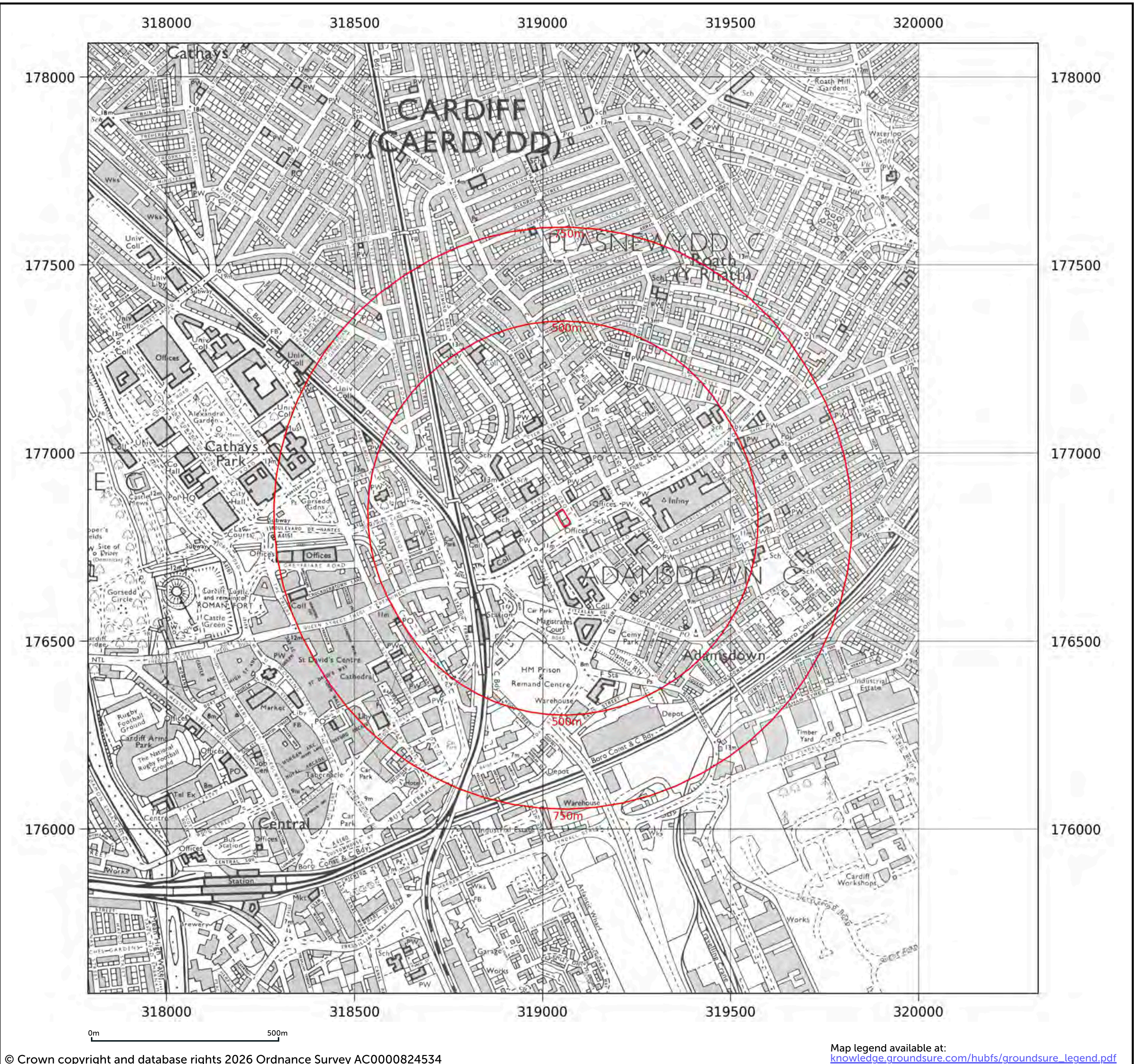
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Client ref:	2603016.001 - Ty Cambria House, Newport Road,
Report ref:	GS-YRW-63H-LE5-I69
Grid ref:	319055.1, 176826.65
Production date:	11 May 2026

Map name:	National Grid
Map date:	1989
Scale:	1:10,000
Printed at:	1:10,000



Date: 1989 Surveyed: 1984 Revised: 1989

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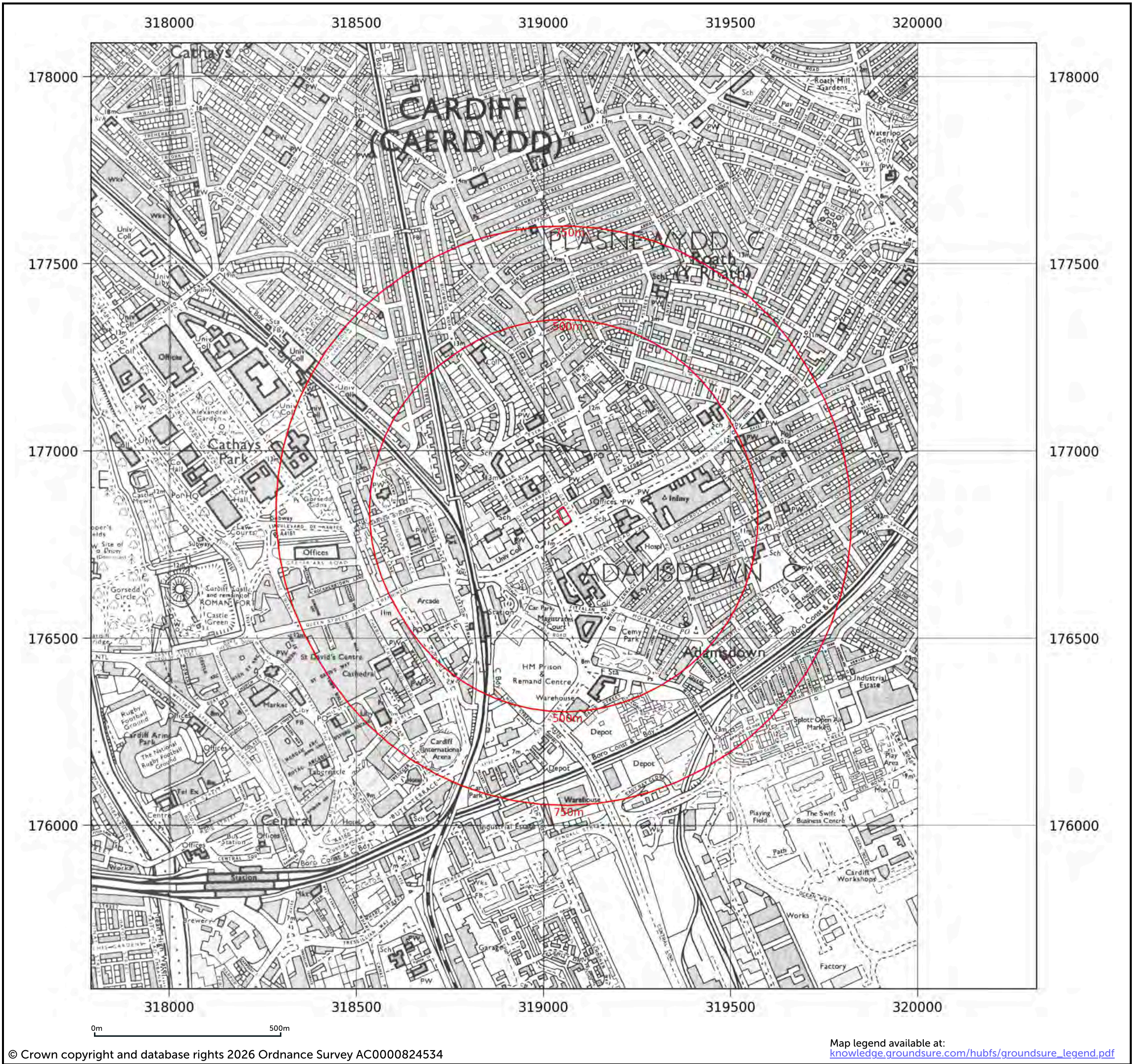
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Client ref:	2603016.001 - Ty Cambria House, Newport Road,
Report ref:	GS-YRW-63H-LE5-I69
Grid ref:	319055.1, 176826.65
Production date:	11 May 2026

Map name:	National Grid
Map date:	1994
Scale:	1:10,000
Printed at:	1:10,000



Date: 1994 Surveyed: 1984 Revised: 1994

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Site details: TY CAMBRIA HOUSE, 29
NEWPORT ROAD, CARDIFF

Client ref: 2603016.001 - Ty Cambria
House, Newport Road,

Report ref: GS-YRW-63H-LE5-I69

Grid ref: 319055.1, 176826.65

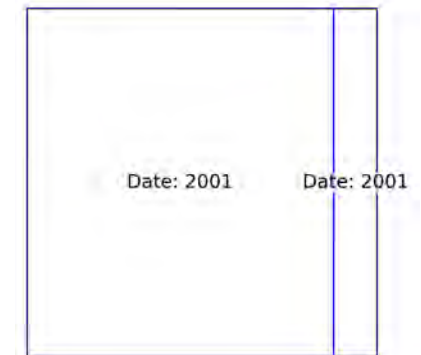
Production date: 11 May 2026

Map name: National Grid

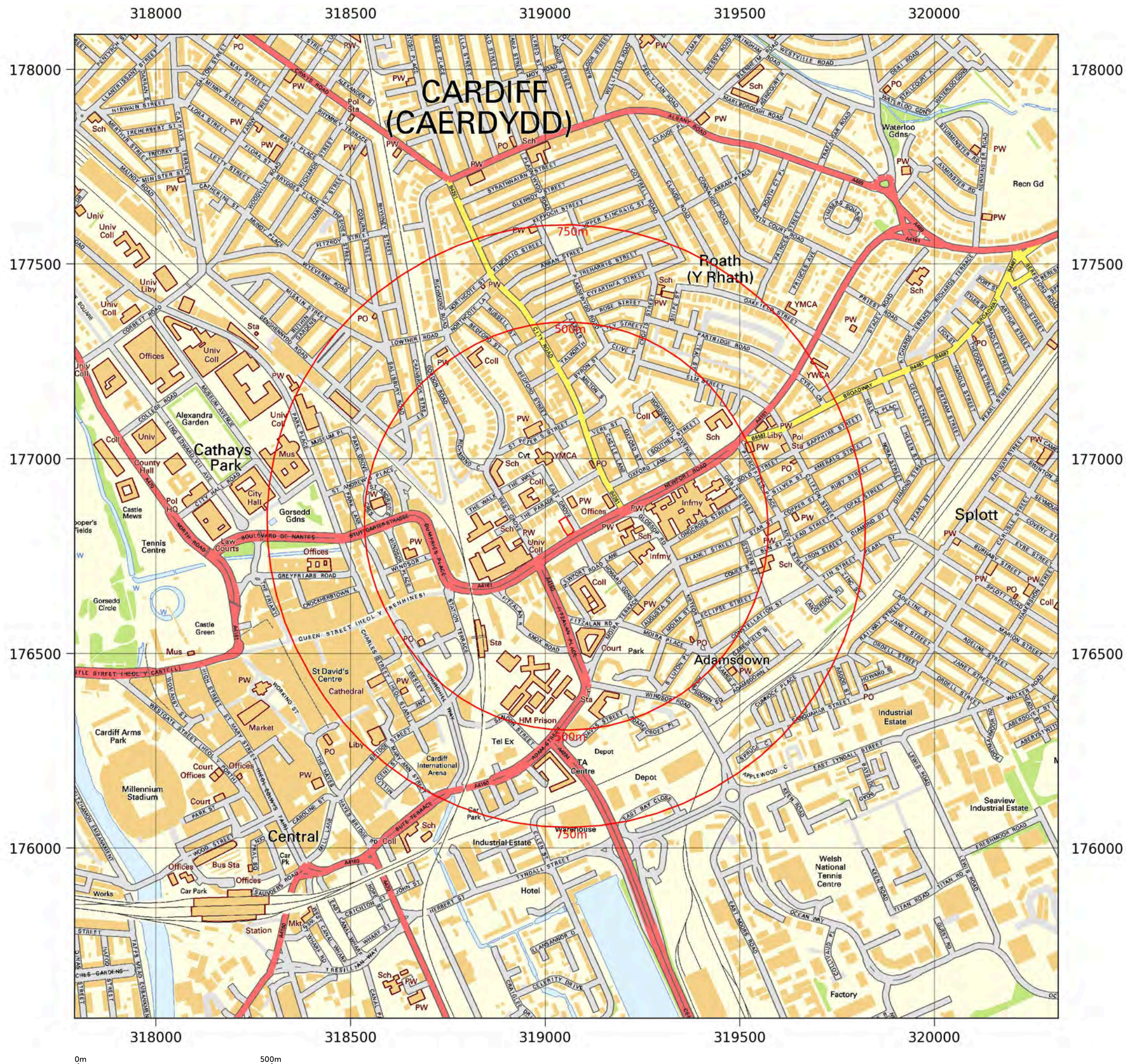
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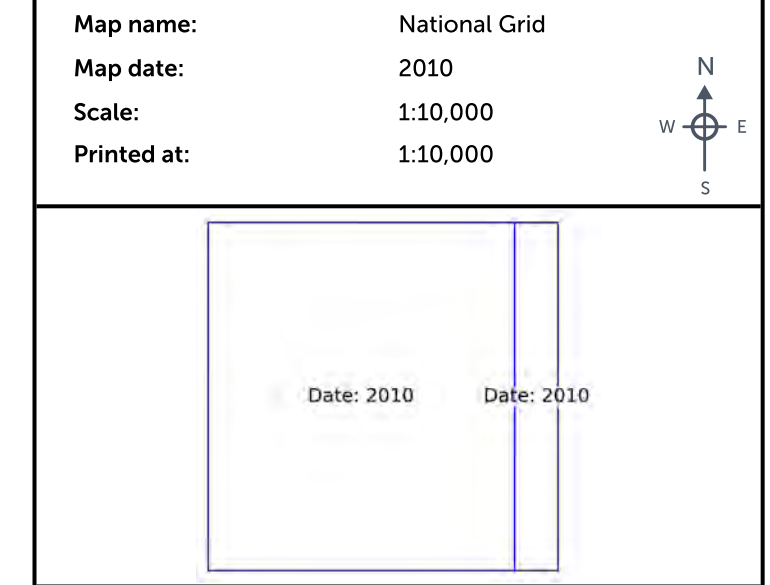
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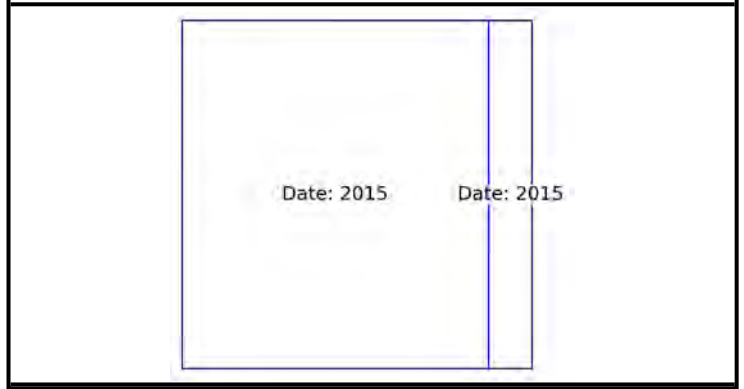
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Site details:	TY CAMBRIA HOUSE, 29 NEWPORT ROAD, CARDIFF
Client ref:	2603016.001 - Ty Cambria House, Newport Road,
Report ref:	GS-YRW-63H-LE5-I69
Grid ref:	319055.1, 176826.65
Production date:	11 May 2026

Map name:	National Grid
Map date:	2015
Scale:	1:10,000
Printed at:	1:10,000



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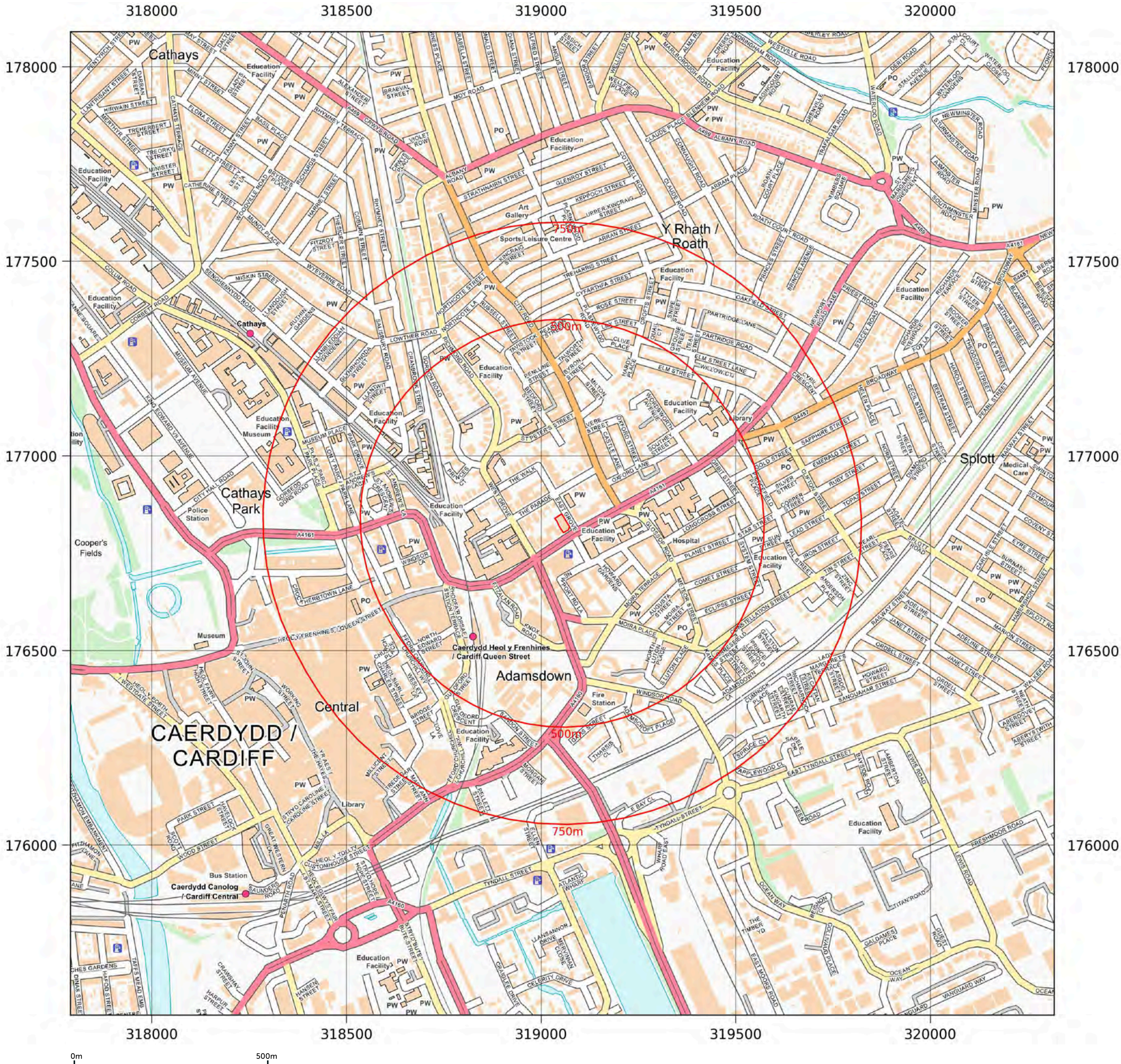
Site details: TY CAMBRIA HOUSE, 29
NEWPORT ROAD, CARDIFF
Client ref: 2603016.001 - Ty Cambria
House, Newport Road,
Report ref: GS-YRW-63H-LE5-I69
Grid ref: 319055.1, 176826.65
Production date: 11 May 2026

Map name: National Grid
Map date: 2025
Scale: 1:10,000
Printed at: 1:10,000



Date: 2025 Date: 2025

Contact us with any questions at:
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Appendix C

GroundSure®

TY CAMBRIA HOUSE, 29 NEWPORT ROAD, CARDIFF**Order Details**

Date: 11/05/2026
Your ref: 2603016.001 - Ty Cambria House, Newport Road,
Our Ref: GS-JAN-FJA-64G-9Q8

Site Details

Location: 319055 176826
Area: 0.1 ha
Authority: [Caerdydd - Cardiff Council](#) ↗

Site plan**Quick Links**

Summary of findings [p. 2](#) >
OS MasterMap site plan [p.14](#) >
Aerial image [p. 9](#) >

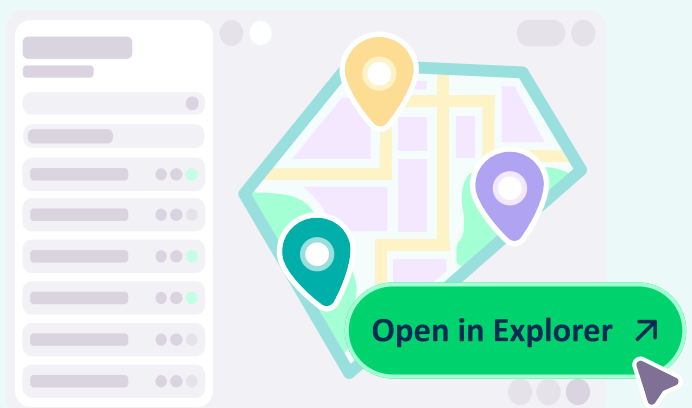
[Insight User Guide](#) ↗

Open this site in Explorer!

Access the data now in our interactive workspace.

- Map and interpret 130+ datasets across 170 years
- Generate insights and visuals quickly
- Revisit and collaborate with your team

Access to Groundsure Explorer requires an Insights account.
12 months access begins at purchase.



Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
15 >	1.1 >	Historical industrial land uses >	0	0	41	97	-
21 >	1.2 >	Historical tanks >	0	0	5	9	-
21 >	1.3 >	Historical energy features >	1	2	11	39	-
24	1.4	Historical petrol stations	0	0	0	0	-
24 >	1.5 >	Historical garages >	1	0	7	32	-
26	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped >	On site	0-50m	50-250m	250-500m	500-2000m
27 >	2.1 >	Historical industrial land uses >	0	0	49	116	-
33 >	2.2 >	Historical tanks >	0	0	12	18	-
35 >	2.3 >	Historical energy features >	2	3	28	79	-
39	2.4	Historical petrol stations	0	0	0	0	-
39 >	2.5 >	Historical garages >	2	0	10	50	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
43	3.1	Active or recent landfill	0	0	0	0	-
43	3.2	Historical landfill (BGS records)	0	0	0	0	-
44	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
44	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
44	3.5	Historical waste sites	0	0	0	0	-
44	3.6	Licensed waste sites	0	0	0	0	-
44 >	3.7 >	Waste exemptions >	18	0	3	11	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
48 >	4.1 >	Recent industrial land uses >	0	1	15	-	-
49 >	4.2 >	National Geographic Database (NGD) - Current or recent tanks >	0	0	1	-	-
50 >	4.3 >	Current or recent petrol stations >	0	0	1	1	-
50	4.4	Electricity cables	0	0	0	0	-
50	4.5	Gas pipelines	0	0	0	0	-



50	4.6	Sites determined as Contaminated Land	0	0	0	0	-
51	4.7	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
51	4.8	Regulated explosive sites	0	0	0	0	-
51	4.9	Hazardous substance storage/usage	0	0	0	0	-
51	4.10	Historical licensed industrial activities (IPC)	0	0	0	0	-
51	4.11	Licensed industrial activities (Part A(1))	0	0	0	0	-
52	4.12	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
52 >	4.13 >	<u>Radioactive Substance Authorisations</u> >	0	0	1	5	-
53	4.14	Licensed Discharges to controlled waters	0	0	0	0	-
53	4.15	Pollutant release to surface waters (Red List)	0	0	0	0	-
53	4.16	Pollutant release to public sewer	0	0	0	0	-
53	4.17	List 1 Dangerous Substances	0	0	0	0	-
54	4.18	List 2 Dangerous Substances	0	0	0	0	-
54 >	4.19 >	<u>Pollution Incidents (EA/NRW)</u> >	1	0	2	1	-
54	4.20	Pollution inventory substances	0	0	0	0	-
55	4.21	Pollution inventory waste transfers	0	0	0	0	-
55	4.22	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	<u>Hydrogeology</u> >	On site	0-50m	50-250m	250-500m	500-2000m
56 >	5.1 >	<u>Superficial aquifer</u> >	Identified (within 500m)				
57 >	5.2 >	<u>Bedrock aquifer</u> >	Identified (within 500m)				
58 >	5.3 >	<u>Groundwater vulnerability</u> >	Identified (within 50m)				
59	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
59	5.5	Groundwater vulnerability- local information	None (within 0m)				
60 >	5.6 >	<u>Groundwater abstractions</u> >	0	0	0	0	12
63 >	5.7 >	<u>Surface water abstractions</u> >	1	0	0	0	15
67	5.8	Potable abstractions	0	0	0	0	0
67	5.9	Source Protection Zones	0	0	0	0	-
67	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	<u>Hydrology</u> >	On site	0-50m	50-250m	250-500m	500-2000m

68	6.1	Water Network (OS NGD)	0	0	0	-	-
68	6.2	Surface water features	0	0	0	-	-
69 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
69 >	6.4 >	WFD Surface water bodies >	0	0	0	-	-
70 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
71	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
71	7.2	Historical Flood Events	0	0	0	-	-
71	7.3	Flood Defences	0	0	0	-	-
72	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
72	7.5	Flood Storage Areas	0	0	0	-	-
73	7.6	Flood Zone 2	None (within 50m)				
73	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding >					
74 >	8.1 >	Surface water flooding >	1 in 30 year, 0.3m - 1.0m (within 50m)				
Page	Section	Groundwater flooding >					
76 >	9.1 >	Groundwater flooding >	Moderate (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
77 >	10.1 >	Sites of Special Scientific Interest (SSSI) >	0	0	0	0	1
78	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
78	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
78	10.4	Special Protection Areas (SPA)	0	0	0	0	0
78	10.5	National Nature Reserves (NNR)	0	0	0	0	0
79	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
79 >	10.7 >	Designated Ancient Woodland >	0	0	0	0	10
80	10.8	Biosphere Reserves	0	0	0	0	0
80	10.9	Forest Parks	0	0	0	0	0
80	10.10	Marine Conservation Zones	0	0	0	0	0
80	10.11	Green Belt	0	0	0	0	0



80	10.12	Proposed Ramsar sites	0	0	0	0	0
81	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
81	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
81	10.15	Nitrate Sensitive Areas	0	0	0	0	0
81	10.16	Nitrate Vulnerable Zones	0	0	0	0	0
82	10.17	SSSI Impact Risk Zones	0	-	-	-	-
82	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
83	11.1	World Heritage Sites	0	0	0	-	-
84	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
84	11.3	National Parks	0	0	0	-	-
84 >	11.4 >	Listed Buildings >	0	1	13	-	-
86 >	11.5 >	Conservation Areas >	0	1	0	-	-
86	11.6	Scheduled Ancient Monuments	0	0	0	-	-
86	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
87	12.1	Agricultural Land Classification	None (within 250m)				
87	12.2	Open Access Land	0	0	0	-	-
87	12.3	Tree Felling Licences	0	0	0	-	-
87	12.4	Environmental Stewardship Schemes	0	0	0	-	-
88	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
89	13.1	Priority Habitat Inventory	0	0	0	-	-
89	13.2	Habitat Networks	0	0	0	-	-
89	13.3	Open Mosaic Habitat	0	0	0	-	-
89	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
90 >	14.1 >	10k Availability >	Identified (within 500m)				
91 >	14.2 >	Artificial and made ground (10k) >	0	0	1	1	-

92 >	14.3 >	Superficial geology (10k) >	1	0	0	0	-
93	14.4	Landslip (10k)	0	0	0	0	-
94 >	14.5 >	Bedrock geology (10k) >	1	0	0	0	-
95	14.6	Bedrock faults and other linear features (10k)	0	0	0	0	-
Page	Section	Geology 1:50,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
96 >	15.1 >	50k Availability >	Identified (within 500m)				
97 >	15.2 >	Artificial and made ground (50k) >	0	0	1	0	-
98	15.3	Artificial ground permeability (50k)	0	0	-	-	-
99 >	15.4 >	Superficial geology (50k) >	1	0	0	0	-
100 >	15.5 >	Superficial permeability (50k) >	Identified (within 50m)				
100	15.6	Landslip (50k)	0	0	0	0	-
100	15.7	Landslip permeability (50k)	None (within 50m)				
101 >	15.8 >	Bedrock geology (50k) >	1	0	0	0	-
102 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
102	15.10	Bedrock faults and other linear features (50k)	0	0	0	0	-
Page	Section	Boreholes >	On site	0-50m	50-250m	250-500m	500-2000m
103 >	16.1 >	BGS Boreholes >	1	2	38	-	-
Page	Section	Natural ground subsidence >					
106 >	17.1 >	Shrink swell clays >	Negligible (within 50m)				
107 >	17.2 >	Running sands >	Very low (within 50m)				
108 >	17.3 >	Compressible deposits >	Negligible (within 50m)				
109 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
110 >	17.5 >	Landslides >	Very low (within 50m)				
111 >	17.6 >	Ground dissolution of soluble rocks >	Negligible (within 50m)				
Page	Section	Mining and ground workings >	On site	0-50m	50-250m	250-500m	500-2000m
113	18.1	BritPits	0	0	0	0	-
114	18.2	Surface ground workings	0	0	0	-	-
114 >	18.3 >	Underground workings >	0	0	0	0	1
114	18.4	Underground mining extents	0	0	0	0	-

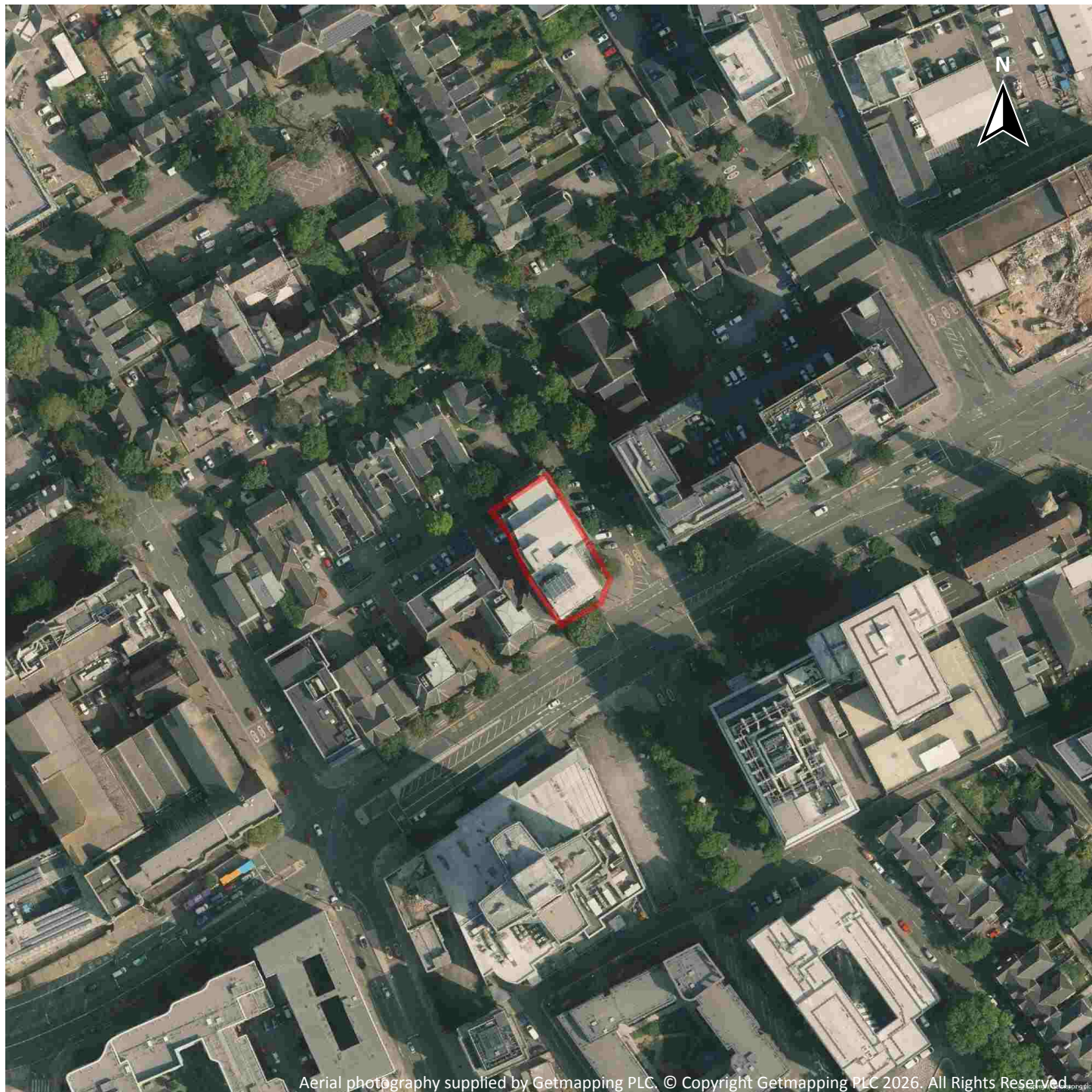


114	18.5	Historical Mineral Planning Areas	0	0	0	0	-
115	18.6	Non-coal mining	0	0	0	0	0
115	18.7	JPB mining areas	None (within 0m)				
115	18.8	The Coal Authority non-coal mining	0	0	0	0	-
115	18.9	Researched mining	0	0	0	0	-
116	18.10	Mining record office plans	0	0	0	0	-
116	18.11	BGS mine plans	0	0	0	0	-
116	18.12	Coal mining	None (within 0m)				
116	18.13	Brine areas	None (within 0m)				
116	18.14	Gypsum areas	None (within 0m)				
117	18.15	Tin mining	None (within 0m)				
117	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
118	19.1	Natural cavities	0	0	0	0	-
118	19.2	Mining cavities	0	0	0	0	0
118	19.3	Reported recent incidents	0	0	0	0	-
118	19.4	Historical incidents	0	0	0	0	-
Page	Section	Radon >					
120 >	20.1 >	Radon >	Less than 1% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
122 >	21.1 >	BGS Estimated Background Soil Chemistry >	1	1	-	-	-
122 >	21.2 >	BGS Estimated Urban Soil Chemistry >	1	5	-	-	-
123	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects >	On site	0-50m	50-250m	250-500m	500-2000m
124	22.1	Underground railways (London)	0	0	0	-	-
124	22.2	Underground railways (Non-London)	0	0	0	-	-
125	22.3	Railway tunnels	0	0	0	-	-
125 >	22.4 >	Historical railway and tunnel features >	0	0	33	-	-
126	22.5	Royal Mail tunnels	0	0	0	-	-



127 >	22.6 >	Historical railways >	0	0	1	-	-
127	22.7	Railways	0	0	0	-	-
127	22.8	Crossrail 2	0	0	0	0	-
127	22.9	HS2	0	0	0	0	-

Recent aerial photograph



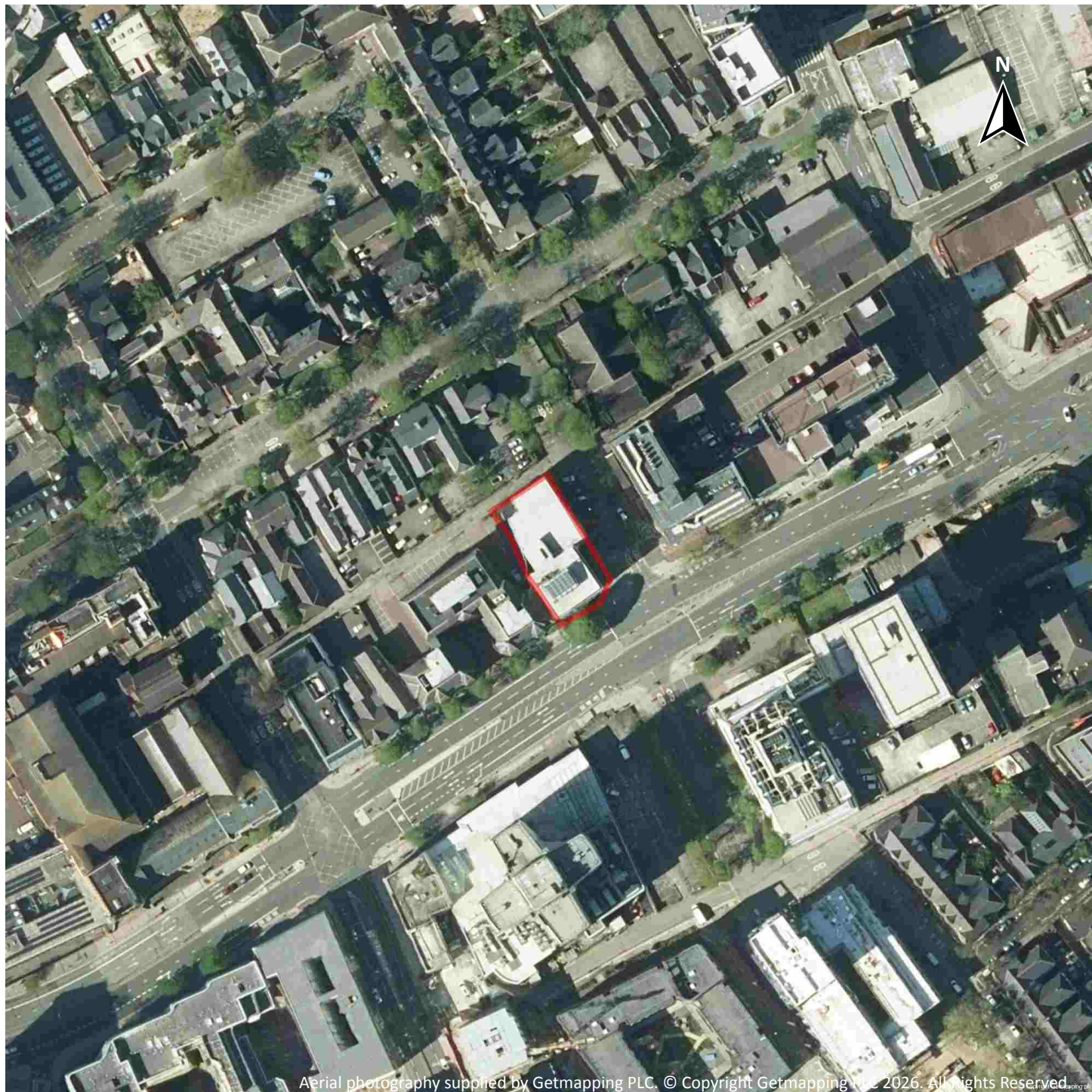
Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2026. All Rights Reserved

Capture Date: 12/08/2025

Site Area: 0.1ha



Recent site history - 2020 aerial photograph

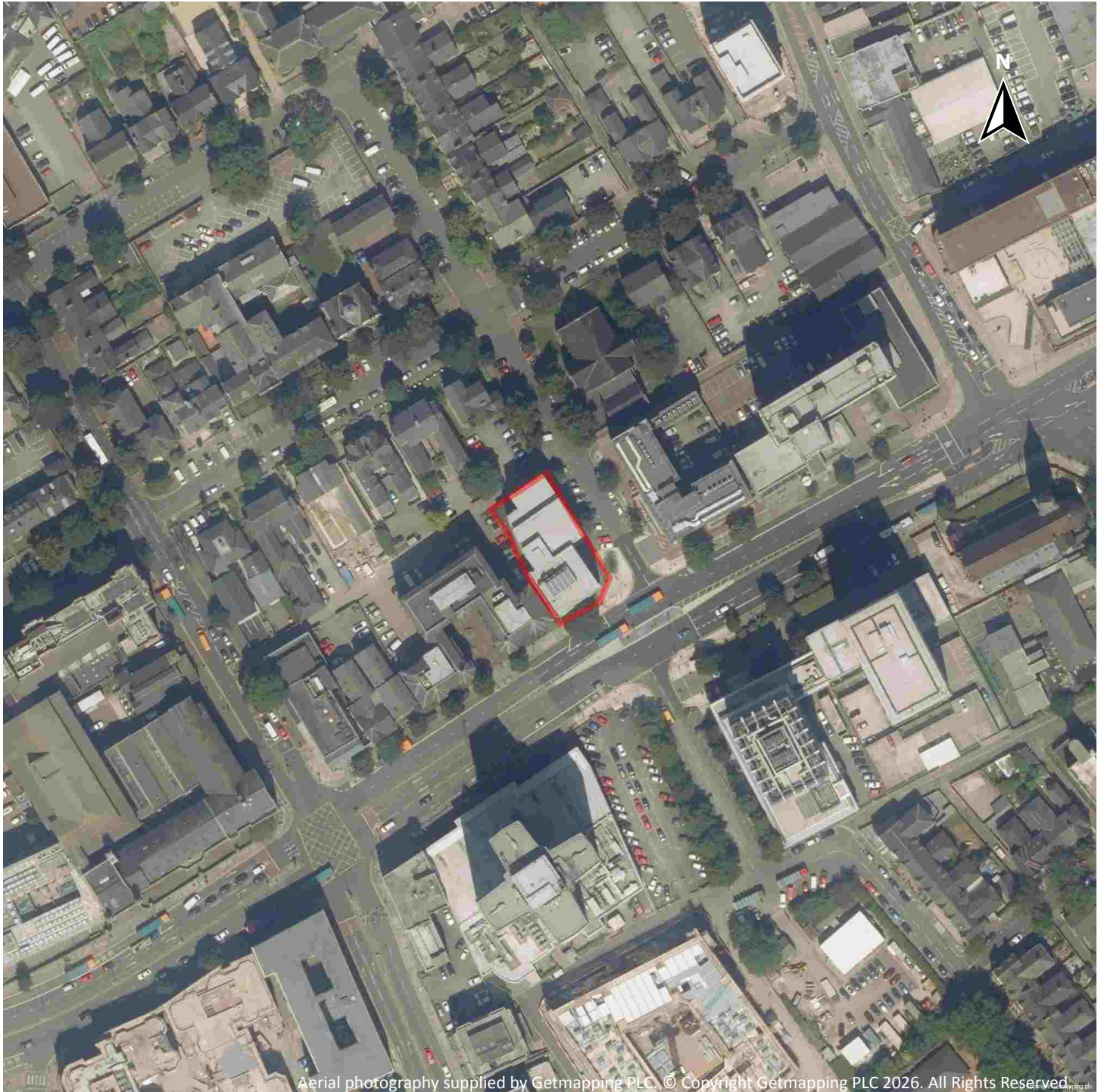


Capture Date: 14/04/2020

Site Area: 0.1ha



Recent site history - 2016 aerial photograph

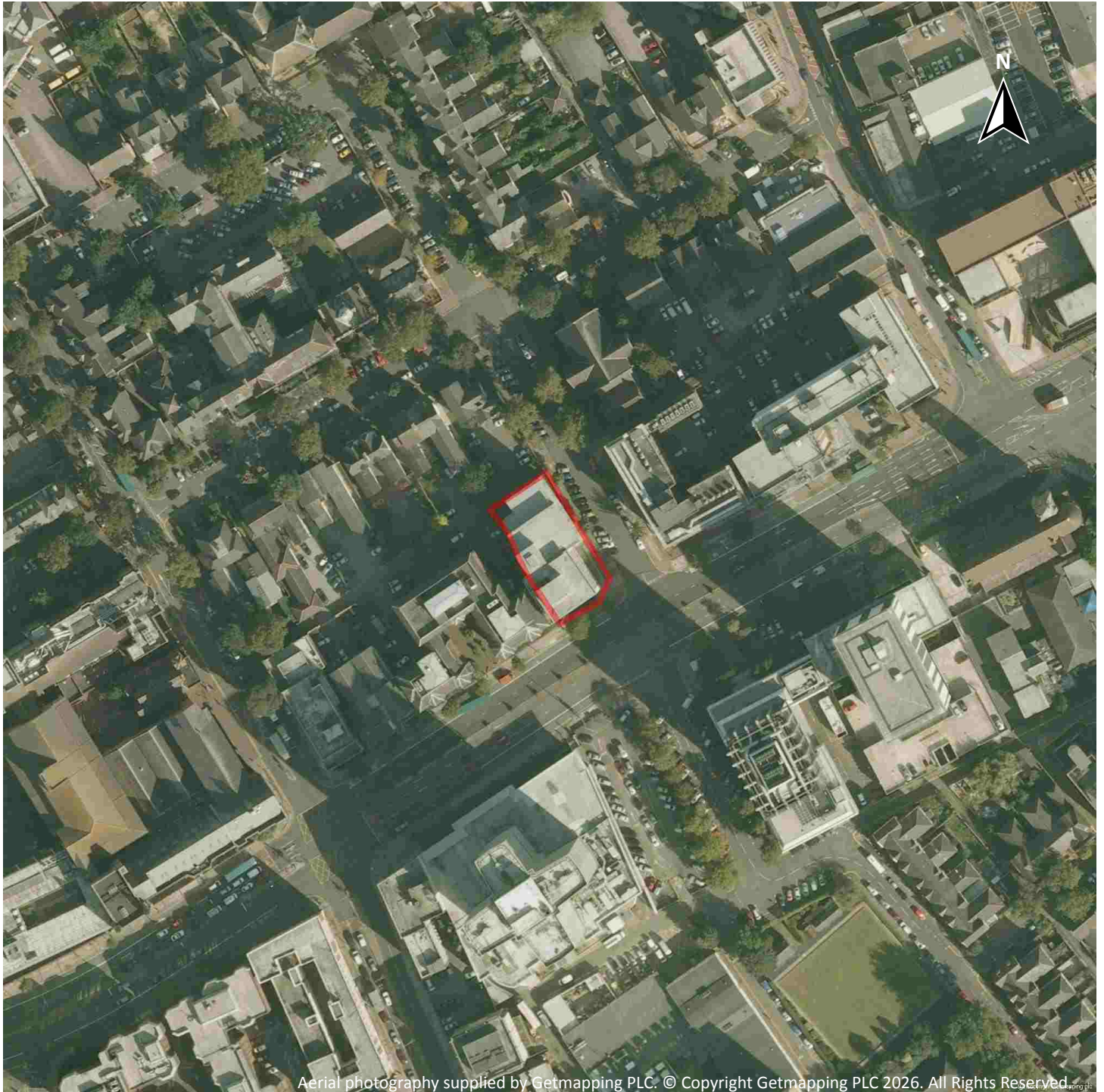


Capture Date: 19/07/2016

Site Area: 0.1ha



Recent site history - 2009 aerial photograph



Capture Date: 18/09/2009

Site Area: 0.1ha



Recent site history - 2000 aerial photograph



Capture Date: 21/07/2000

Site Area: 0.1ha



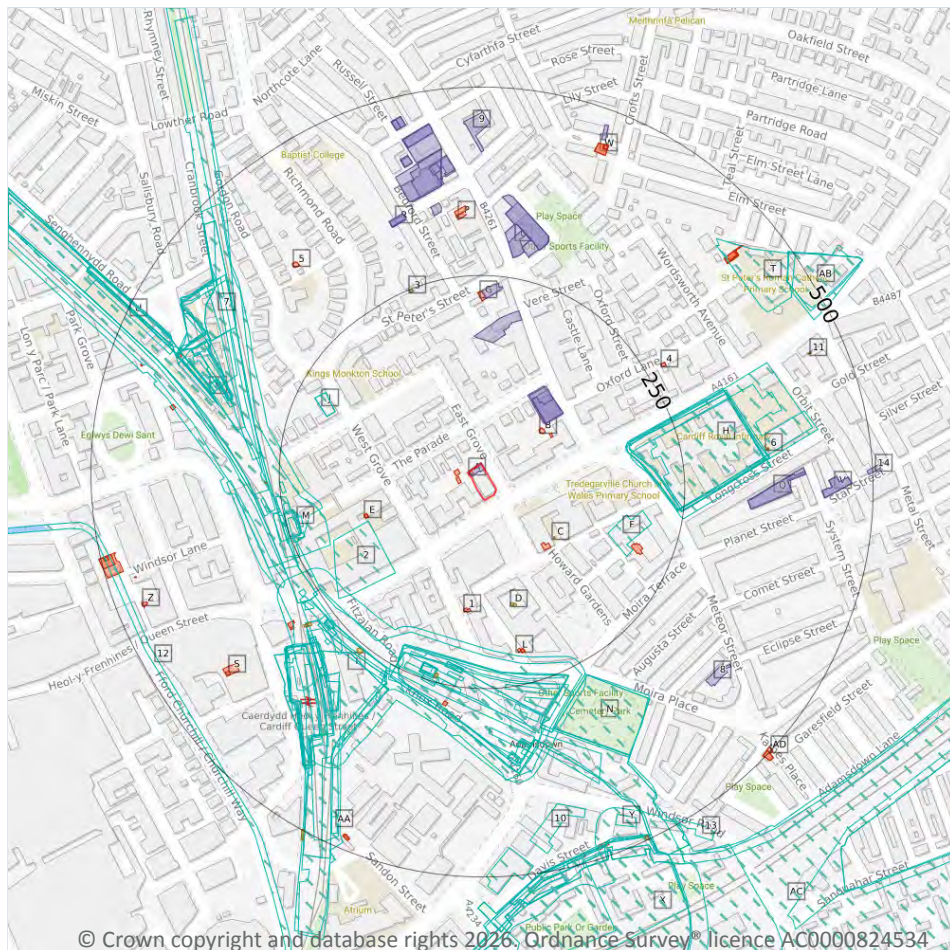
OS MasterMap site plan



Site Area: 0.1ha



1 Past land use



- Site Outline
- Search buffers in metres (m)
- Historical industrial land uses
- Historical tanks
- Historical energy features
- Historical garages

1.1 Historical industrial land uses

Records within 500m

138

Potentially contaminative land use features digitised from historical Ordnance Survey® mapping at 1:10,000 and 1:10,560 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on [page 15](#) >

ID	Location	Land use	Dates present	Group ID
2	147m SW	Infirmary	1881	1195387



ID	Location	Land use	Dates present	Group ID
F	159m E	Hospital	1984 - 1994	1258686
H	179m E	Infirmery	1965	1251622
H	180m E	Infirmery	1901	1259522
H	181m E	Infirmery	1899	1282614
H	183m E	Infirmery	1922	1288361
H	184m E	Infirmery	1947	1231606
H	185m E	Infirmery	1938	1253729
H	185m E	Infirmery	1916	1274372
I	188m S	Railway Sidings	1899	1258489
J	194m NW	Hospital	1965	1247323
J	194m NW	Hospital	1973	1247589
I	197m S	Railway Sidings	1965	1217023
I	198m W	Railway Sidings	1938 - 1948	1226216
K	199m W	Railway Sidings	1922	1293106
H	211m E	Infirmery	1973 - 1994	1291859
I	214m S	Railway Sidings	1916	1261238
I	214m S	Railway Sidings	1938	1272406
I	217m S	Goods Station	1901	1234009
I	217m S	Railway Sidings	1901	1236187
I	219m S	Railway Building	1938 - 1947	1233149
I	220m S	Railway Building	1916	1288577
I	222m S	Railway Building	1899	1243694
I	223m S	Coal Yard	1881	1197647
I	223m S	Railway Sidings	1881	1218549
I	224m S	Railway Sidings	1922	1261637
M	228m W	Railway Building	1947	1206251
I	229m S	Goods Station	1947	1238944
I	229m S	Goods Station	1881 - 1899	1276633



ID	Location	Land use	Dates present	Group ID
I	230m S	Goods Station	1916	1236631
I	230m S	Goods Station	1938	1275731
I	231m S	Railway Building	1922	1206233
M	232m W	Railway Station	1881 - 1899	1216824
M	232m W	Railway Station	1922	1258330
I	233m S	Goods Station	1965	1276715
M	233m W	Railway Station	1938	1233330
M	233m W	Railway Station	1916	1286860
M	238m W	Railway Station	1901	1243594
I	240m S	Goods Station	1922	1283782
M	242m W	Railway Buildings	1881	1180146
I	245m S	Railway Building	1881	1206086
K	251m W	Railway Sidings	1965	1238934
M	253m W	Railway Sidings	1881	1243961
K	254m SW	Railway Sidings	1916	1251095
K	254m SW	Railway Sidings	1938	1276819
I	255m SW	Railway Sidings	1901	1233099
I	256m SW	Railway Sidings	1965	1250544
I	257m SW	Railway Building	1922 - 1938	1224239
I	260m SW	Railway Buildings	1947 - 1965	1290512
I	260m SW	Railway Building	1899	1267394
I	260m SW	Railway Building	1916	1290252
K	260m W	Railway Sidings	1881	1284389
I	263m SW	Railway Building	1922	1206076
K	265m W	Railway Sidings	1899	1211883
I	265m SW	Railway Building	1947	1206250
I	266m SW	Railway Sidings	1938	1225533
I	266m SW	Railway Sidings	1916	1272497



ID	Location	Land use	Dates present	Group ID
N	266m SE	Cemetery	1899 - 1901	1220106
I	267m SW	Unspecified Pit	1881	1190705
M	267m W	Railway Buildings	1881	1180117
N	269m SE	Old Cemetery	1916 - 1947	1212622
N	269m SE	Old Cemetery	1881	1248629
I	270m SW	Railway Sidings	1881	1244799
I	270m SW	Railway Building	1881	1286622
I	273m SW	Railway Sidings	1922	1287704
I	273m S	Railway Buildings	1947	1180189
K	277m W	Railway Sidings	1901	1263317
I	277m SW	Railway Building	1922	1206234
M	283m SW	Unspecified Ground Workings	1984	1182859
I	288m SW	Goods Shed	1916	1216782
I	288m SW	Goods Shed	1938	1270516
I	289m SW	Goods Sheds	1899 - 1901	1258680
I	290m SW	Goods Shed	1922	1241636
I	290m SW	Railway Station	1973	1231919
I	290m SW	Railway Station	1965	1289017
I	291m SW	Railway Building	1922	1218499
I	293m SW	Railway Station	1947	1251628
I	293m SW	Railway Station	1881	1251492
K	302m W	Goods Station	1901	1225975
I	305m SW	Railway Station	1922 - 1938	1250494
I	305m SW	Railway Station	1916	1293885
I	307m SW	Railway Station	1899	1230516
I	310m SW	Railway Station	1901	1291088
I	311m SW	Railway Station	1984 - 1994	1235001
I	320m SW	Goods Sheds	1899 - 1901	1255735



ID	Location	Land use	Dates present	Group ID
I	320m S	Railway Building	1947	1269557
I	323m S	Railway Building	1938	1214309
I	323m S	Railway Building	1916	1276365
K	323m W	Goods Station	1922	1219299
K	327m W	Railway Buildings	1965	1211431
K	327m W	Goods Station	1938	1253792
K	327m W	Goods Station	1916	1280012
K	328m W	Goods Station	1947	1245480
K	332m NW	Brewery	1881	1179104
K	333m W	Goods Station	1899	1243200
I	334m S	Railway Building	1922	1206077
I	335m S	Railway Building	1947	1289942
I	338m S	Railway Building	1916 - 1938	1214412
I	343m S	Railway Building	1881	1229638
K	348m W	Railway Building	1922	1240574
K	352m W	Railway Buildings	1916	1259239
K	352m W	Railway Buildings	1938	1285886
I	359m SW	Railway Building	1922	1233979
K	360m W	Railway Building	1899	1277024
I	360m SW	Railway Building	1881	1266842
7	363m NW	Railway Sidings	1881	1226406
K	363m NW	Sawmill	1881	1209754
K	397m NW	Railway Building	1965	1206084
K	413m NW	Railway Building	1922	1206082
10	414m S	Fire Station	1984 - 1994	1218312
K	419m NW	Railway Building	1947	1206083
U	422m NW	Railway Buildings	1922	1231235
T	423m NE	Nursery	1881	1247890



ID	Location	Land use	Dates present	Group ID
U	426m NW	Railway Buildings	1938	1233472
U	426m NW	Railway Buildings	1916	1280129
U	430m NW	Railway Buildings	1899	1236253
X	442m S	Railway Sidings	1899	1274950
Y	453m SE	Smithy	1901	1194150
Y	462m S	Unspecified Warehouse	1984 - 1994	1222402
AA	463m SW	Railway Building	1947	1206090
AB	470m NE	Nursery	1916 - 1922	1290001
AB	471m NE	Nursery	1899	1230562
AB	472m NE	Nursery	1901	1291065
12	479m SW	Dock Feeder	1901	1187677
X	480m S	Goods Depot	1947	1230345
X	481m S	Railway Sidings	1938 - 1965	1270989
X	483m S	Railway Sidings	1916	1284307
Y	483m S	Railway Buildings	1916	1251687
Y	483m S	Railway Buildings	1938	1279213
X	484m S	Railway Sidings	1973	1225844
Y	485m S	Railway Buildings	1973	1250856
Y	492m S	Railway Building	1965	1206252
13	492m SE	Smithy	1899	1194149
Y	492m S	Railway Building	1965	1206240
Y	493m S	Unspecified Depot	1994	1274821
X	493m S	Goods Yard	1922	1262898
AC	493m S	Dock	1915 - 1922	1241955
AC	493m S	Railway Sidings	1915 - 1922	1276556

This data is sourced from Ordnance Survey® / Groundsure.



1.2 Historical tanks

Records within 500m

14

Tank features digitised from historical Ordnance Survey® mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on [page 15 >](#)

ID	Location	Land use	Dates present	Group ID
C	97m SE	Unspecified Tank	1880	184656
D	141m S	Unspecified Tank	1983 - 1989	196125
D	143m S	Unspecified Tank	1994 - 1997	189562
I	238m S	Unspecified Tank	1953 - 1955	190862
3	245m N	Unspecified Tank	1972 - 1992	198597
I	256m SW	Unspecified Tank	1987 - 1998	189281
M	266m W	Unspecified Tank	1882	184658
M	269m W	Unspecified Tank	1880	184654
I	282m SW	Unspecified Tank	1953 - 1955	194595
I	286m SW	Unspecified Tank	1920 - 1942	197007
6	363m E	Unspecified Tank	1969	182329
11	451m NE	Unspecified Tank	1969 - 1989	187991
Y	494m SE	Unspecified Tank	1985	188349
AA	498m SW	Tanks	1953 - 1955	196865

This data is sourced from Ordnance Survey® / Groundsure.

1.3 Historical energy features

Records within 500m

53

Energy features digitised from historical Ordnance Survey® mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.



Features are displayed on the Past land use map on [page 15 >](#)

ID	Location	Land use	Dates present	Group ID
A	On site	Electricity Substation	1994 - 1997	117841
A	10m W	Electricity Substation	1969	107832
A	13m SW	Electricity Substation	1983 - 1989	114125
B	88m NE	Electricity Substation	1983 - 1997	123805
C	90m SE	Electricity Substation	1969	107833
B	98m NE	Electricity Substation	1969	107831
E	144m SW	Electricity Substation	1983 - 1998	117697
E	144m SW	Electricity Substation	1977	115782
1	145m S	Electricity Substation	1983 - 1997	111957
F	194m E	Electricity Substation	1983 - 1997	119930
L	202m S	Electricity Substation	1983 - 1989	118101
L	203m S	Electricity Substation	1994 - 1997	112310
L	203m S	Electricity Substation	1969	117594
G	216m N	Electricity Substation	1984 - 1992	114030
I	272m S	Electricity Substation	1994 - 1997	116895
4	272m NE	Electricity Substation	1989 - 1997	110501
I	279m S	Electricity Substation	1998	107828
I	299m SW	Electricity Substation	1994 - 1998	110695
I	301m SW	Electricity Substation	1977	119947
I	303m SW	Electricity Substation	1983 - 1991	124382
P	325m N	Electricity Substation	1987	107830
P	331m N	Electricity Substation	1992	107842
5	354m NW	Electricity Substation	1972 - 1992	109811
S	395m SW	Electricity Substation	1969 - 1977	123576
K	397m W	Electricity Substation	1991 - 1998	114990
S	407m SW	Electricity Substation	1983	115465
K	410m W	Electricity Substation	1977 - 1998	122734



ID	Location	Land use	Dates present	Group ID
T	421m NE	Electricity Substation	1952 - 1972	121477
T	421m NE	Electricity Substation	1987	112535
T	422m NE	Electricity Substation	1992	120116
T	426m NE	Electricity Substation	1984	109501
K	433m NW	Electricity Substation	1992	107437
W	441m N	Electricity Substation	1952	124307
W	441m N	Electricity Substation	1952 - 1972	110351
W	448m N	Electricity Substation	1984	112606
W	449m N	Electricity Substation	1992	112748
W	449m N	Electricity Substation	1987	114500
K	454m W	Electricity Substation	1994 - 1998	122233
Z	459m W	Electricity Substation	1987 - 1991	116364
Z	461m W	Electricity Substation	1994 - 1998	112694
Z	464m W	Electricity Substation	1994 - 1998	120521
Z	475m W	Electricity Substation	1983 - 1991	122883
AA	479m SW	Electricity Substation	1973 - 1986	113889
AA	481m SW	Electricity Substation	1998	115016
Y	481m S	Electricity Substation	1971 - 1985	123720
Y	482m S	Electricity Substation	1985	107840
Z	483m W	Electricity Substation	1994 - 1998	121262
Y	486m S	Electricity Substation	1993 - 1997	121474
Z	490m W	Electricity Substation	1977	112916
Z	490m W	Electricity Substation	1969	116763
AD	495m SE	Electricity Substation	1985 - 1997	116214
AD	496m SE	Electricity Substation	1953	109520
AD	496m SE	Electricity Substation	1971	113190

This data is sourced from Ordnance Survey® / Groundsure.



1.4 Historical petrol stations

Records within 500m

0

Petrol stations digitised from historical Ordnance Survey® mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey® / Groundsure.

1.5 Historical garages

Records within 500m

40

Garages digitised from historical Ordnance Survey® mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on [page 15 >](#)

ID	Location	Land use	Dates present	Group ID
A	On site	Garage	1953 - 1955	38236
B	99m NE	Garage	1983 - 1989	36863
B	100m NE	Garage	1994 - 1997	38919
B	101m NE	Garage	1955	39909
B	101m NE	Garage	1969	38266
B	102m NE	Garage	1953	38413
G	162m N	Garage	1952	35962
G	220m N	Garage	1952 - 1972	37707
O	276m N	Garage	1984	36299
O	277m N	Garage	1972	38750
O	281m N	Garage	1984	36512
O	294m N	Garage	1992	37437
O	294m N	Garage	1987	36465
Q	334m E	Garage	1989	39327



ID	Location	Land use	Dates present	Group ID
Q	334m E	Garage	1994 - 1997	38423
R	335m N	Garage	1992	36670
P	335m N	Garage	1953 - 1954	40420
R	335m N	Garage	1972	37073
R	336m N	Garage	1985 - 1989	38044
P	359m N	Garage	1972	36102
P	360m N	Garage	1985 - 1989	40239
P	362m N	Garage	1953 - 1954	39602
P	373m N	Garage	1987	39870
8	374m SE	Garage	1989	35829
P	386m N	Garage	1992	38205
P	388m N	Garage	1992	38777
P	406m N	Garage	1985 - 1992	36542
P	407m N	Garage	1972	39616
P	409m N	Garage	1985 - 1989	36380
9	414m N	Garage	1987 - 1992	38085
P	430m N	Garage	1992	39482
P	431m N	Garage	1972	39337
V	432m E	Service Station	1961	35995
V	433m E	Garage	1983	35959
P	457m N	Garage	1972	40908
P	457m N	Garage	1985 - 1992	38776
P	457m N	Garage	1953 - 1954	39707
P	458m N	Garage	1953 - 1954	37526
W	459m N	Garage	1952	35961
14	492m E	Garage	1994	35960

This data is sourced from Ordnance Survey® / Groundsure.



1.6 Historical military land

Records within 500m

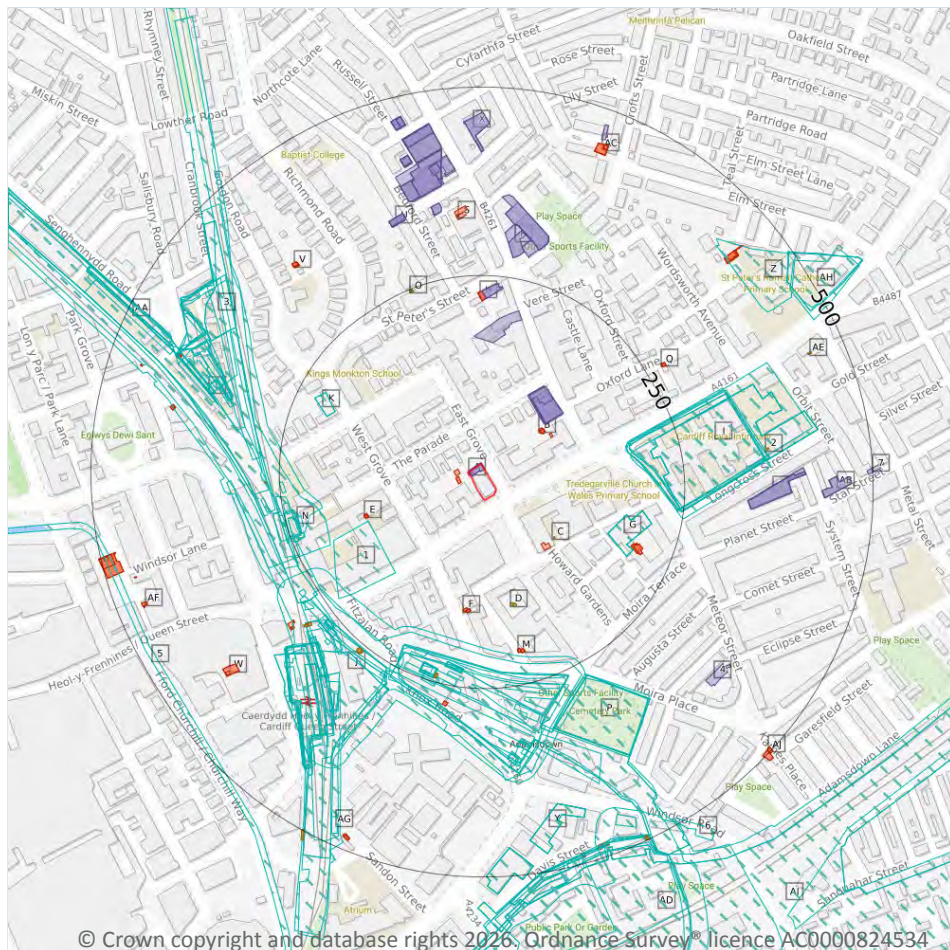
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Areas of military land digitised from multiple sources including the National Archives, local records, MOD records and verified other sources, intelligently grouped into contiguous features.

This data is sourced from Ordnance Survey® / Groundsure / other sources.



2 Past land use - un-grouped



- Site Outline
- Search buffers in metres (m)
- Historical industrial land uses
- Historical tanks
- Historical energy features
- Historical garages

2.1 Historical industrial land uses

Records within 500m

165

Potentially contaminative land use features digitised from historical Ordnance Survey® mapping at 1:10,000 and 10,560 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on [page 27](#) >

ID	Location	Land Use	Date	Group ID
1	147m SW	Infirmary	1881	1195387
G	159m E	Hospital	1994	1258686
G	159m E	Hospital	1989	1258686



ID	Location	Land Use	Date	Group ID
G	159m E	Hospital	1984	1258686
I	179m E	Infirmery	1965	1251622
I	180m E	Infirmery	1901	1259522
I	181m E	Infirmery	1899	1282614
I	183m E	Infirmery	1922	1288361
I	184m E	Infirmery	1947	1231606
I	185m E	Infirmery	1938	1253729
I	185m E	Infirmery	1916	1274372
J	188m S	Railway Sidings	1899	1258489
K	194m NW	Hospital	1973	1247589
K	194m NW	Hospital	1965	1247323
J	197m S	Railway Sidings	1965	1217023
J	198m W	Railway Sidings	1947	1226216
L	199m W	Railway Sidings	1922	1293106
I	211m E	Infirmery	1994	1291859
I	211m E	Infirmery	1989	1291859
I	211m E	Infirmery	1984	1291859
I	211m E	Infirmery	1973	1291859
J	214m S	Railway Sidings	1938	1272406
J	214m S	Railway Sidings	1916	1261238
J	217m S	Goods Station	1901	1234009
J	217m S	Railway Sidings	1901	1236187
J	219m S	Railway Building	1947	1233149
J	220m S	Railway Building	1938	1233149
J	220m S	Railway Building	1916	1288577
J	222m S	Railway Building	1899	1243694
J	223m S	Coal Yard	1881	1197647
J	223m S	Railway Sidings	1881	1218549



ID	Location	Land Use	Date	Group ID
J	224m S	Railway Sidings	1922	1261637
N	228m W	Railway Building	1947	1206251
J	229m S	Goods Station	1947	1238944
J	229m S	Goods Station	1899	1276633
J	230m S	Goods Station	1938	1275731
J	230m S	Goods Station	1916	1236631
J	231m S	Railway Building	1922	1206233
N	232m W	Railway Station	1922	1258330
N	232m W	Railway Station	1881	1216824
J	233m S	Goods Station	1965	1276715
N	233m W	Railway Station	1938	1233330
N	233m W	Railway Station	1916	1286860
N	236m W	Railway Station	1899	1216824
N	238m W	Railway Station	1901	1243594
J	239m S	Goods Station	1881	1276633
J	240m S	Goods Station	1922	1283782
N	242m W	Railway Buildings	1881	1180146
J	245m S	Railway Building	1881	1206086
L	251m W	Railway Sidings	1965	1238934
N	253m W	Railway Sidings	1881	1243961
L	254m SW	Railway Sidings	1938	1276819
L	254m SW	Railway Sidings	1916	1251095
J	255m SW	Railway Sidings	1901	1233099
J	256m SW	Railway Sidings	1965	1250544
J	257m SW	Railway Building	1938	1224239
J	260m SW	Railway Buildings	1947	1290512
J	260m SW	Railway Building	1916	1290252
J	260m SW	Railway Building	1899	1267394



ID	Location	Land Use	Date	Group ID
L	260m W	Railway Sidings	1881	1284389
J	263m SW	Railway Building	1922	1206076
J	264m SW	Railway Building	1922	1224239
J	264m SW	Railway Buildings	1965	1290512
L	265m W	Railway Sidings	1899	1211883
J	265m SW	Railway Building	1947	1206250
J	266m SW	Railway Sidings	1938	1225533
J	266m SW	Railway Sidings	1916	1272497
P	266m SE	Cemetery	1899	1220106
J	267m SW	Unspecified Pit	1881	1190705
N	267m W	Railway Buildings	1881	1180117
P	269m SE	Old Cemetery	1922	1212622
P	269m SE	Old Cemetery	1947	1212622
P	269m SE	Old Cemetery	1881	1248629
P	269m SE	Old Cemetery	1938	1212622
P	269m SE	Old Cemetery	1916	1212622
P	270m SE	Cemetery	1901	1220106
J	270m SW	Railway Sidings	1881	1244799
J	270m SW	Railway Building	1881	1286622
J	273m SW	Railway Sidings	1922	1287704
J	273m S	Railway Buildings	1947	1180189
L	277m W	Railway Sidings	1901	1263317
J	277m SW	Railway Building	1922	1206234
N	283m SW	Unspecified Ground Workings	1984	1182859
J	288m SW	Goods Shed	1938	1270516
J	288m SW	Goods Shed	1916	1216782
J	289m SW	Goods Sheds	1899	1258680
J	290m SW	Goods Shed	1922	1241636



ID	Location	Land Use	Date	Group ID
J	290m SW	Railway Station	1973	1231919
J	290m SW	Railway Station	1965	1289017
J	290m SW	Goods Sheds	1901	1258680
J	291m SW	Railway Building	1922	1218499
J	293m SW	Railway Station	1947	1251628
J	293m SW	Railway Station	1881	1251492
L	302m W	Goods Station	1901	1225975
J	305m SW	Railway Station	1938	1250494
J	305m SW	Railway Station	1916	1293885
J	307m SW	Railway Station	1899	1230516
J	310m SW	Railway Station	1901	1291088
J	311m SW	Railway Station	1994	1235001
J	311m SW	Railway Station	1989	1235001
J	311m SW	Railway Station	1984	1235001
J	312m SW	Railway Station	1922	1250494
J	320m SW	Goods Sheds	1899	1255735
J	320m S	Railway Building	1947	1269557
J	322m SW	Goods Sheds	1901	1255735
J	323m S	Railway Building	1938	1214309
J	323m S	Railway Building	1916	1276365
L	323m W	Goods Station	1922	1219299
L	327m W	Railway Buildings	1965	1211431
L	327m W	Goods Station	1938	1253792
L	327m W	Goods Station	1916	1280012
L	328m W	Goods Station	1947	1245480
L	332m NW	Brewery	1881	1179104
L	333m W	Goods Station	1899	1243200
J	334m S	Railway Building	1922	1206077



ID	Location	Land Use	Date	Group ID
J	335m S	Railway Building	1947	1289942
J	338m S	Railway Building	1938	1214412
J	338m S	Railway Building	1916	1214412
J	343m S	Railway Building	1881	1229638
L	348m W	Railway Building	1922	1240574
J	349m S	Railway Building	1922	1214412
L	352m W	Railway Buildings	1938	1285886
L	352m W	Railway Buildings	1916	1259239
J	359m SW	Railway Building	1922	1233979
L	360m W	Railway Building	1899	1277024
J	360m SW	Railway Building	1881	1266842
3	363m NW	Railway Sidings	1881	1226406
L	363m NW	Sawmill	1881	1209754
L	397m NW	Railway Building	1965	1206084
L	413m NW	Railway Building	1922	1206082
Y	414m S	Fire Station	1994	1218312
Y	414m S	Fire Station	1989	1218312
Y	414m S	Fire Station	1984	1218312
L	419m NW	Railway Building	1947	1206083
AA	422m NW	Railway Buildings	1922	1231235
Z	423m NE	Nursery	1881	1247890
AA	426m NW	Railway Buildings	1938	1233472
AA	426m NW	Railway Buildings	1916	1280129
AA	430m NW	Railway Buildings	1899	1236253
AD	442m S	Railway Sidings	1899	1274950
AD	453m SE	Smithy	1901	1194150
AD	462m S	Unspecified Warehouse	1994	1222402
AD	462m S	Unspecified Warehouse	1989	1222402



ID	Location	Land Use	Date	Group ID
AD	462m S	Unspecified Warehouse	1984	1222402
AG	463m SW	Railway Building	1947	1206090
AH	470m NE	Nursery	1922	1290001
AH	471m NE	Nursery	1916	1290001
AH	471m NE	Nursery	1899	1230562
AH	472m NE	Nursery	1901	1291065
5	479m SW	Dock Feeder	1901	1187677
AD	480m S	Goods Depot	1947	1230345
AD	481m S	Railway Sidings	1965	1270989
AD	483m S	Railway Sidings	1938	1270989
AD	483m S	Railway Buildings	1938	1279213
AD	483m S	Railway Buildings	1916	1251687
AD	483m S	Railway Sidings	1916	1284307
AD	484m S	Railway Sidings	1973	1225844
AD	485m S	Railway Buildings	1973	1250856
AD	492m S	Railway Building	1965	1206252
6	492m SE	Smithy	1899	1194149
AD	492m S	Railway Building	1965	1206240
AD	493m S	Unspecified Depot	1994	1274821
AD	493m S	Goods Yard	1922	1262898
AI	493m S	Railway Sidings	1922	1276556
AI	493m S	Dock	1922	1241955

This data is sourced from Ordnance Survey® / Groundsure.

2.2 Historical tanks

Records within 500m

30

Tank features digitised from historical Ordnance Survey® mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.



Features are displayed on the Past land use - un-grouped map on [page 27 >](#)

ID	Location	Land Use	Date	Group ID
C	97m SE	Unspecified Tank	1880	184656
D	141m S	Unspecified Tank	1983	196125
D	141m S	Unspecified Tank	1989	196125
D	143m S	Unspecified Tank	1997	189562
D	143m S	Unspecified Tank	1994	189562
J	238m S	Unspecified Tank	1955	190862
J	239m S	Unspecified Tank	1953	190862
O	245m N	Unspecified Tank	1992	198597
O	246m N	Unspecified Tank	1972	198597
O	247m N	Unspecified Tank	1985	198597
O	247m N	Unspecified Tank	1989	198597
O	247m N	Unspecified Tank	1989	198597
J	256m SW	Unspecified Tank	1994	189281
J	256m SW	Unspecified Tank	1998	189281
J	256m SW	Unspecified Tank	1991	189281
J	256m SW	Unspecified Tank	1987	189281
N	266m W	Unspecified Tank	1882	184658
N	269m W	Unspecified Tank	1880	184654
J	282m SW	Unspecified Tank	1955	194595
J	282m SW	Unspecified Tank	1953	194595
J	286m SW	Unspecified Tank	1920	197007
J	286m SW	Unspecified Tank	1942	197007
2	363m E	Unspecified Tank	1969	182329
AE	451m NE	Unspecified Tank	1983	187991
AE	451m NE	Unspecified Tank	1989	187991
AE	452m NE	Unspecified Tank	1969	187991
AD	494m SE	Unspecified Tank	1985	188349



ID	Location	Land Use	Date	Group ID
AD	494m SE	Unspecified Tank	1985	188349
AG	498m SW	Tanks	1955	196865
AG	498m SW	Tanks	1953	196865

This data is sourced from Ordnance Survey® / Groundsure.

2.3 Historical energy features

Records within 500m

112

Energy features digitised from historical Ordnance Survey® mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on [page 27 >](#)

ID	Location	Land Use	Date	Group ID
A	On site	Electricity Substation	1997	117841
A	On site	Electricity Substation	1994	117841
A	10m W	Electricity Substation	1969	107832
A	13m SW	Electricity Substation	1983	114125
A	13m SW	Electricity Substation	1989	114125
B	88m NE	Electricity Substation	1983	123805
B	88m NE	Electricity Substation	1989	123805
B	90m NE	Electricity Substation	1997	123805
B	90m NE	Electricity Substation	1994	123805
C	90m SE	Electricity Substation	1969	107833
B	98m NE	Electricity Substation	1969	107831
E	144m SW	Electricity Substation	1983	117697
E	144m SW	Electricity Substation	1991	117697
E	144m SW	Electricity Substation	1987	117697
E	144m SW	Electricity Substation	1977	115782
E	145m SW	Electricity Substation	1994	117697
E	145m SW	Electricity Substation	1998	117697



ID	Location	Land Use	Date	Group ID
F	145m S	Electricity Substation	1983	111957
F	145m S	Electricity Substation	1989	111957
F	145m S	Electricity Substation	1997	111957
F	145m S	Electricity Substation	1994	111957
G	194m E	Electricity Substation	1983	119930
G	194m E	Electricity Substation	1989	119930
G	197m E	Electricity Substation	1997	119930
G	197m E	Electricity Substation	1994	119930
M	202m S	Electricity Substation	1983	118101
M	202m S	Electricity Substation	1989	118101
M	203m S	Electricity Substation	1997	112310
M	203m S	Electricity Substation	1994	112310
M	203m S	Electricity Substation	1969	117594
H	216m N	Electricity Substation	1984	114030
H	216m N	Electricity Substation	1987	114030
H	217m N	Electricity Substation	1992	114030
J	272m S	Electricity Substation	1997	116895
J	272m S	Electricity Substation	1994	116895
Q	272m NE	Electricity Substation	1989	110501
Q	273m NE	Electricity Substation	1997	110501
Q	273m NE	Electricity Substation	1994	110501
J	279m S	Electricity Substation	1998	107828
J	299m SW	Electricity Substation	1994	110695
J	299m SW	Electricity Substation	1998	110695
J	301m SW	Electricity Substation	1977	119947
J	303m SW	Electricity Substation	1983	124382
J	303m SW	Electricity Substation	1991	124382
J	303m SW	Electricity Substation	1987	124382

ID	Location	Land Use	Date	Group ID
S	325m N	Electricity Substation	1987	107830
S	331m N	Electricity Substation	1992	107842
V	354m NW	Electricity Substation	1992	109811
V	355m NW	Electricity Substation	1972	109811
V	356m NW	Electricity Substation	1985	109811
V	356m NW	Electricity Substation	1989	109811
V	356m NW	Electricity Substation	1989	109811
W	395m SW	Electricity Substation	1977	123576
W	395m SW	Electricity Substation	1969	123576
L	397m W	Electricity Substation	1994	114990
L	397m W	Electricity Substation	1998	114990
L	398m W	Electricity Substation	1991	114990
W	407m SW	Electricity Substation	1983	115465
L	410m W	Electricity Substation	1983	122734
L	410m W	Electricity Substation	1991	122734
L	410m W	Electricity Substation	1987	122734
L	410m W	Electricity Substation	1977	122734
L	411m W	Electricity Substation	1994	122734
L	411m W	Electricity Substation	1998	122734
Z	421m NE	Electricity Substation	1952	121477
Z	421m NE	Electricity Substation	1952	121477
Z	421m NE	Electricity Substation	1987	112535
Z	421m NE	Electricity Substation	1972	121477
Z	422m NE	Electricity Substation	1992	120116
Z	426m NE	Electricity Substation	1984	109501
L	433m NW	Electricity Substation	1992	107437
AC	441m N	Electricity Substation	1952	124307
AC	441m N	Electricity Substation	1972	110351



ID	Location	Land Use	Date	Group ID
AC	441m N	Electricity Substation	1952	110351
AC	448m N	Electricity Substation	1984	112606
AC	449m N	Electricity Substation	1992	112748
AC	449m N	Electricity Substation	1987	114500
L	454m W	Electricity Substation	1994	122233
L	454m W	Electricity Substation	1998	122233
AF	459m W	Electricity Substation	1991	116364
AF	459m W	Electricity Substation	1987	116364
AF	461m W	Electricity Substation	1994	112694
AF	461m W	Electricity Substation	1998	112694
AF	464m W	Electricity Substation	1994	120521
AF	464m W	Electricity Substation	1998	120521
AF	475m W	Electricity Substation	1983	122883
AF	475m W	Electricity Substation	1991	122883
AF	475m W	Electricity Substation	1987	122883
AG	479m SW	Electricity Substation	1984	113889
AG	479m SW	Electricity Substation	1973	113889
AG	480m SW	Electricity Substation	1986	113889
AG	480m SW	Electricity Substation	1985	113889
AG	481m SW	Electricity Substation	1998	115016
AD	481m S	Electricity Substation	1985	123720
AD	481m S	Electricity Substation	1971	123720
AD	482m S	Electricity Substation	1985	107840
AF	483m W	Electricity Substation	1994	121262
AF	483m W	Electricity Substation	1998	121262
AD	486m S	Electricity Substation	1997	121474
AD	486m S	Electricity Substation	1994	121474
AD	486m S	Electricity Substation	1996	121474



ID	Location	Land Use	Date	Group ID
AD	486m S	Electricity Substation	1993	121474
AF	490m W	Electricity Substation	1977	112916
AF	490m W	Electricity Substation	1969	116763
AJ	495m SE	Electricity Substation	1985	116214
AJ	496m SE	Electricity Substation	1997	116214
AJ	496m SE	Electricity Substation	1994	116214
AJ	496m SE	Electricity Substation	1996	116214
AJ	496m SE	Electricity Substation	1993	116214
AJ	496m SE	Electricity Substation	1985	116214
AJ	496m SE	Electricity Substation	1953	109520
AJ	496m SE	Electricity Substation	1971	113190

This data is sourced from Ordnance Survey® / Groundsure.

2.4 Historical petrol stations

Records within 500m	0
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Petrol stations digitised from historical Ordnance Survey® mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey® / Groundsure.

2.5 Historical garages

Records within 500m	62
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Garages digitised from historical Ordnance Survey® mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on [page 27 >](#)

ID	Location	Land Use	Date	Group ID
A	On site	Garage	1953	38236
A	On site	Garage	1955	38236



ID	Location	Land Use	Date	Group ID
B	99m NE	Garage	1983	36863
B	99m NE	Garage	1989	36863
B	100m NE	Garage	1997	38919
B	100m NE	Garage	1994	38919
B	101m NE	Garage	1955	39909
B	101m NE	Garage	1969	38266
B	102m NE	Garage	1953	38413
H	162m N	Garage	1952	35962
H	220m N	Garage	1952	37707
H	220m N	Garage	1972	37707
R	276m N	Garage	1984	36299
R	277m N	Garage	1972	38750
R	281m N	Garage	1984	36512
R	294m N	Garage	1992	37437
R	294m N	Garage	1987	36465
T	334m E	Garage	1989	39327
T	334m E	Garage	1997	38423
T	334m E	Garage	1994	38423
U	335m N	Garage	1992	36670
S	335m N	Garage	1953	40420
S	335m N	Garage	1954	40420
U	335m N	Garage	1972	37073
U	336m N	Garage	1985	38044
U	336m N	Garage	1989	38044
U	336m N	Garage	1989	38044
S	359m N	Garage	1972	36102
S	360m N	Garage	1985	40239
S	360m N	Garage	1989	40239



ID	Location	Land Use	Date	Group ID
S	360m N	Garage	1989	40239
S	362m N	Garage	1953	39602
S	363m N	Garage	1954	39602
S	373m N	Garage	1987	39870
4	374m SE	Garage	1989	35829
S	386m N	Garage	1992	38205
S	388m N	Garage	1992	38777
S	406m N	Garage	1992	36542
S	407m N	Garage	1972	39616
S	408m N	Garage	1985	36542
S	408m N	Garage	1989	36542
S	408m N	Garage	1989	36542
S	409m N	Garage	1985	36380
S	409m N	Garage	1989	36380
S	409m N	Garage	1989	36380
X	414m N	Garage	1987	38085
X	415m N	Garage	1992	38085
S	430m N	Garage	1992	39482
S	431m N	Garage	1972	39337
AB	432m E	Service Station	1961	35995
AB	433m E	Garage	1983	35959
S	457m N	Garage	1972	40908
S	457m N	Garage	1992	38776
S	457m N	Garage	1953	39707
S	457m N	Garage	1954	39707
S	457m N	Garage	1985	38776
S	457m N	Garage	1989	38776
S	457m N	Garage	1989	38776

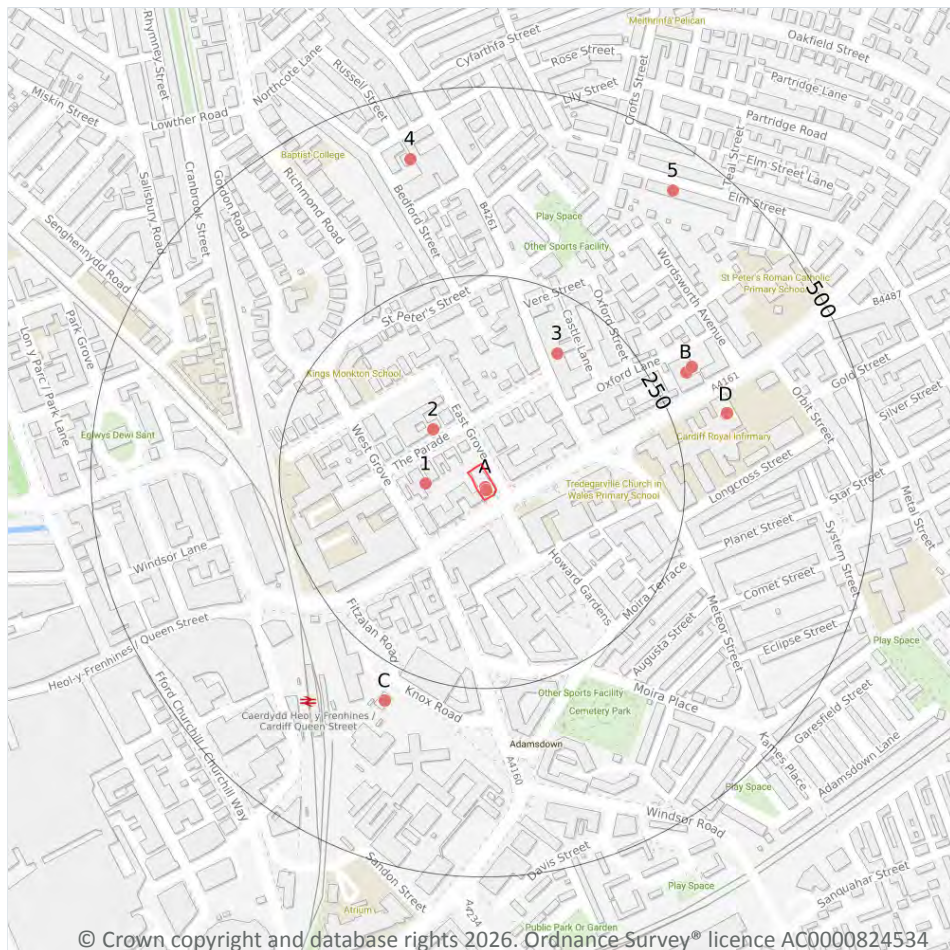


ID	Location	Land Use	Date	Group ID
S	458m N	Garage	1953	37526
AC	459m N	Garage	1952	35961
S	459m N	Garage	1954	37526
7	492m E	Garage	1994	35960

This data is sourced from Ordnance Survey® / Groundsure.



3 Waste and landfill



- Site Outline
- Search buffers in metres (m)
- Waste exemptions

3.1 Active or recent landfill

Records within 500m

0

Active or recently closed landfill sites under Environment Agency/Natural Resources Wales regulation.

This data is sourced from the Environment Agency and Natural Resources Wales.

3.2 Historical landfill (BGS records)

Records within 500m

0

Landfill sites identified on a survey carried out on behalf of the DoE in 1973. These sites may have been closed or operational at this time.

This data is sourced from the British Geological Survey.



3.3 Historical landfill (LA/mapping records)

Records within 500m

0

Landfill sites identified from Local Authority records and high detail historical mapping.

This data is sourced from the Ordnance Survey®/Groundsure and Local Authority records.

3.4 Historical landfill (EA/NRW records)

Records within 500m

0

Known historical (closed) landfill sites (e.g. sites where there is no PPC permit or waste management licence currently in force). This includes sites that existed before the waste licensing regime and sites that have been licensed in the past but where a licence has been revoked, ceased to exist or surrendered and a certificate of completion has been issued.

This data is sourced from the Environment Agency and Natural Resources Wales.

3.5 Historical waste sites

Records within 500m

0

Waste site records derived from Local Authority planning records and high detail historical mapping.

This data is sourced from Ordnance Survey®/Groundsure and Local Authority records.

3.6 Licensed waste sites

Records within 500m

0

Active or recently closed waste sites under Environment Agency/Natural Resources Wales regulation.

This data is sourced from the Environment Agency and Natural Resources Wales.

3.7 Waste exemptions

Records within 500m

32

Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

Features are displayed on the Waste and landfill map on [page 43](#) >

ID	Location	Site	Reference	Category	Sub-Category	Description
A	On site	Natural Resources Wales, Linear Exemption - Powysland Idd, Cf24 0tp	NRW- WME044399	Disposing of waste exemption	Not on a farm	Deposit of waste from dredging of inland waters

ID	Location	Site	Reference	Category	Sub-Category	Description
A	On site	Test Company, Cyfoeth Naturiol Cymru, Cambria House, 29 Newport Road, Cardiff, Caerdydd, Cf24 0tp	NRW-WME068210	Using waste exemption	On a farm	Use of waste in construction
A	On site	Cambria House, 29 Newport Road, Cardiff, Caerdydd, Cf24 0tp	NRW-WME067277	Using waste exemption	On a farm	Use of waste in construction
A	On site	Cambria House, 29 Newport Road, Cardiff, Caerdydd, Cf24 0tp	NRW-WME067277	Storing waste exemption	On a farm	Storage of waste in a secure place
A	On site	Cambria House, 29 Newport Road, Cardiff, Caerdydd, Cf24 0tp	NRW-WME067277	Using waste exemption	On a farm	Use of waste for a specified purpose
A	On site	Test Company, Cyfoeth Naturiol Cymru, Cambria House, 29 Newport Road, Cardiff, Caerdydd, Cf24 0tp	NRW-WME068210	Treating waste exemption	Waste exemption - agricultural and non-agricultural	Treatment of waste in a biobed or biofilter
A	On site	Test Company, Cyfoeth Naturiol Cymru, Cambria House, 29 Newport Road, Cardiff, Caerdydd, Cf24 0tp	NRW-WME068210	Disposing of waste exemption	On a farm	Burning waste in the open
A	On site	Test Company, Cyfoeth Naturiol Cymru, Cambria House, 29 Newport Road, Cardiff, Caerdydd, Cf24 0tp	NRW-WME068210	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit
A	On site	Cyfoeth Naturiol Cymru, Cambria House, 29 Newport Road, Cardiff, Caerdydd, Cf24 0tp	NRW-WME069079	Treating waste exemption	Waste exemption - agricultural and non-agricultural	Treatment of waste in a biobed or biofilter
A	On site	Cambria House, 29 Newport Road, Cardiff, Caerdydd, Cf24 0tp	NRW-WME067277	Disposing of waste exemption	On a farm	Burning waste in the open
A	On site	Cambria House, 29 Newport Road, Cardiff, Caerdydd, Cf24 0tp	NRW-WME067277	Using waste exemption	On a farm	Spreading waste on agricultural land to confer benefit
A	On site	Natural Resources Wales, Cambria House, 29 Newport Road, Cardiff, Caerdydd, Cf240tp	NRW-WME006068	Disposing of waste exemption	On a farm	Deposit of waste from dredging of inland waters



ID	Location	Site	Reference	Category	Sub-Category	Description
A	On site	Natural Resources Wales, Cambria House, 29 Newport Road, Cardiff, Caerdydd, Cf240tp	NRW-WME006243	Disposing of waste exemption	On a farm	Deposit of waste from dredging of inland waters
A	On site	Welsh Company, Welsh Company, Welsh Company, 29 Heol Casnewydd, Caerdydd, Cf240tp	NRW-WME013680	Treating waste exemption	Waste exemption - agricultural and non-agricultural	Treatment of waste aerosol cans
A	On site	Welsh Company, Welsh Company, Welsh Company, 29 Heol Casnewydd, Caerdydd, Cf240tp	NRW-WME013680	Treating waste exemption	On a farm	Sorting mixed waste
A	On site	29, Newport Rd, Cardiff, Cf24 0tp	NRW-WME058568	Using waste exemption	Not on a farm	Use of waste in construction
A	On site	Welsh Company, Welsh Company, Welsh Company, 29 Heol Casnewydd, Caerdydd, Cf240tp	NRW-WME013680	Disposing of waste exemption	Waste exemption - agricultural and non-agricultural	Deposit of waste from a portable sanitary convenience
A	On site	Welsh Company, Welsh Company, Welsh Company, 29 Heol Casnewydd, Caerdydd, Cf240tp	NRW-WME013680	Storing waste exemption	Waste exemption - agricultural and non-agricultural	Storage of waste in secure containers
1	58m W	Andrew Thomas Dental Care, First Floor Suite, 50 The Parade, Roath, Cardiff, Cardiff, Cf24 3ab	NRW-WME068492	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
2	73m NW	Andrew Thomas Dental Care, First Floor Suite, 50 The Parade, Roath, Cardiff, Cf243ab	NRW-WME032032	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
3	177m NE	Asda Stores Limited, Asda Cardiff Sc, Longwood Drive, Cardiff, Cardiff, Caerdydd, Cf24 3tw	NRW-WME058488	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
B	295m NE	Glain House Care Home, Glain House Care Home, 77-85 Newport Road, Cardiff, Cardiff, Cf24 0ae	NRW-WME099738	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal

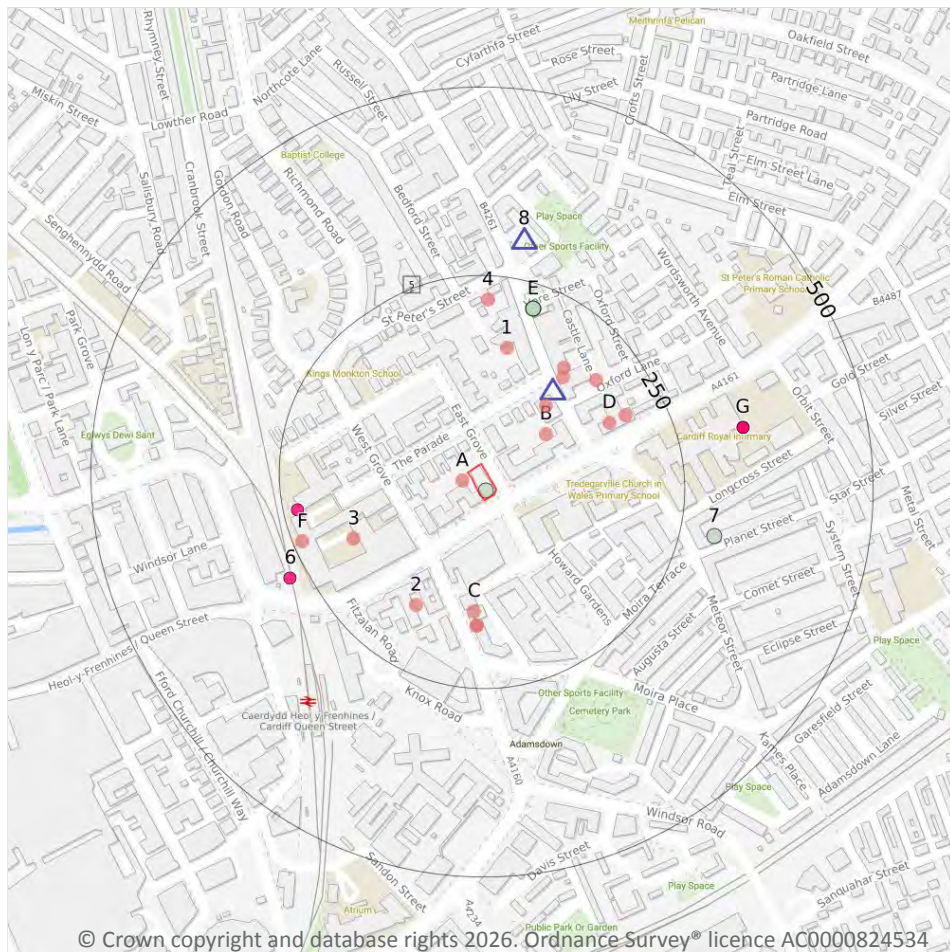


ID	Location	Site	Reference	Category	Sub-Category	Description
C	298m SW	Hmp Cardiff, H M Prison, Knox Road, Cardiff, Caerdydd, Cf240ug	NRW- WME033323	Treating waste exemption	Not on a farm	Sorting and de- naturing of controlled drugs for disposal
C	298m SW	Hmp Cardiff, H M Prison, Knox Road, Cardiff, Caerdydd, Cf24 Oug	NRW- WME072011	Treating waste exemption	Not on a farm	Sorting and de- naturing of controlled drugs for disposal
B	305m NE	-	WEX233494	Treating waste exemption	Not on a farm	Sorting and de- naturing of controlled drugs for disposal
D	319m E	7-8, Clifton Street, Cardiff, Cf24 1pw	WEX100310	Treating waste exemption	Not on a farm	Sorting and de- naturing of controlled drugs for disposal
D	321m E	Willmott Dixon Construction Limited, Willmott Dixon Site Office, Wellbeing At Cardiff Royal Infirmary, Glossop Road, Cardiff, Caerdydd, Cf24 0sz	NRW- WME049240	Using waste exemption	Not on a farm	Use of waste in construction
D	321m E	Willmott Dixon Construction Limited, Cardiff Royal Infirmary, Newport Road, Cardiff, Caerdydd, Cf24 0sz	NRW- WME066129	Using waste exemption	Not on a farm	Use of waste in construction
D	321m E	Out Of Hours Gp Service (Cardiff & Vale University Health Board), Cardiff Royal Infirmary, Newport Road, Cardiff, Caerdydd, Cf24 0sz	NRW- WME044739	Disposing of waste exemption	Not on a farm	Disposal by incineration
D	321m E	Clifton Pharmacy Ltd, City Pharmacy, Cardiff Royal Infirmary, Newport Road, Cardiff, Caerdydd, Cf24 0sz	NRW- WME061008	Treating waste exemption	Not on a farm	Sorting and de- naturing of controlled drugs for disposal
4	415m N	Classic Cars Cardiff, Off Tavistock St, Cardiff, Cardiff, Glamorgan, Cf243be	NRW- WME083859	Storing waste exemption	Not on a farm	Storage of waste in secure containers
5	442m NE	40 Elm Street, Cardiff, Caerdydd, Cf24 3qs	NRW- WME003959	Disposing of waste exemption	Waste exemption - non-agricultural	Burning waste in the open

This data is sourced from the Environment Agency and Natural Resources Wales.



4 Current industrial land use



- Site Outline
- Search buffers in metres (m)
- Recent industrial land uses
- NGD current or recent tanks
- ▲ Current or recent petrol stations
- Radioactive Substance Authorisations
- Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m

16

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on [page 48](#) >

ID	Location	Company	Address	Activity	Category
A	12m SW	Electricity Sub Station	South Glamorgan, CF24	Electrical Features	Infrastructure and Facilities
B	94m NE	Electricity Sub Station	South Glamorgan, CF24	Electrical Features	Infrastructure and Facilities
B	115m NE	Lewis Motors Ltd	1, City Road, Roath, Cardiff, South Glamorgan, CF24 3BJ	Vehicle Repair, Testing and Servicing	Repair and Servicing



ID	Location	Company	Address	Activity	Category
C	148m S	Electricity Sub Station	South Glamorgan, CF24	Electrical Features	Infrastructure and Facilities
1	158m N	Electricity Sub Station	South Glamorgan, CF24	Electrical Features	Infrastructure and Facilities
B	158m NE	Straight Edge Scaffolding Ltd	12-14, City Road, Cardiff, South Glamorgan, CF24 3DL	Construction and Tool Hire	Hire Services
2	166m SW	Electricity Sub Station	South Glamorgan, CF24	Electrical Features	Infrastructure and Facilities
C	166m S	Flightlink Wales	Trafalgar House 5, Fitzalan Place, Adamsdown, Cardiff, South Glamorgan, CF24 0ED	Airlines and Airline Services	Transport, Storage and Delivery
C	166m S	Cardiff Commercial Supplies	Trafalgar House 5, Fitzalan Place, Adamsdown, Cardiff, South Glamorgan, CF24 0ED	Distribution and Haulage	Transport, Storage and Delivery
B	168m NE	Cardiff Safe Deposit	14-18, City Road, Roath, Cardiff, South Glamorgan, CF24 3DL	Container and Storage	Transport, Storage and Delivery
D	174m NE	Aecom Europe Ltd	47, Newport Road, Roath, Cardiff, South Glamorgan, CF24 0AD	Civil Engineers	Engineering Services
3	175m SW	Electricity Sub Station	South Glamorgan, CF24	Electrical Features	Infrastructure and Facilities
B	189m NE	Electricity Sub Station	South Glamorgan, CF24	Electrical Features	Infrastructure and Facilities
D	197m NE	W Y G Group	Longcross Court, 47, Newport Road, Roath, Cardiff, South Glamorgan, CF24 0AD	Civil Engineers	Engineering Services
4	218m N	Electricity Sub Station	South Glamorgan, CF24	Electrical Features	Infrastructure and Facilities
F	237m SW	Chimney	South Glamorgan, CF24	Chimneys	Industrial Features

This data is sourced from Ordnance Survey®.

4.2 National Geographic Database (NGD) - Current or recent tanks

Records within 250m

1

Current or recent tanks identified from the Ordnance Survey® NGD.

Features are displayed on the Current industrial land use map on [page 48](#) >



ID	Location	Tank description	Activity	Date first identified
5	246m N	Roofed Storage Tank	Commercial Activity: Distribution Or Storage	01/08/1993

This data is sourced from Ordnance Survey®.

4.3 Current or recent petrol stations

Records within 500m	2
----------------------------	----------

Open, closed, under development and obsolete petrol stations.

Features are displayed on the Current industrial land use map on [page 48 >](#)

ID	Location	Company	Address	LPG	Status
B	137m NE	OBSOLETE	1, City Road, Roath, Cardiff, Cardiff, CF24 3TQ	Not Applicable	Obsolete
8	304m N	OBSOLETE	58, City Road, Roath, Cardiff, Cardiff, CF24 3DN	Not Applicable	Obsolete

This data is sourced from Experian.

4.4 Electricity cables

Records within 500m	0
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High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.5 Gas pipelines

Records within 500m	0
----------------------------	----------

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.6 Sites determined as Contaminated Land

Records within 500m	0
----------------------------	----------

Contaminated Land Register of sites designated under Part 2a of the Environmental Protection Act 1990.

This data is sourced from Local Authority records.

4.7 Control of Major Accident Hazards (COMAH)

Records within 500m**0**

Control of Major Accident Hazards (COMAH) sites. This data includes upper and lower tier sites, and includes a historical archive of COMAH sites and Notification of Installations Handling Hazardous Substances (NIHHS) records.

This data is sourced from the Health and Safety Executive.

4.8 Regulated explosive sites

Records within 500m**0**

Sites registered and licensed by the Health and Safety Executive under the Manufacture and Storage of Explosives Regulations 2005 (MSER). The last update to this data was in April 2011.

This data is sourced from the Health and Safety Executive.

4.9 Hazardous substance storage/usage

Records within 500m**0**

Consents granted for a site to hold certain quantities of hazardous substances at or above defined limits in accordance with the Planning (Hazardous Substances) Regulations 2015.

This data is sourced from Local Authority records.

4.10 Historical licensed industrial activities (IPC)

Records within 500m**0**

Integrated Pollution Control (IPC) records of substance releases to air, land and water. This data represents a historical archive as the IPC regime has been superseded.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.11 Licensed industrial activities (Part A(1))

Records within 500m**0**

Records of Part A(1) installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.12 Licensed pollutant release (Part A(2)/B)

Records within 500m

0

Records of Part A(2) and Part B installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

This data is sourced from Local Authority records.

4.13 Radioactive Substance Authorisations

Records within 500m

6

Records of the storage, use, accumulation and disposal of radioactive substances regulated under the Radioactive Substances Act 1993.

Features are displayed on the Current industrial land use map on [page 48 >](#)

ID	Location	Address	Details	
F	231m W	Cardiff University, Cardiff School Of Engineering, Cardiff University, Queen's Buildings, The Parade, Cardiff, CF24 3AA	Operator: Cardiff University Type: Disposal Of Radioactive Waste (was Rsa60 Section 6). Permission number: CD7124 Date of approval: 09/07/2009	Effective from: 03/08/2009 Last date of update: 01/01/2015 Status: Effective
6	273m SW	University Of Wales College Of Medicine, Cardiff Royal Infirmary, Newport Road, Cardiff, South Glamorgan, CF2 1SZ	Operator: University Of Wales College Of Medicine Type: Disposal Of Radioactive Waste (was Rsa60 Section 6). Permission number: AJ4898 Date of approval: 04/02/1994	Effective from: 07/03/1994 Last date of update: 01/01/2015 Status: Revoked/cancelled
G	337m E	Cardiff And Vale Nhs Trust, Newport Road, Cardiff, South Glamorgan, CF2 1SZ	Operator: Cardiff And Vale Nhs Trust Type: Disposal Of Radioactive Waste (was Rsa60 Section 6). Permission number: AF1187 Date of approval: 31/03/1991	Effective from: 31/03/1991 Last date of update: 01/01/2015 Status: Revoked/cancelled
G	337m E	Cardiff And Vale Nhs Trust, Newport Road, Cardiff, South Glamorgan, CF2 1SZ	Operator: Cardiff And Vale Nhs Trust Type: Disposal Of Radioactive Waste (was Rsa60 Section 6). Permission number: AF1195 Date of approval: 31/03/1991	Effective from: 31/03/1991 Last date of update: 01/01/2015 Status: Revoked/cancelled
G	337m E	University Hospital Of Wales Health Care Nhs Trust, Cardiff Royal Infirmary, Newport Road, Cardiff, South Glamorgan, CF2 1SZ	Operator: University Hospital Of Wales Health Care Nhs Trust Type: Disposal Of Radioactive Waste (was Rsa60 Section 6). Permission number: AT9106 Date of approval: 14/11/1995	Effective from: 15/11/1995 Last date of update: 01/01/2015 Status: Revoked/cancelled



ID	Location	Address	Details	
G	337m E	Zzzz University Of Wales College Of Medicine, Cardiff Royal Infirmary,newport Road, Cardiff, South Glamorgan, CF2 1SZ	Operator: Zzzz University Of Wales College Of Medicine Type: Keeping And Use Of Radioactive Materials (was Rsa60 Section 1). Permission number: AL5518 Date of approval: 12/12/1991	Effective from: 12/12/1991 Last date of update: 06/01/2005 Status: Superseded By Variation

This data is sourced from the Environment Agency and Natural Resources Wales.

4.14 Licensed Discharges to controlled waters

Records within 500m	0
----------------------------	----------

Discharges of treated or untreated effluent to controlled waters under the Water Resources Act 1991.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.15 Pollutant release to surface waters (Red List)

Records within 500m	0
----------------------------	----------

Discharges of specified substances under the Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.16 Pollutant release to public sewer

Records within 500m	0
----------------------------	----------

Discharges of Special Category Effluents to the public sewer.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.17 List 1 Dangerous Substances

Records within 500m	0
----------------------------	----------

Discharges of substances identified on List I of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.18 List 2 Dangerous Substances

Records within 500m

0

Discharges of substances identified on List II of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.19 Pollution Incidents (EA/NRW)

Records within 500m

4

Records of substantiated pollution incidents. Since 2006 this data has only included category 1 (major) and 2 (significant) pollution incidents.

Features are displayed on the Current industrial land use map on [page 48 >](#)

ID	Location	Details	
A	On site	Incident Date: 28/07/2015 Incident Identification: 1359361 Pollutant: Oils and Fuel Pollutant Description: Gas and Fuel Oils	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
E	217m N	Incident Date: 07/04/2016 Incident Identification: 1601549 Pollutant: - Pollutant Description: -	Water Impact: Category 3 (Minor) Land Impact: No Details Air Impact: Category 3 (Minor)
E	217m N	Incident Date: 07/04/2016 Incident Identification: 1601549 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Smoke	Water Impact: Category 3 (Minor) Land Impact: No Details Air Impact: Category 3 (Minor)
7	296m E	Incident Date: 15/10/2001 Incident Identification: 36820 Pollutant: Oils and Fuel Pollutant Description: Petrol	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

This data is sourced from the Environment Agency and Natural Resources Wales.

4.20 Pollution inventory substances

Records within 500m

0

The pollution inventory (substances) includes reporting on annual emissions of certain regulated substances to air, controlled waters and land. A reporting threshold for each substance is also included. Where emissions fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.



This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

4.21 Pollution inventory waste transfers

Records within 500m

0

The pollution inventory (waste transfers) includes reporting on annual transfers and recovery/disposal of controlled wastes from a site. A reporting threshold for each waste type is also included. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

4.22 Pollution inventory radioactive waste

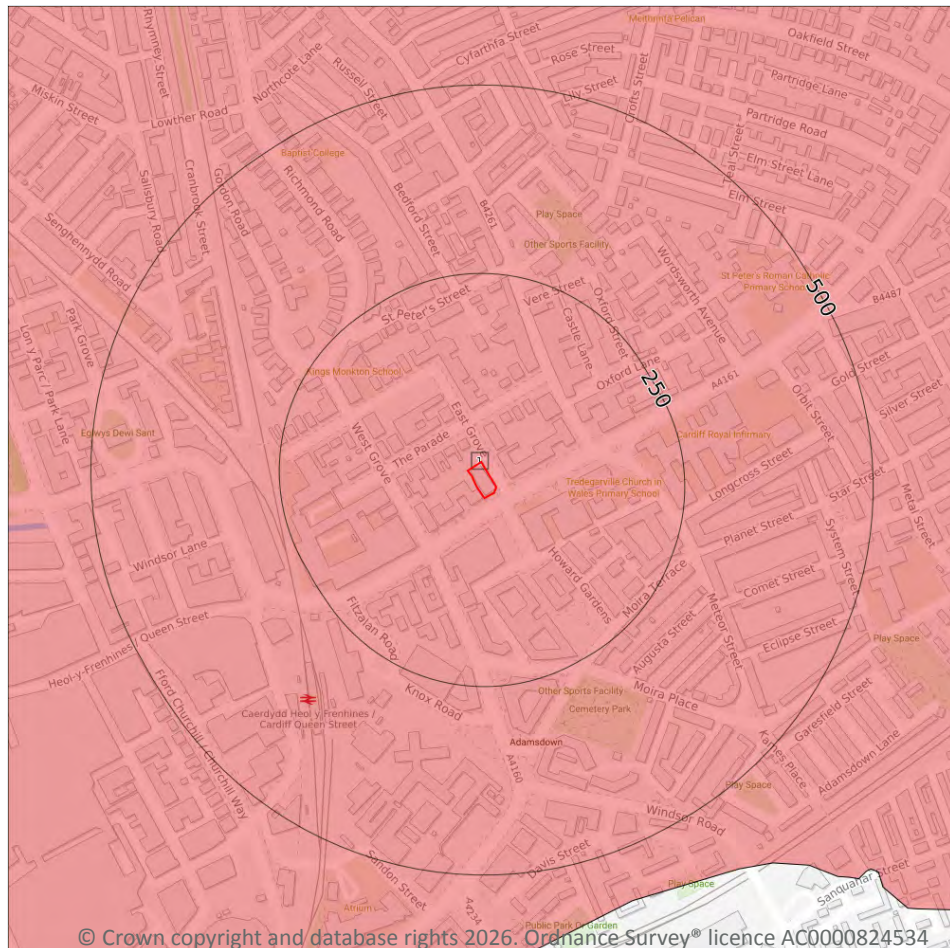
Records within 500m

0

The pollution inventory (radioactive wastes) includes reporting on annual releases of radioactive substances from a site, including the means of release. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

5 Hydrogeology - Superficial aquifer



- Site Outline
- Search buffers in metres (m)
- Principal
 - Secondary A
 - Secondary B
 - Secondary Undifferentiated
 - Unproductive
 - Unknown

5.1 Superficial aquifer

Records within 500m

1

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on [page 56](#) >

ID	Location	Designation	Description
1	On site	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

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.



Bedrock aquifer



- Site Outline
- Search buffers in metres (m)
- Principal
 - Secondary A
 - Secondary B
 - Secondary Undifferentiated
 - Unproductive

5.2 Bedrock aquifer

Records within 500m

1

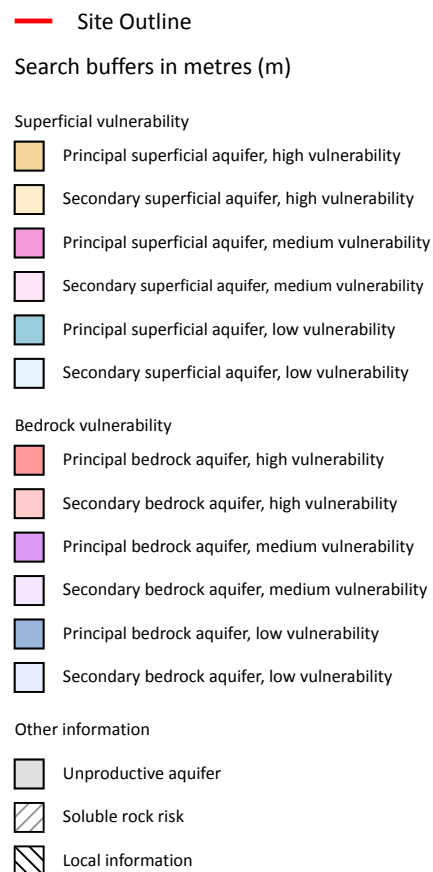
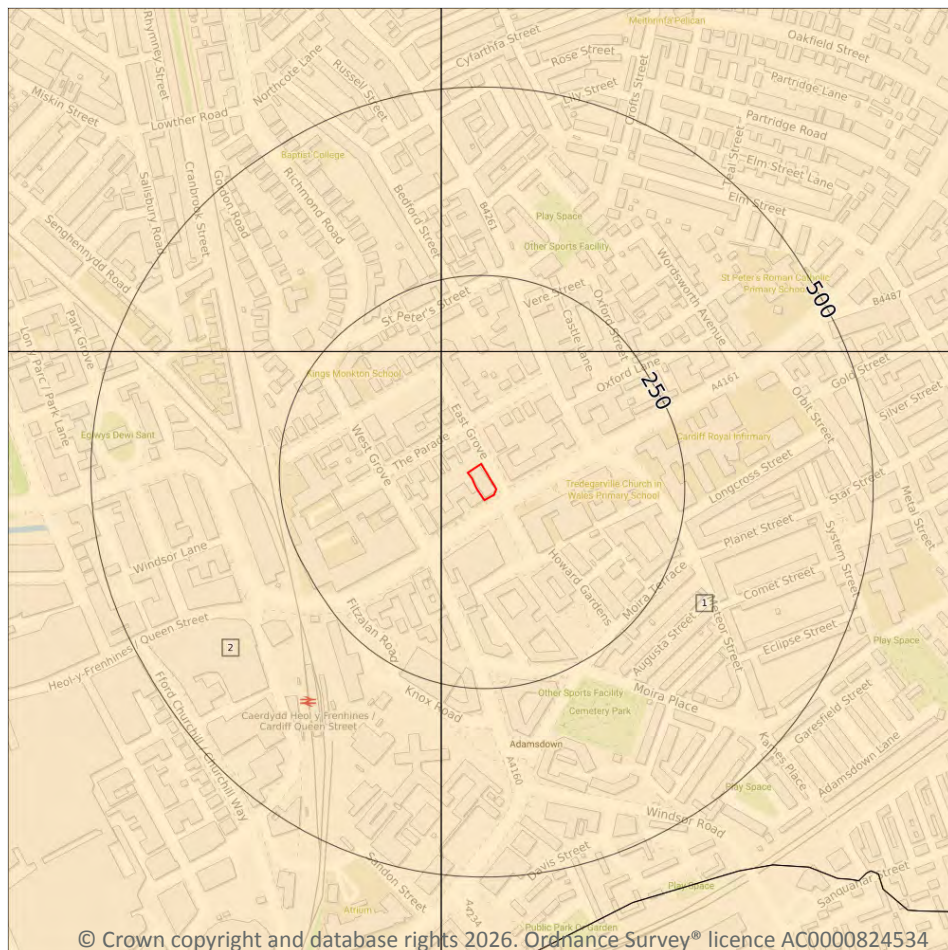
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on [page 57](#) >

ID	Location	Designation	Description
1	On site	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m

2

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one kilometre square grid. Groundwater vulnerability is described as High, Medium or Low as follows:

- High - Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.
- Medium - Intermediate between high and low vulnerability.
- Low - Areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability.

Features are displayed on the Groundwater vulnerability map on [page 58](#) >

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: >550mm/year	Vulnerability: High Aquifer type: Secondary Thickness: 3-10m Patchiness value: >90% Recharge potential: High	Vulnerability: Medium Aquifer type: Secondary Flow mechanism: Well connected fractures
2	35m W	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: >550mm/year	Vulnerability: High Aquifer type: Secondary Thickness: 3-10m Patchiness value: >90% Recharge potential: High	Vulnerability: Medium Aquifer type: Secondary Flow mechanism: Well connected fractures

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

5.4 Groundwater vulnerability- soluble rock risk

Records on site

0

This dataset identifies areas where solution features that enable rapid movement of a pollutant may be present within a 1km grid square.

This data is sourced from the British Geological Survey and the Environment Agency.

5.5 Groundwater vulnerability- local information

Records on site

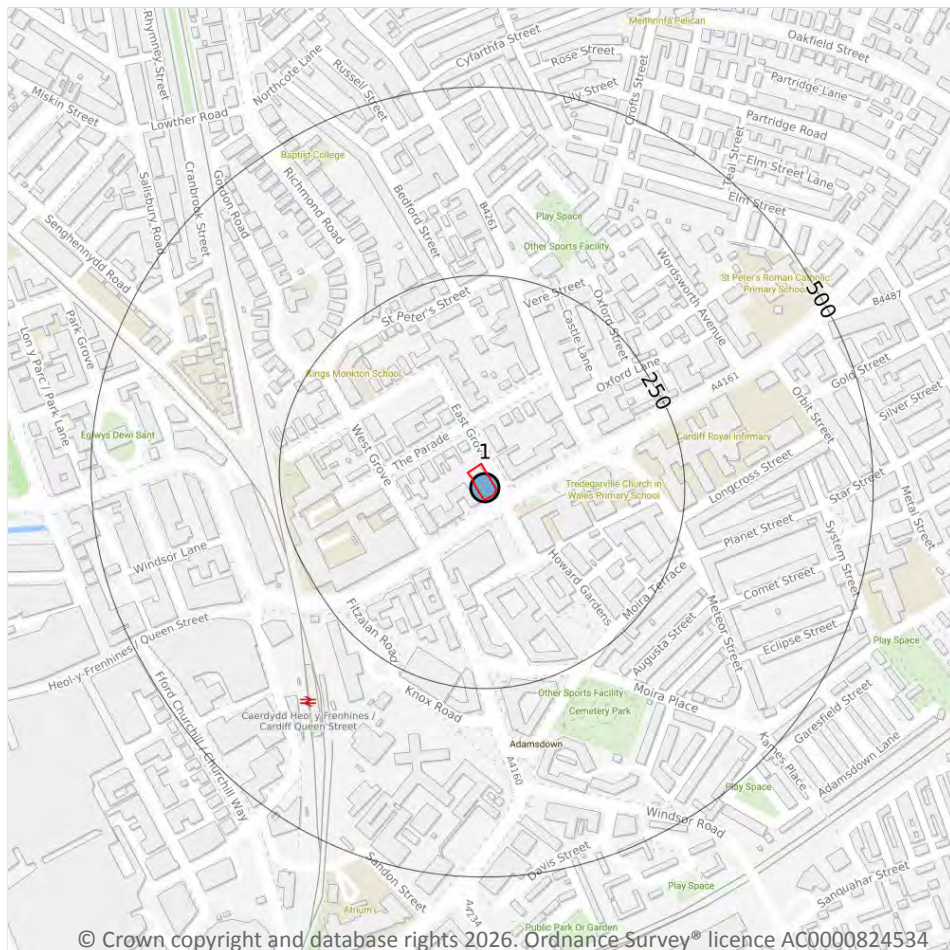
0

This dataset identifies areas where additional local information affecting vulnerability is held by the Environment Agency. Further information can be obtained by contacting the Environment Agency local Area groundwater team through the Environment Agency National Customer Call Centre on 03798 506 506 or by email on enquiries@environment-agency.gov.uk ↗.

This data is sourced from the British Geological Survey and the Environment Agency.



Abstractions and Source Protection Zones



- Site Outline
- Search buffers in metres (m)**
- Source Protection Zone 1
Inner catchment
- Source Protection Zone 2
Outer catchment
- Source Protection Zone 3
Total catchment
- Source Protection Zone 4
Zone of Special Interest
- Source Protection Zone 1c
Inner catchment - confined aquifer
- Source Protection Zone 2c
Outer catchment - confined aquifer
- Source Protection Zone 3c
Total catchment - confined aquifer
- Drinking water abstraction licences
Polygon features
- Drinking water abstraction licences
Linear features
- Groundwater abstraction licence (point)
- Groundwater abstraction licence (area)
- Groundwater abstraction licence (linear)
- Surface Water Abstractions (point)
- Surface Water Abstractions (area)
- Surface Water Abstractions (linear)

5.6 Groundwater abstractions

Records within 2000m

12

Licensed groundwater abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, between two points (line data) or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on [page 60 >](#)

ID	Location	Details	
-	976m SW	Status: Historical Licence No: 21/57/25/0028 Details: Non-Evaporative Cooling Direct Source: EAW Groundwater Point: WELL AT THE OLD BREWERY (POINT A) Data Type: Point Name: S A Brain & Co Ltd Easting: 318360 Northing: 176120	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 11/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 21/05/1999 Version End Date: -
-	984m SW	Status: Historical Licence No: 21/57/25/0028 Details: Non-Evaporative Cooling Direct Source: EAW Groundwater Point: WELL AT THE OLD BREWERY (POINT B) Data Type: Point Name: S A Brain & Co Ltd Easting: 318340 Northing: 176130	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 11/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 21/05/1999 Version End Date: -
-	1004m SW	Status: Historical Licence No: 21/57/25/0028 Details: Non-Evaporative Cooling Direct Source: EAW Groundwater Point: WELL AT THE OLD BREWERY (POINT C) Data Type: Point Name: S A Brain & Co Ltd Easting: 318340 Northing: 176100	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 11/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 21/05/1999 Version End Date: -
-	1269m SW	Status: Historical Licence No: 21/57/25/0062 Details: Spray Irrigation - Direct Direct Source: EAW Groundwater Point: BOREHOLE AT CARDIFF ATHLETIC CLUB Data Type: Point Name: Cardiff Rugby Football Club Limited Easting: 317959 Northing: 176165	Annual Volume (m ³): 4546 Max Daily Volume (m ³): 24.5 Original Application No: - Original Start Date: 28/06/1985 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2008 Version End Date: -
-	1406m SW	Status: Historical Licence No: 21/57/25/0029 Details: Non-Evaporative Cooling Direct Source: EAW Groundwater Point: WELL AT THE BREWERY (POINT A) Data Type: Point Name: S A Brain & Co Ltd Easting: 318160 Northing: 175720	Annual Volume (m ³): 436425 Max Daily Volume (m ³): 1200.17 Original Application No: - Original Start Date: 10/02/1966 Expiry Date: - Issue No: 101 Version Start Date: 20/10/2008 Version End Date: -



ID	Location	Details	
-	1450m SW	Status: Historical Licence No: 21/57/25/0029 Details: Non Evaporative Cooling - Low Direct Source: - Point: - Data Type: Point Name: - Easting: 318140 Northing: 175680	Annual Volume (m ³): 436425 Max Daily Volume (m ³): - Original Application No: - Original Start Date: Oct 20 2008 12:00AM Expiry Date: - Issue No: - Version Start Date: - Version End Date: -
-	1450m SW	Status: Historical Licence No: 21/57/25/0029 Details: Non-Evaporative Cooling Direct Source: EAW Groundwater Point: WELL AT THE BREWERY (POINT B) Data Type: Point Name: S A Brain & Co Ltd Easting: 318140 Northing: 175680	Annual Volume (m ³): 436425 Max Daily Volume (m ³): 1200.17 Original Application No: - Original Start Date: 10/02/1966 Expiry Date: - Issue No: 101 Version Start Date: 20/10/2008 Version End Date: -
-	1732m SW	Status: Historical Licence No: 21/57/25/0067 Details: General Washing/Process Washing Direct Source: EAW Groundwater Point: BOREHOLE AT INITIAL LAUNDRY Data Type: Point Name: Initial Textiles Services Easting: 317660 Northing: 175780	Annual Volume (m ³): 90920 Max Daily Volume (m ³): 363.68 Original Application No: - Original Start Date: 13/07/1990 Expiry Date: - Issue No: 100 Version Start Date: 16/08/2004 Version End Date: -
-	1797m W	Status: Active Licence No: WA/057/0025/004 Details: Spray Irrigation - Direct - High Direct Source: Underground strata Point: - Data Type: Point Name: - Easting: 317294 Northing: 177285	Annual Volume (m ³): 5500 Max Daily Volume (m ³): 96 Original Application No: - Original Start Date: 01/04/2017 Expiry Date: 31/03/2029 Issue No: - Version Start Date: - Version End Date: -
-	1797m W	Status: Historical Licence No: WA/057/0025/004 Details: Spray Irrigation - Direct Direct Source: EAW Groundwater Point: SOPHIA GARDENS BH A Data Type: Point Name: Glamorgan County Cricket Club Limited Easting: 317294 Northing: 177285	Annual Volume (m ³): 5500 Max Daily Volume (m ³): 96 Original Application No: - Original Start Date: 03/12/2010 Expiry Date: 31/03/2027 Issue No: 1 Version Start Date: 01/03/2011 Version End Date: -



ID	Location	Details	
-	1810m W	Status: Active Licence No: WA/057/0025/004 Details: Spray Irrigation - Direct - High Direct Source: Underground strata Point: - Data Type: Point Name: - Easting: 317277 Northing: 177270	Annual Volume (m ³): 5500 Max Daily Volume (m ³): 96 Original Application No: - Original Start Date: 01/04/2017 Expiry Date: 31/03/2029 Issue No: - Version Start Date: - Version End Date: -
-	1810m W	Status: Historical Licence No: WA/057/0025/004 Details: Spray Irrigation - Direct Direct Source: EAW Groundwater Point: SOPHIA GARDENS BH B Data Type: Point Name: Glamorgan County Cricket Club Limited Easting: 317277 Northing: 177270	Annual Volume (m ³): 5500 Max Daily Volume (m ³): 96 Original Application No: - Original Start Date: 03/12/2010 Expiry Date: 31/03/2027 Issue No: 1 Version Start Date: 01/03/2011 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

5.7 Surface water abstractions

Records within 2000m	16
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Licensed surface water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on [page 60 >](#)

ID	Location	Details	
1	On site	Status: Historical Licence No: WA/054/0001/0118 Details: Animal Watering & General use in non-farming situations - Medium Direct Source: NRW test 1 Point: - Data Type: Point Name: - Easting: 319058 Northing: 176820	Annual Volume (m ³): 12345678 Max Daily Volume (m ³): - Original Application No: - Original Start Date: 07/12/2022 Expiry Date: - Issue No: - Version Start Date: - Version End Date: -



ID	Location	Details	
-	1444m SW	Status: Historical Licence No: 21/57/25/0076 Details: General use relating to Secondary Category (Very Low Loss) Direct Source: EAW Surface Water Point: RIVER TAFF AT WOOD STREET (MILLENIUM PLAZA) Data Type: Point Name: Cardiff County Council Easting: 317900 Northing: 175940	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 21/05/2003 Expiry Date: 31/03/2004 Issue No: 1 Version Start Date: 21/05/2003 Version End Date: -
-	1538m W	Status: Active Licence No: 21/57/12/0083 Details: Horticultural Watering - Medium Direct Source: - Point: - Data Type: Point Name: - Easting: 317540 Northing: 177200	Annual Volume (m ³): 2045.7 Max Daily Volume (m ³): 45.46 Original Application No: - Original Start Date: 16/12/2003 Expiry Date: - Issue No: - Version Start Date: - Version End Date: -
-	1538m W	Status: Active Licence No: 21/57/12/0083 Details: General Use relating to Secondary category - Medium Loss - Medium Direct Source: - Point: - Data Type: Point Name: - Easting: 317540 Northing: 177200	Annual Volume (m ³): 2045.7 Max Daily Volume (m ³): 45.46 Original Application No: - Original Start Date: 16/12/2003 Expiry Date: - Issue No: - Version Start Date: - Version End Date: -
-	1538m W	Status: Historical Licence No: 21/57/12/0083 Details: General Use relating to Secondary category - Medium Loss - Medium Direct Source: - Point: - Data Type: Point Name: - Easting: 317540 Northing: 177200	Annual Volume (m ³): 2045.7 Max Daily Volume (m ³): - Original Application No: - Original Start Date: 16/12/2003 Expiry Date: - Issue No: - Version Start Date: - Version End Date: -



ID	Location	Details	
-	1538m W	Status: Historical Licence No: 21/57/12/0083 Details: Horticultural Watering - Medium Direct Source: - Point: - Data Type: Point Name: - Easting: 317540 Northing: 177200	Annual Volume (m ³): 2045.7 Max Daily Volume (m ³): - Original Application No: - Original Start Date: 16/12/2003 Expiry Date: - Issue No: - Version Start Date: - Version End Date: -
-	1538m W	Status: Historical Licence No: 21/57/12/0083 Details: Horticultural Watering Direct Source: EAW Surface Water Point: RIVER TAFF (POINT A) Data Type: Point Name: Cardiff County Council Easting: 317540 Northing: 177200	Annual Volume (m ³): 4091.4 Max Daily Volume (m ³): 113.65 Original Application No: - Original Start Date: 14/06/1990 Expiry Date: - Issue No: 100 Version Start Date: 16/12/2003 Version End Date: -
-	1538m W	Status: Historical Licence No: 21/57/12/0083 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: EAW Surface Water Point: RIVER TAFF (POINT A) Data Type: Point Name: Cardiff County Council Easting: 317540 Northing: 177200	Annual Volume (m ³): 4091.4 Max Daily Volume (m ³): 113.65 Original Application No: - Original Start Date: 14/06/1990 Expiry Date: - Issue No: 100 Version Start Date: 16/12/2003 Version End Date: -
-	1620m S	Status: Historical Licence No: 21/57/25/0048 Details: Evaporative Cooling Direct Source: EAW Surface Water Point: EAST BUTE DOCK Data Type: Point Name: Celsa Manufacturing (UK) Ltd Easting: 319520 Northing: 175250	Annual Volume (m ³): 68190 Max Daily Volume (m ³): 2273 Original Application No: - Original Start Date: 01/05/1975 Expiry Date: - Issue No: 101 Version Start Date: 16/08/2004 Version End Date: -
-	1621m S	Status: Historical Licence No: 21/57/25/0048 Details: Evaporative Cooling - High Direct Source: - Point: - Data Type: Point Name: - Easting: 319491 Northing: 175241	Annual Volume (m ³): 68190 Max Daily Volume (m ³): - Original Application No: - Original Start Date: 30/04/2015 Expiry Date: - Issue No: - Version Start Date: - Version End Date: -



ID	Location	Details	
-	1621m S	Status: Historical Licence No: 21/57/25/0048 Details: Evaporative Cooling - High Direct Source: - Point: - Data Type: Point Name: - Easting: 319491 Northing: 175241	Annual Volume (m ³): 71810 Max Daily Volume (m ³): 11198.4 Original Application No: - Original Start Date: 30/04/2015 Expiry Date: - Issue No: - Version Start Date: - Version End Date: -
-	1621m S	Status: Historical Licence No: 21/57/25/0048 Details: Evaporative Cooling Direct Source: EAW Surface Water Point: EAST BUTE DOCK Data Type: Point Name: Celsa Manufacturing (UK) Ltd Easting: 319491 Northing: 175241	Annual Volume (m ³): 208190 Max Daily Volume (m ³): 6939 Original Application No: - Original Start Date: 01/05/1975 Expiry Date: - Issue No: 102 Version Start Date: 30/04/2015 Version End Date: -
-	1621m S	Status: Historical Licence No: 21/57/25/0048 Details: Evaporative Cooling - High Direct Source: - Point: - Data Type: Point Name: - Easting: 319491 Northing: 175241	Annual Volume (m ³): 71810 Max Daily Volume (m ³): 2393 Original Application No: - Original Start Date: 30/04/2015 Expiry Date: - Issue No: - Version Start Date: - Version End Date: -
-	1621m S	Status: Historical Licence No: 21/57/25/0048 Details: Evaporative Cooling - High Direct Source: - Point: - Data Type: Point Name: - Easting: 319491 Northing: 175241	Annual Volume (m ³): 68190 Max Daily Volume (m ³): 2273 Original Application No: - Original Start Date: 30/04/2015 Expiry Date: - Issue No: - Version Start Date: - Version End Date: -
-	1621m S	Status: Active Licence No: 21/57/25/0048 Details: Evaporative Cooling - High Direct Source: Inland Water, East Bute Dock Point: - Data Type: Point Name: - Easting: 319491 Northing: 175241	Annual Volume (m ³): 68190 Max Daily Volume (m ³): 2273 Original Application No: - Original Start Date: 25/06/2025 Expiry Date: - Issue No: - Version Start Date: - Version End Date: -



ID	Location	Details	
-	1621m S	Status: Active Licence No: 21/57/25/0048 Details: Evaporative Cooling - High Direct Source: Inland Water, East Bute Dock Point: - Data Type: Point Name: - Easting: 319491 Northing: 175241	Annual Volume (m ³): 140000 Max Daily Volume (m ³): 4666 Original Application No: - Original Start Date: 25/06/2025 Expiry Date: - Issue No: - Version Start Date: - Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

5.8 Potable abstractions

Records within 2000m	0
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Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

This data is sourced from the Environment Agency and Natural Resources Wales.

5.9 Source Protection Zones

Records within 500m	0
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Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination.

This data is sourced from the Environment Agency and Natural Resources Wales.

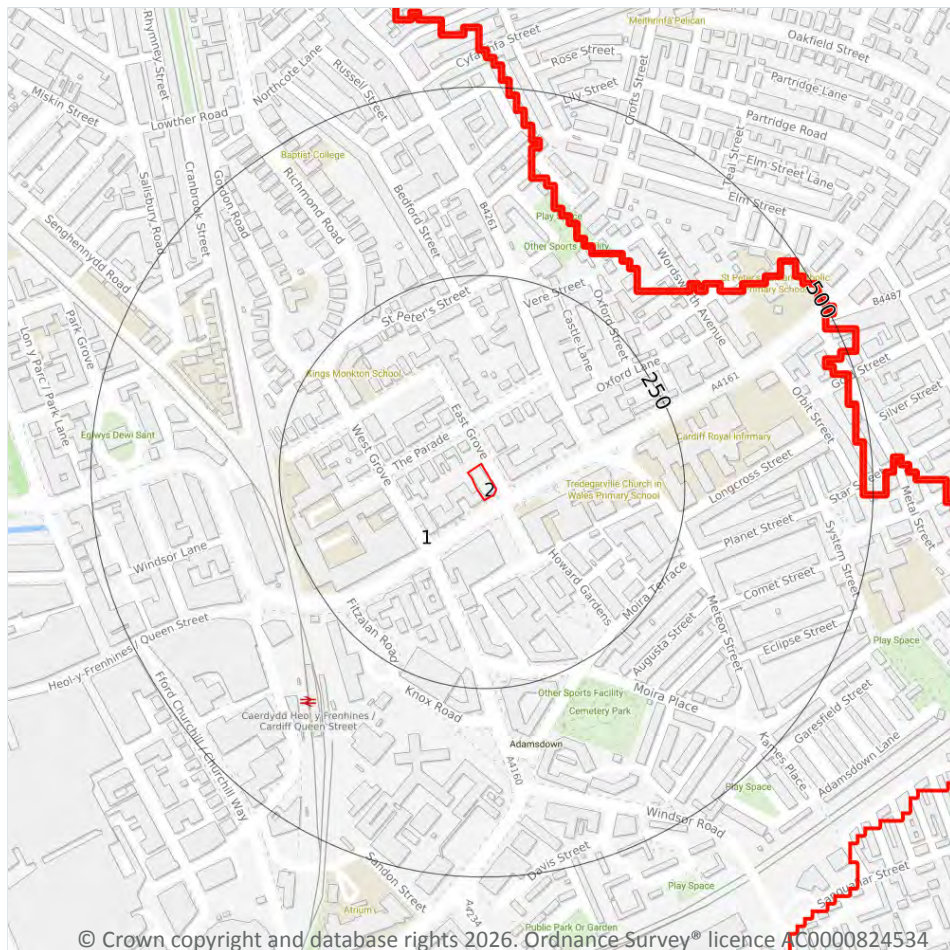
5.10 Source Protection Zones (confined aquifer)

Records within 500m	0
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Source Protection Zones in the confined aquifer define the sensitivity around a deep groundwater abstraction to contamination. A confined aquifer would normally be protected from contamination by overlying geology and is only considered a sensitive resource if deep excavation/drilling is taking place.

This data is sourced from the Environment Agency and Natural Resources Wales.

6 Hydrology



- Site Outline
- Search buffers in metres (m)
- Water Network (OS NGD)
- Surface water features (wider than 5m)
- Surface water features (narrower than 5m)
- ⋯ WFD River, canal and surface water transfer water bodies
- WFD Lake water bodies
- WFD Transitional and coastal water bodies
- WFD Surface water body catchments boundaries
- WFD Groundwater body boundaries

6.1 Water Network (OS NGD)

Records within 250m

0

Detailed water network of Great Britain showing the flow and precise central course of every river, stream, lake and canal.

This data is sourced from the Ordnance Survey®.

6.2 Surface water features

Records within 250m

0

Covering rivers, streams and lakes (some overlap with OS NGD Water Network data in previous section) but additionally covers smaller features such as ponds. Rivers and streams narrower than 5m are represented as a single line. Lakes, ponds and rivers or streams wider than 5m are represented as polygons.



This data is sourced from the Ordnance Survey®.

6.3 WFD Surface water body catchments

Records on site	1
------------------------	----------

The Water Framework Directive is an EU-led framework for the protection of inland surface waters, estuaries, coastal waters and groundwater through river basin-level management planning. In terms of surface water, these basins are broken down into smaller units known as management, operational and water body catchments.

Features are displayed on the Hydrology map on [page 68 >](#)

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
1	On site	River	Taff - conf Rhondda R to Castle Street	GB109057027270	Taff US Cynon	South East Valleys

This data is sourced from the Environment Agency and Natural Resources Wales.

6.4 WFD Surface water bodies

Records identified	1
---------------------------	----------

Surface water bodies under the Directive may be rivers, lakes, estuary or coastal. To achieve the purpose of the Directive, environmental objectives have been set and are reported on for each water body. The progress towards delivery of the objectives is then reported on by the relevant competent authorities at the end of each six-year cycle. The river water body directly associated with the catchment listed in the previous section is detailed below, along with any lake, canal, coastal or artificial water body within 250m of the site.

Features are displayed on the Hydrology map on [page 68 >](#)

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	1336m W	River	Taff - conf Rhondda R to Castle Street	GB109057027270	Moderate	Moderate	Moderate	2024

This data is sourced from the Environment Agency and Natural Resources Wales.

6.5 WFD Groundwater bodies

Records on site

1

Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place.

Features are displayed on the Hydrology map on [page 68](#) >

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
2	On site	SE Valleys Southern Devonian Old Red Sandstone & Triassic Mercia Mudstone	GB40902G201500	Good			2021

This data is sourced from the Environment Agency and Natural Resources Wales.



7 River and coastal flooding

7.1 Risk of flooding from rivers and the sea

Records within 50m

0

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m within the Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) models. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition. The risk categories for RoFRaS for rivers and the sea and FRAW for rivers are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance). The risk categories for FRAW for the sea are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 200 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 200 chance) or High (greater than or equal to 1 in 30 chance).

This data is sourced from the Environment Agency and Natural Resources Wales.

7.2 Historical Flood Events

Records within 250m

0

Records of historic flooding from rivers, the sea, groundwater and surface water. Records began in 1946 when predecessor bodies started collecting detailed information about flooding incidents, although limited details may be included on flooding incidents prior to this date. Takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding, and includes flood extents that may have been affected by overtopping, breaches or blockages.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.3 Flood Defences

Records within 250m

0

Records of flood defences owned, managed or inspected by the Environment Agency and Natural Resources Wales. Flood defences can be structures, buildings or parts of buildings. Typically these are earth banks, stone and concrete walls, or sheet-piling that is used to prevent or control the extent of flooding.

This data is sourced from the Environment Agency and Natural Resources Wales.



7.4 Areas Benefiting from Flood Defences

Records within 250m

0

Areas that would benefit from the presence of flood defences in a 1 in 100 (1%) chance of flooding each year from rivers or 1 in 200 (0.5%) chance of flooding each year from the sea.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.5 Flood Storage Areas

Records within 250m

0

Areas that act as a balancing reservoir, storage basin or balancing pond to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel or to delay the timing of a flood peak so that its volume is discharged over a longer period.

This data is sourced from the Environment Agency and Natural Resources Wales.



River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m

0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land between Flood Zone 3 (see next section) and the extent of the flooding from rivers or the sea with a 1 in 1000 (0.1%) chance of flooding each year.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.7 Flood Zone 3

Records within 50m

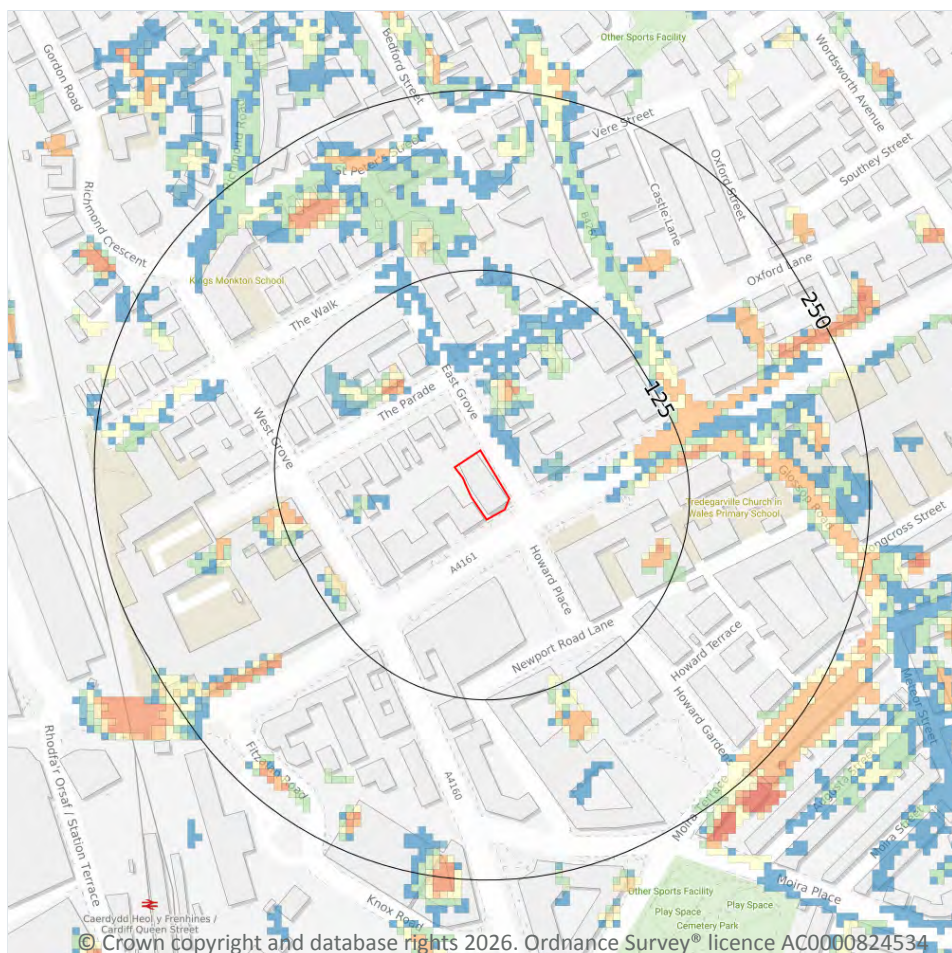
0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

This data is sourced from the Environment Agency and Natural Resources Wales.



8 Surface water flooding



— Site Outline

Search buffers in metres (m)

1 in 1000 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 250 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 100 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 30 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

8.1 Surface water flooding

Highest risk on site

Negligible

Highest risk within 50m

1 in 30 year, 0.3m - 1.0m

Ambiental Risk Analytics surface water (pluvial) FloodMap identifies areas likely to flood as a result of extreme rainfall events, i.e. land naturally vulnerable to surface water ponding or flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1,000 year rainfall events. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though some older ones may flood in a 1 in 5 year rainfall event.

Features are displayed on the Surface water flooding map on [page 74 >](#)

The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

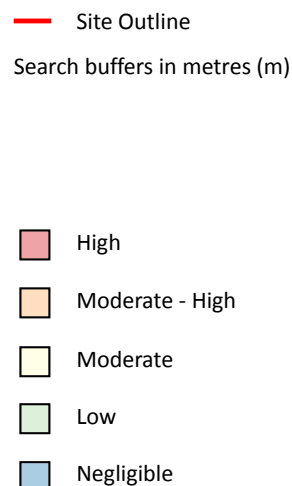
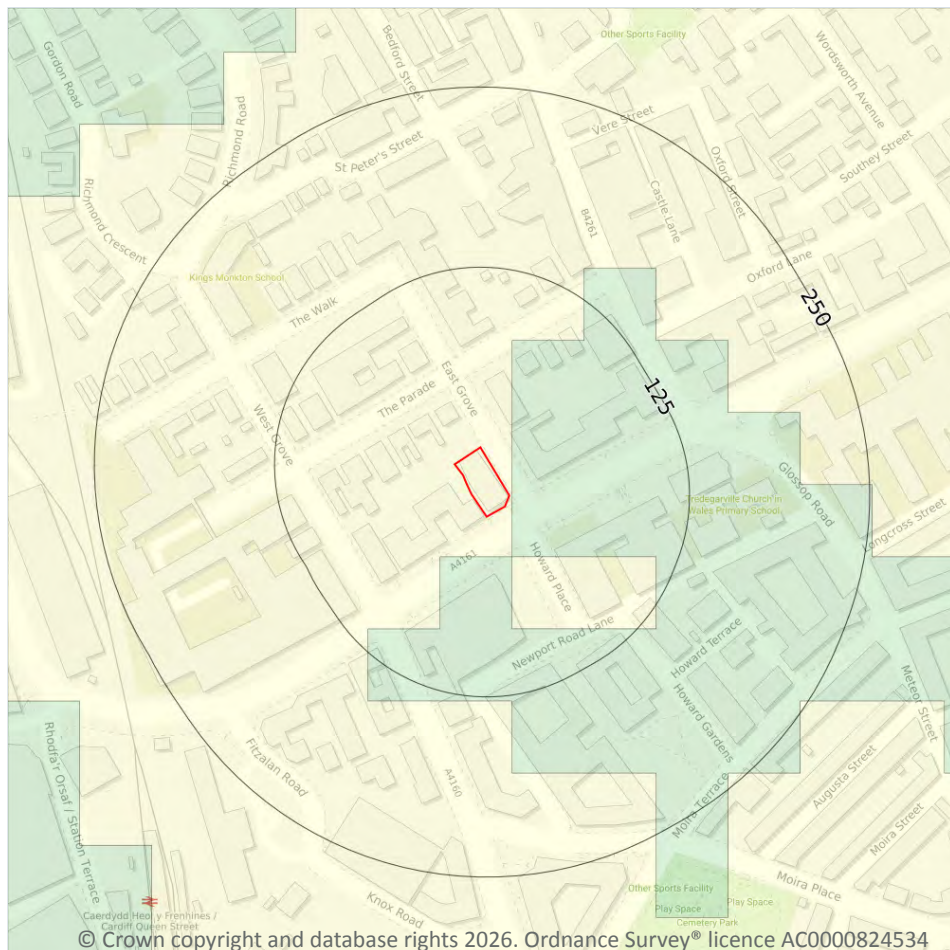
The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Negligible
1 in 250 year	Negligible
1 in 100 year	Negligible
1 in 30 year	Negligible

This data is sourced from Ambiantal Risk Analytics.



9 Groundwater flooding



9.1 Groundwater flooding

Highest risk on site

Moderate

Highest risk within 50m

Moderate

Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property. This risk assessment is based on a 1 in 100 year return period and a 5m Digital Terrain Model (DTM).

Features are displayed on the Groundwater flooding map on [page 76 >](#)

This data is sourced from Ambiantal Risk Analytics.

10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- Sites of Special Scientific Interest (SSSI)
- Designated Ancient Woodland

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

1

Sites providing statutory protection for the best examples of UK flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were re-notified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and (in Scotland) by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2010.

Features are displayed on the Environmental designations map on [page 77 >](#)

ID	Location	Name	Data source
-	1971m N	Penylan Quarry	Natural Resources Wales



This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m

0

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. They cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. These sites cover a broad definition of wetland; marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, and even some marine areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.3 Special Areas of Conservation (SAC)

Records within 2000m

0

Areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.4 Special Protection Areas (SPA)

Records within 2000m

0

Sites classified by the UK Government under the EC Birds Directive, SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.5 National Nature Reserves (NNR)

Records within 2000m

0

Sites containing examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats, provide special opportunities for scientific study or to provide public recreation compatible with natural heritage interests.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.



10.6 Local Nature Reserves (LNR)

Records within 2000m**0**

Sites managed for nature conservation, and to provide opportunities for research and education, or simply enjoying and having contact with nature. They are declared by local authorities under the National Parks and Access to the Countryside Act 1949 after consultation with the relevant statutory nature conservation agency.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.7 Designated Ancient Woodland

Records within 2000m**10**

Ancient woodlands are classified as areas which have been wooded continuously since at least 1600 AD. This includes semi-natural woodland and plantations on ancient woodland sites. 'Wooded continuously' does not mean there is or has previously been continuous tree cover across the whole site, and not all trees within the woodland have to be old.

Features are displayed on the Environmental designations map on [page 77 >](#)

ID	Location	Name	Woodland Type
1	1049m W	Unknown	Restored Ancient Woodland Site
2	1107m W	Unknown	Restored Ancient Woodland Site
3	1114m W	Unknown	Restored Ancient Woodland Site
4	1211m W	Unknown	Restored Ancient Woodland Site
-	1271m W	Unknown	Restored Ancient Woodland Site
-	1288m W	Unknown	Ancient Semi Natural Woodland
-	1361m W	Unknown	Restored Ancient Woodland Site
-	1541m W	Unknown	Ancient Semi Natural Woodland
-	1723m NW	Unknown	Restored Ancient Woodland Site
-	1947m NW	Unknown	Restored Ancient Woodland Site

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.8 Biosphere Reserves

Records within 2000m

0

Biosphere Reserves are internationally recognised by UNESCO as sites of excellence to balance conservation and socioeconomic development between nature and people. They are recognised under the Man and the Biosphere (MAB) Programme with the aim of promoting sustainable development founded on the work of the local community.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.9 Forest Parks

Records within 2000m

0

These are areas managed by the Forestry Commission designated on the basis of recreational, conservation or scenic interest.

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m

0

A type of marine nature reserve in UK waters established under the Marine and Coastal Access Act (2009). They are designated with the aim to protect nationally important, rare or threatened habitats and species.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.11 Green Belt

Records within 2000m

0

Areas designated to prevent urban sprawl by keeping land permanently open.

This data is sourced from the Ministry of Housing, Communities and Local Government.

10.12 Proposed Ramsar sites

Records within 2000m

0

Ramsar sites are areas listed as a Wetland of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) 1971. The sites here supplied have a status of 'Proposed' having been identified for potential adoption under the framework.

This data is sourced from Natural England.



10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m**0**

Special Areas of Conservation are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive. Those sites supplied here are those with a status of 'Possible' having been identified for potential adoption under the framework.

This data is sourced from Natural England and Natural Resources Wales.

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m**0**

Special Protection Areas (SPAs) are areas designated (or 'classified') under the European Union Wild Birds Directive for the protection of nationally and internationally important populations of wild birds. Those sites supplied here are those with a status of 'Potential' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m**0**

Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

Records within 2000m**0**

Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

This data is sourced from Natural England and Natural Resources Wales.



SSSI Impact Zones and Units

10.17 SSSI Impact Risk Zones

Records on site

0

Developed to allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m

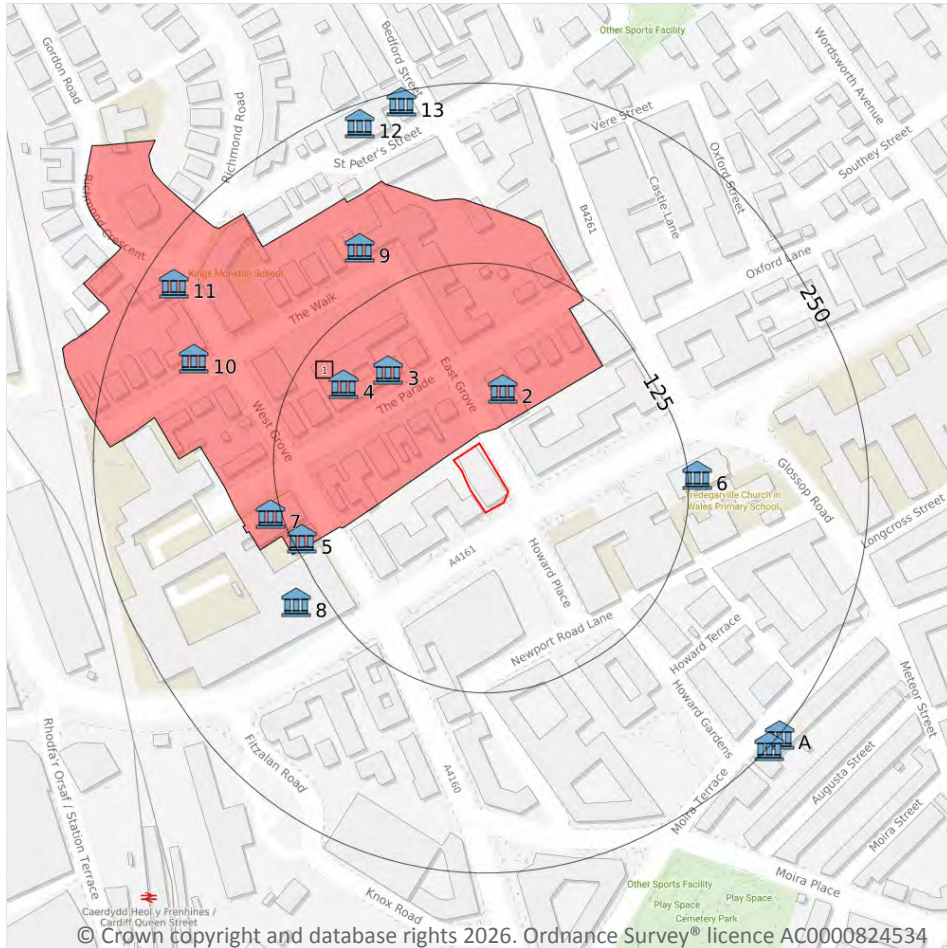
0

Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

This data is sourced from Natural England and Natural Resources Wales.



11 Visual and cultural designations



- Site Outline
- Search buffers in metres (m)
- Listed buildings
- Conservation areas
- Conservation areas - no data
- National Parks
- Areas of Outstanding Natural Beauty
- Registered parks and gardens
- Scheduled Monuments
- World Heritage Sites

11.1 World Heritage Sites

Records within 250m

0

Sites designated for their globally important cultural or natural interest requiring appropriate management and protection measures. World Heritage Sites are designated to meet the UK's commitments under the World Heritage Convention.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.2 Area of Outstanding Natural Beauty

Records within 250m

0

Areas of Outstanding Natural Beauty (AONB) are conservation areas, chosen because they represent 18% of the finest countryside. Each AONB has been designated for special attention because of the quality of their flora, fauna, historical and cultural associations, and/or scenic views. The National Parks and Access to the Countryside Act of 1949 created AONBs and the Countryside and Rights of Way Act, 2000 added further regulation and protection. There are likely to be restrictions to some developments within these areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

11.3 National Parks

Records within 250m

0

In England and Wales, the purpose of National Parks is to conserve and enhance landscapes within the countryside whilst promoting public enjoyment of them and having regard for the social and economic well-being of those living within them. In Scotland National Parks have the additional purpose of promoting the sustainable use of the natural resources of the area and the sustainable social and economic development of its communities. The National Parks and Access to the Countryside Act 1949 established the National Park designation in England and Wales, and The National Parks (Scotland) Act 2000 in Scotland.

This data is sourced from Natural England, Natural Resources Wales and the Scottish Government.

11.4 Listed Buildings

Records within 250m

14

Buildings listed for their special architectural or historical interest. Building control in the form of 'listed building consent' is required in order to make any changes to that building which might affect its special interest. Listed buildings are graded to indicate their relative importance, however building controls apply to all buildings equally, irrespective of their grade, and apply to the interior and exterior of the building in its entirety, together with any curtilage structures.

Features are displayed on the Visual and cultural designations map on [page 83 >](#)

ID	Location	Name	Grade	Reference Number	Listed date
2	41m NE	Tredegaville Baptist Church, Situated At The Junction Of The Parade With East Grove.	II	21573	31/03/1999
3	77m NW	28 The Parade, Immediately E Of Coleg Glan Hafren. Set Back From The Street Behind Dwarf Walls With Square Piers To Front And Side Entrances. The Entrance Is Reached Up Stone Steps.	II	26656	24/05/2002

ID	Location	Name	Grade	Reference Number	Listed date
4	93m NW	Coleg Glan Hafren, Set Back From The Street Behind Dwarf Walls With Square Piers To Main And Side Gates. Stone Steps With Plain Railings Lead Up To The Main Entrance.	II	26657	24/05/2002
5	118m SW	Unitarian Church, Situated 50m N Of The Junction Of West Grove With Newport Road.	II	21577	31/03/1999
6	131m E	Church Of St James The Great, On W Corner Of Newport Road And Glossop Road	II	13760	19/05/1975
7	133m W	Public Analyst's Laboratory, Queen's Building, Cardiff University, At The Junction With The Parade And West Grove. Set Back From The Street Behind A Low Brick Parapet Wall With Moulded Stone Coping. The Entrance Is Reached Up Stone Steps.	II	26654	24/05/2002
8	144m SW	Queen's Buildings, Cardiff University, To The W Of The Junction With West Grove And The S Side Of A Conglomeration Of Teaching Blocks Between Newport Road And The Parade. Reached Up Stone Steps From The Street, Which Have Brick Parapet Walls Curving Out To Terminal Ashlar Piers.	II	13758	25/01/1966
9	159m NW	The Old Convent, At The E End Of The Walk Facing East Grove.	II	26655	24/05/2002
10	194m W	Megalithic Folly At James Howell House, In The Forecourt Of The House, Set Behind Railings To The Street. James Howell House Is At The Corner Of The Junction With West Grove.	II	26663	24/05/2002
11	230m NW	Pillar Box In West Grove, At The Junction Between West Grove And Richmond Crescent.	II	26659	24/05/2002
12	237m N	Catholic Church Of St Peter, Prominently Sited And Facing Directly On To The Street.	II*	13805	19/05/1975
13	243m N	Presbytery At Catholic Church Of St Peter Including Forecourt Railings, To The E Of The Church At The Junction With Bedford Street.	II	26658	24/05/2002
A	250m SE	11 Moira Terrace, On S Side Of Road.	II	18647	31/07/1997
A	250m SE	9 Moira Terrace, On S Side Of Road.	II	18640	31/07/1997

This data is sourced from Historic England, Cadw and Historic Environment Scotland.



11.5 Conservation Areas

Records within 250m

1

Local planning authorities are obliged to designate as conservation areas any parts of their own area that are of special architectural or historic interest, the character and appearance of which it is desirable to preserve or enhance. Designation of a conservation area gives broader protection than the listing of individual buildings. All the features within the area, listed or otherwise, are recognised as part of its character. Conservation area designation is the means of recognising the importance of all factors and of ensuring that planning decisions address the quality of the landscape in its broadest sense.

Features are displayed on the Visual and cultural designations map on [page 83](#) >

ID	Location	Name	District	Date of designation
1	5m NW	Tredegarville	Cardiff	01/03/1981

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.6 Scheduled Ancient Monuments

Records within 250m

0

A scheduled monument is an historic building or site that is included in the Schedule of Monuments kept by the Secretary of State for Digital, Culture, Media and Sport. The regime is set out in the Ancient Monuments and Archaeological Areas Act 1979. The Schedule of Monuments has c.20,000 entries and includes sites such as Roman remains, burial mounds, castles, bridges, earthworks, the remains of deserted villages and industrial sites. Monuments are not graded, but all are, by definition, considered to be of national importance.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.7 Registered Parks and Gardens

Records within 250m

0

Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process, meaning that planning authorities must consider the impact of any proposed development on the special character of the landscape.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

12 Agricultural designations

12.1 Agricultural Land Classification

Records within 250m

0

Classification of the quality of agricultural land taking into consideration multiple factors including climate, physical geography and soil properties. It should be noted that the categories for the grading of agricultural land are not consistent across England, Wales and Scotland.

This data is sourced from Natural Resources Wales.

12.2 Open Access Land

Records within 250m

0

The Countryside and Rights of Way Act 2000 (CROW Act) gives a public right of access to land without having to use paths. Access land includes mountains, moors, heaths and downs that are privately owned. It also includes common land registered with the local council and some land around the England Coast Path. Generally permitted activities on access land are walking, running, watching wildlife and climbing.

This data is sourced from Natural England and Natural Resources Wales.

12.3 Tree Felling Licences

Records within 250m

0

Felling Licence Application (FLA) areas approved by Forestry Commission England. Anyone wishing to fell trees must ensure that a licence or permission under a grant scheme has been issued by the Forestry Commission before any felling is carried out or that one of the exceptions apply.

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m

0

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. The schemes identified may be historical schemes that have now expired, or may still be active.

This data is sourced from Natural England.



12.5 Countryside Stewardship Schemes

Records within 250m

0

Countryside Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. Main objectives are to improve the farmed environment for wildlife and to reduce diffuse water pollution.

This data is sourced from Natural England.



13 Habitat designations

13.1 Priority Habitat Inventory

Records within 250m

0

Habitats of principal importance as named under Natural Environment and Rural Communities Act (2006) Section 41.

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m

0

Habitat networks for 18 priority habitat networks (based primarily, but not exclusively, on the priority habitat inventory) and areas suitable for the expansion of networks through restoration and habitat creation.

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m

0

Sites verified as Open Mosaic Habitat. Mosaic habitats are brownfield sites that are identified under the UK Biodiversity Action Plan as a priority habitat due to the habitat variation within a single site, supporting an array of invertebrates.

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m

0

Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened due to their removal for use in gardens and water features. Many limestone pavements have been designated as SSSIs which affords them some protection. In addition, Section 34 of the Wildlife and Countryside Act 1981 gave them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of the UK Biodiversity Action Plan priority habitat in England.

This data is sourced from Natural England.



14 Geology 1:10,000 scale - Availability



— Site Outline
Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

14.1 10k Availability

Records within 500m

1

An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

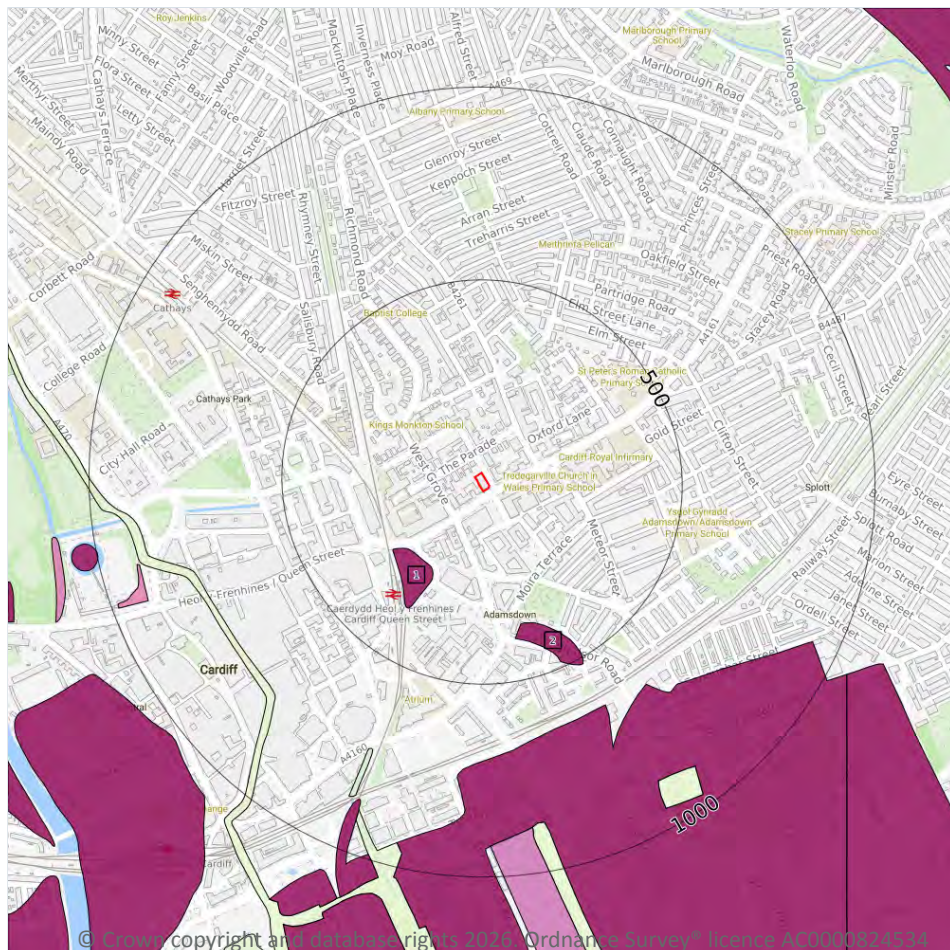
Features are displayed on the Geology 1:10,000 scale - Availability map on [page 90](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	ST17NE

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Artificial and made ground



- Site Outline**
- Search buffers in metres (m)**
- Reclaimed ground
 - Made ground
 - Worked ground
 - Infilled ground
 - Disturbed ground
 - Landscaped ground

14.2 Artificial and made ground (10k)

Records within 500m

2

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

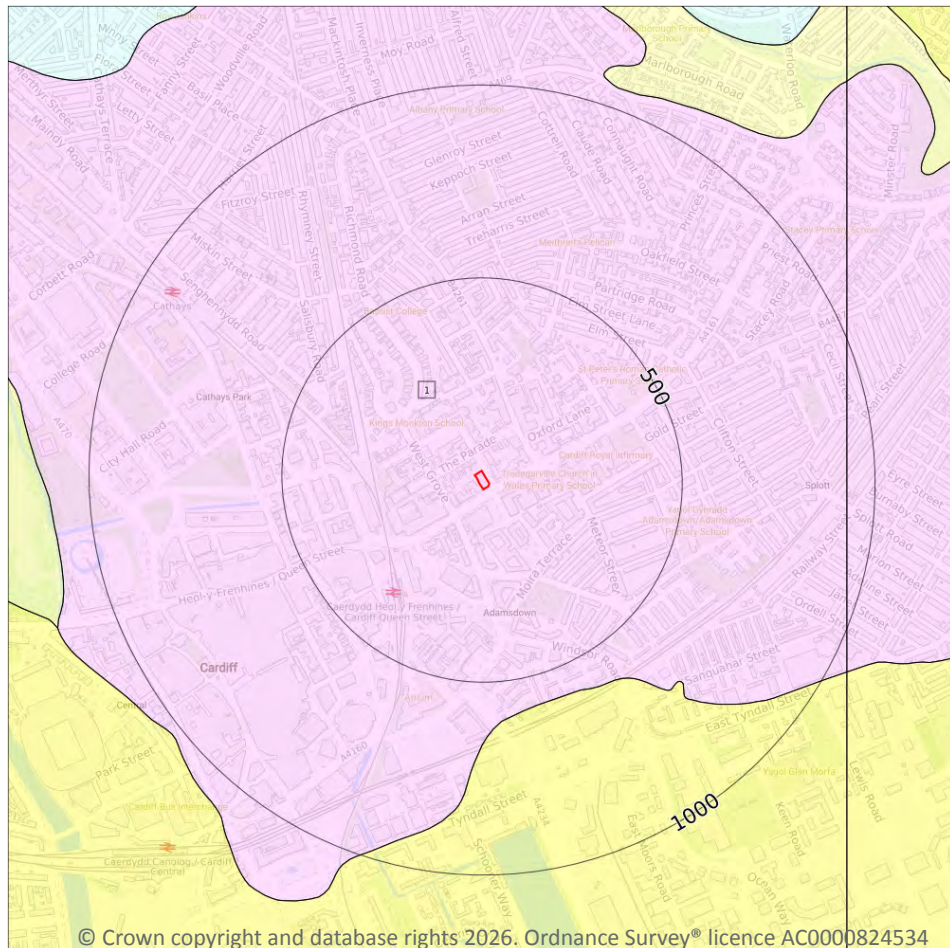
Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on [page 91](#) >

ID	Location	LEX Code	Description	Rock description
1	237m SW	MGR-ARTDP	Made Ground (Undivided)	Artificial deposit
2	357m S	MGR-ARTDP	Made Ground (Undivided)	Artificial deposit

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (10k)

Superficial geology (10k)
Please see table for more details.

14.3 Superficial geology (10k)

Records within 500m

1

Superficial geological deposits at 1:10,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:10,000 scale - Superficial map on [page 92](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	GFSDDD-XSV	Glaciofluvial Sheet Deposits, Devensian-Sand And Gravel	Sand and gravel

This data is sourced from the British Geological Survey.



14.4 Landslip (10k)

Records within 500m

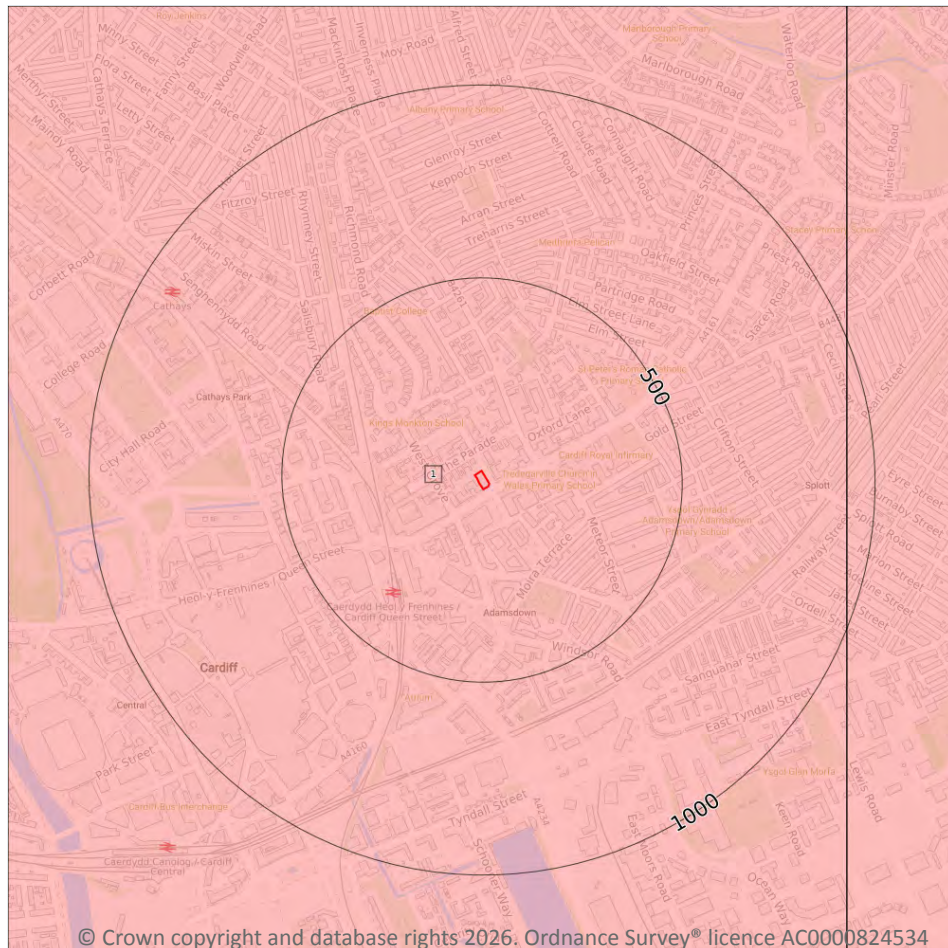
0

Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

..... Bedrock faults and other linear features (10k)

Bedrock geology (10k)
Please see table for more details.

14.5 Bedrock geology (10k)

Records within 500m

1

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on [page 94](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	MMG-MDST	Mercia Mudstone Group-Mudstone	Anisian

This data is sourced from the British Geological Survey.



14.6 Bedrock faults and other linear features (10k)

Records within 500m

0

Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.



15 Geology 1:50,000 scale - Availability



— Site Outline
Search buffers in metres (m)

☐ Geological map tile

15.1 50k Availability

Records within 500m

1

An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme. Where 50k data is not available, this area has been filled in with 625k scale data.

Features are displayed on the Geology 1:50,000 scale - Availability map on [page 96](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	EW263_cardiff_v4

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Artificial and made ground



- Site Outline
- Search buffers in metres (m)
- Made ground
 - Worked ground
 - Infilled ground
 - Disturbed ground
 - Landscaped ground

15.2 Artificial and made ground (50k)

Records within 500m

1

Details of made, worked, infilled, disturbed and landscaped ground at 1:50,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on [page 97](#) >

ID	Location	LEX Code	Description	Rock description
1	208m SW	MGR-ARTDP	Made Ground	Artificial deposit

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

Records within 50m

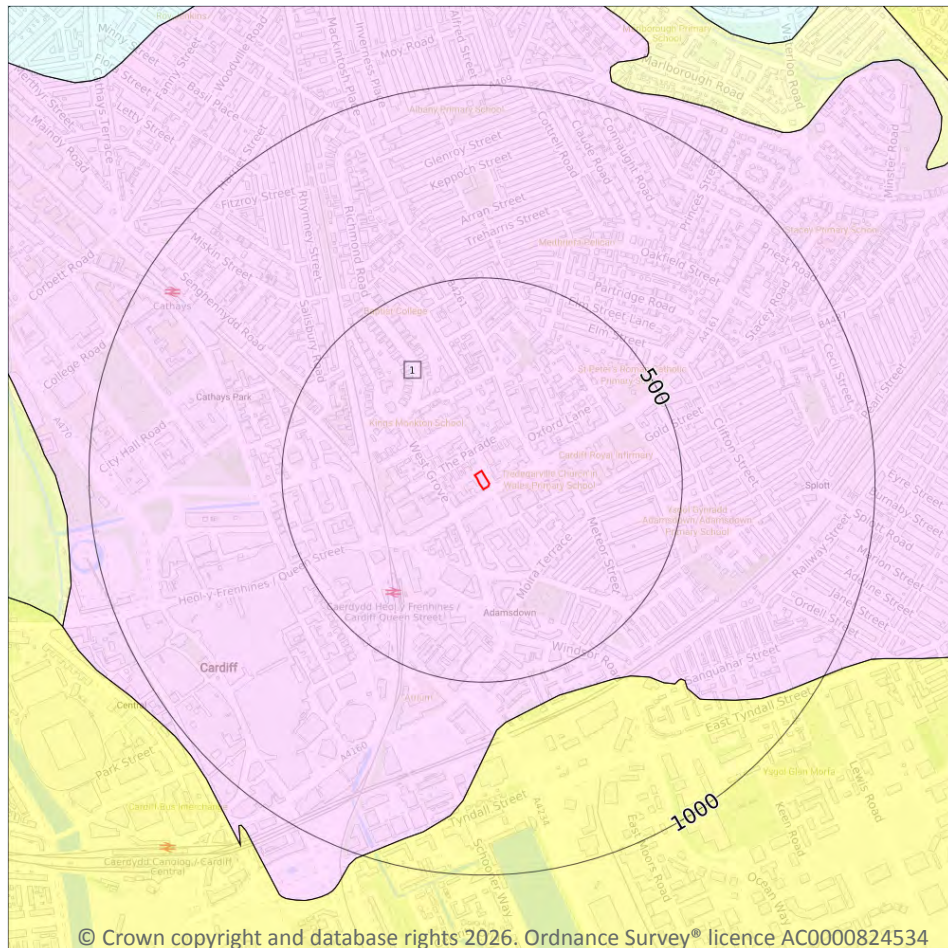
0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (50k)

Superficial geology (50k)
Please see table for more details.

15.4 Superficial geology (50k)

Records within 500m

1

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:50,000 scale - Superficial map on [page 99](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	GFSDDD-XSV	Glaciofluvial sheet deposits, Devensian	Sand and gravel

This data is sourced from the British Geological Survey.



15.5 Superficial permeability (50k)

Records within 50m**1**

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any superficial deposits (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Intergranular	Very High	High

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m**0**

Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

15.7 Landslip permeability (50k)

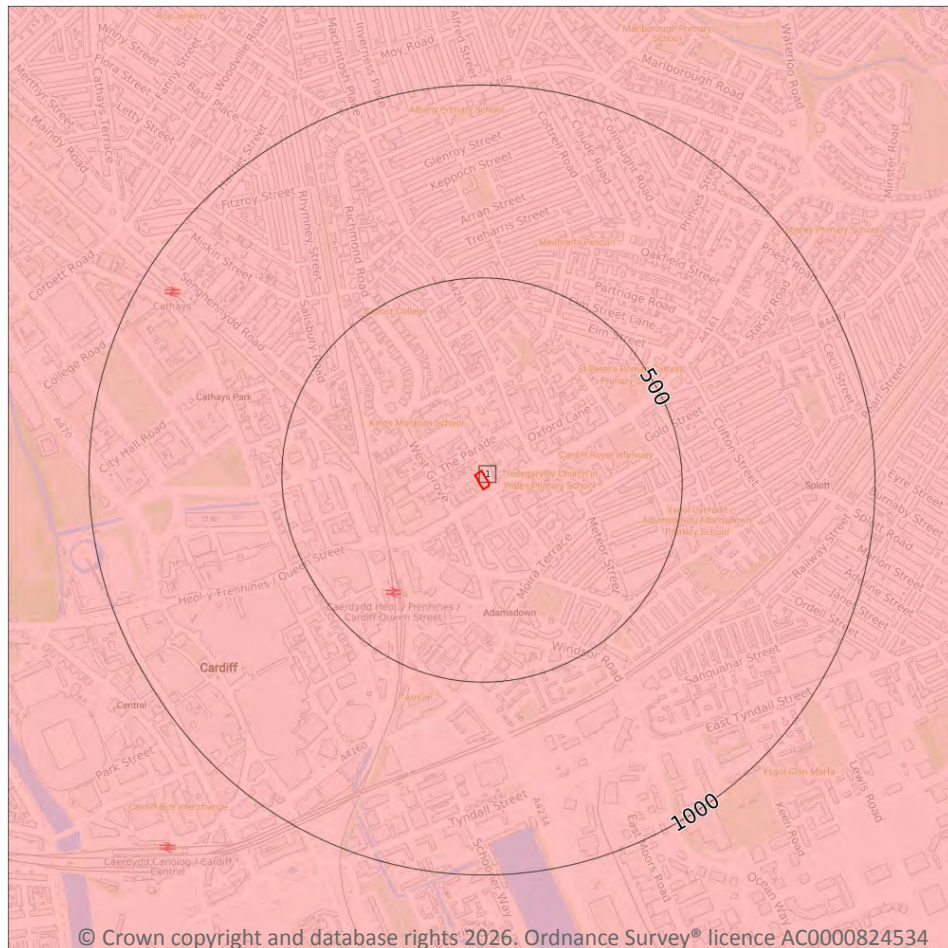
Records within 50m**0**

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any landslip deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

.... Bedrock faults and other linear features (50k)

Bedrock geology (50k)
Please see table for more details.

15.8 Bedrock geology (50k)

Records within 500m

1

Bedrock geology at 1:50,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on [page 101](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	MMG-MDST	Mercia Mudstone Group-Mudstone	Anisian

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m

1

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of bedrock (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Fracture	Low	Low

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m

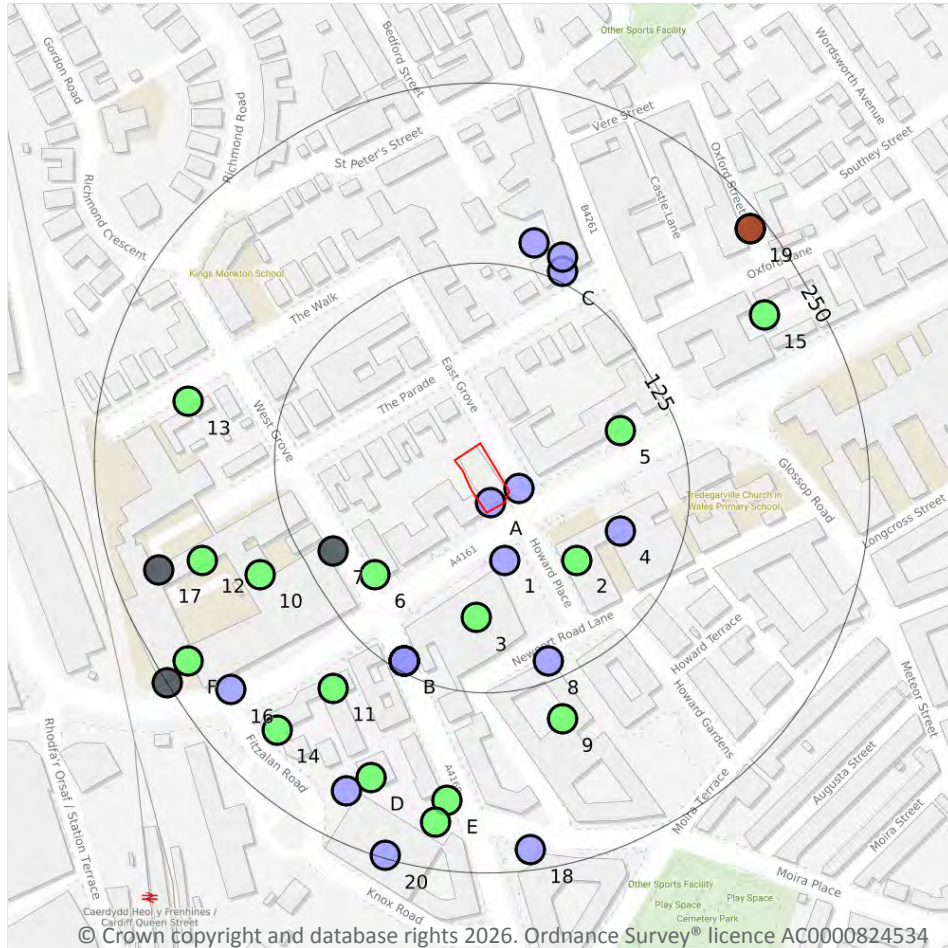
0

Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.



16 Boreholes



— Site Outline
Search buffers in metres (m)

- Confidential
- 0 - 10m
- 10 - 30m
- 30m+
- Unknown

16.1 BGS Boreholes

Records within 250m

41

The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

Features are displayed on the Boreholes map on [page 103](#) >

ID	Location	Grid reference	Name	Length	Confidential	Web link
A	On site	319060 176810	29, NEWPORT ROAD	6.4	N	378487 ↗
A	7m E	319080 176820	DISTRIBUTOR ROAD, PHASE 2, HIWARD PLACE. NO.5	9.1	N	378462 ↗



ID	Location	Grid reference	Name	Length	Confidential	Web link
1	35m S	319070 176770	DISTRIBUTOR ROAD, PHASE 2, HIWARD PLACE. NO.6	9.1	N	378463 ↗
2	64m SE	319120 176770	S. GLAM OFFICES, 32-36 NEWPORT ROAD	12.19	N	378967 ↗
3	73m S	319050 176730	JULIAN HODGE BLDG, NEWPORT ROAD	16.76	N	378866 ↗
4	82m E	319150 176790	38-40 NEWPORT ROAD, CARDIFF. 3-4	8.23	N	379117 ↗
5	88m NE	319150 176860	OFFICES, 35-43 NEWPORT ROAD	14.02	N	378485 ↗
6	88m SW	318980 176760	NEWPORT ROAD/WEST GROVE	11.58	N	378483 ↗
7	105m SW	318951 176776	UCC/UWIST FACULTY OF ENGINEERING WEST BUILDING BH4	-	Y	N/A
8	111m SE	319100 176700	HOWARD PLACE	6.1	N	378668 ↗
B	118m SW	319000 176700	KNOX COURT. TP.4. SITE 94	4.0	N	379137 ↗
B	118m SW	319000 176700	KNOX COURT. TP.5. SITE 94	3.5	N	379138 ↗
B	118m SW	319000 176700	KNOX COURT. TP.6. SITE 94	3.9	N	379139 ↗
B	118m SW	319000 176700	KNOX COURT. 1. SITE 94	20.39	N	379130 ↗
B	118m SW	319000 176700	KNOX COURT. 2. SITE 94	20.27	N	379131 ↗
B	118m SW	319000 176700	KNOX COURT. 3. SITE 94	20.2	N	379132 ↗
B	118m SW	319000 176700	KNOX COURT. 4. SITE 94	20.06	N	379133 ↗
B	118m SW	319000 176700	KNOX COURT. TP.1. SITE 94	4.0	N	379134 ↗
B	118m SW	319000 176700	KNOX COURT. TP.2. SITE 94	4.5	N	379135 ↗
B	118m SW	319000 176700	KNOX COURT. TP.3. SITE 94	4.3	N	379136 ↗
C	132m NE	319110 176970	P.O. BUILDING, CITY ROAD/THE PARADE. 3	9.75	N	378992 ↗
C	141m NE	319110 176980	P.O. BUILDING, CITY ROAD/THE PARADE. 1	9.14	N	378990 ↗
C	144m N	319090 176990	P.O. BUILDING, CITY ROAD/THE PARADE. 2	8.53	N	378991 ↗
9	152m S	319110 176660	COLLEGE OF ART, HOWARD GARDENS	10.52	N	378864 ↗
10	157m SW	318900 176760	NEW MINING DEPT, OLD COLLEGE, NEWPORT ROAD	15.85	N	378602 ↗
11	162m SW	318951 176681	FITZALAN CARPARK 2	20.0	N	379179 ↗
12	188m W	318860 176770	NEWMINING DEPT, OLD COLLEGE, NEWPORT ROAD	15.85	N	378342 ↗
13	190m W	318850 176880	NEW MINING DEPT, OLD COLLEGE, NEWPORT ROAD	15.84	N	379419 ↗

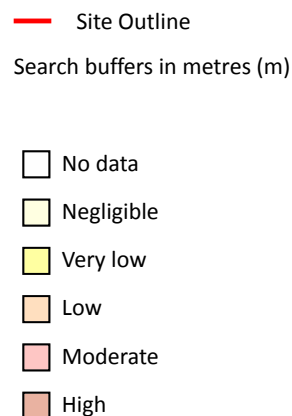


ID	Location	Grid reference	Name	Length	Confidential	Web link
D	201m SW	318977 176619	FITZALAN CARPARK 3	24.5	N	379180 ↗
E	202m S	319030 176603	FITZALAN CARPARK 4	20.3	N	379181 ↗
14	210m SW	318912 176652	FITZALAN CARPARK 1	27.0	N	379178 ↗
15	215m NE	319250 176940	NEWPORT RD, OXFORD LANE 1&2	12.5	N	379150 ↗
16	216m SW	318880 176680	DISTRIBUTOR ROAD, PHASE 2, NEWPORT ROAD, NO.3	4.0	N	378461 ↗
D	216m SW	318960 176610	KNOX ROAD/UWIST DEVELOPMENT 1	9.3	N	379068 ↗
E	218m S	319022 176588	KNOX ROAD/UWIST DEVELOPMENT 4	11.0	N	379071 ↗
17	219m W	318830 176763	UCC/UWIST FACULTY OF ENGINEERING WEST BUILDING BH2A/2B	-	Y	N/A
F	230m SW	318850 176700	NEWPORT ROAD, UNIVERSITY COLLEGE	12.19	N	379002 ↗
18	236m S	319088 176569	KNOX ROAD/UWIST DEVELOPMENT 7	9.5	N	379074 ↗
19	239m NE	319240 177000	NO RECORD	-1.0	N	378473 ↗
20	248m S	318987 176565	KNOX ROAD/UWIST DEVELOPMENT 3	8.3	N	379070 ↗
F	250m SW	318836 176685	UCC/UWIST FACULTY OF ENGINEERING WEST BUILDING BH3	-	Y	N/A

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



17.1 Shrink swell clays

Records within 50m

1

The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and local drainage).

Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 106](#) >

Location	Hazard rating	Details
On site	Negligible	Ground conditions predominantly non-plastic.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☒ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.2 Running sands

Records within 50m

1

The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

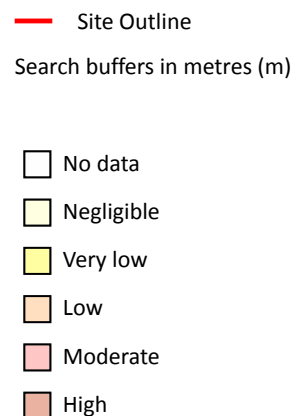
Features are displayed on the Natural ground subsidence - Running sands map on [page 107 >](#)

Location	Hazard rating	Details
On site	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



17.3 Compressible deposits

Records within 50m

1

The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on [page 108](#) >

Location	Hazard rating	Details
On site	Negligible	Compressible strata are not thought to occur.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Collapsible deposits



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☒ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.4 Collapsible deposits

Records within 50m

1

The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 109 >](#)

Location	Hazard rating	Details
On site	Very low	Deposits with potential to collapse when loaded and saturated are unlikely to be present.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Landslides



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☒ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.5 Landslides

Records within 50m

1

The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

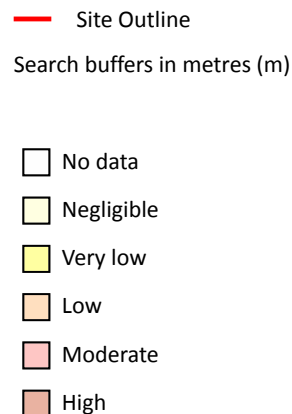
Features are displayed on the Natural ground subsidence - Landslides map on [page 110 >](#)

Location	Hazard rating	Details
On site	Very low	Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Ground dissolution of soluble rocks



17.6 Ground dissolution of soluble rocks

Records within 50m

1

The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

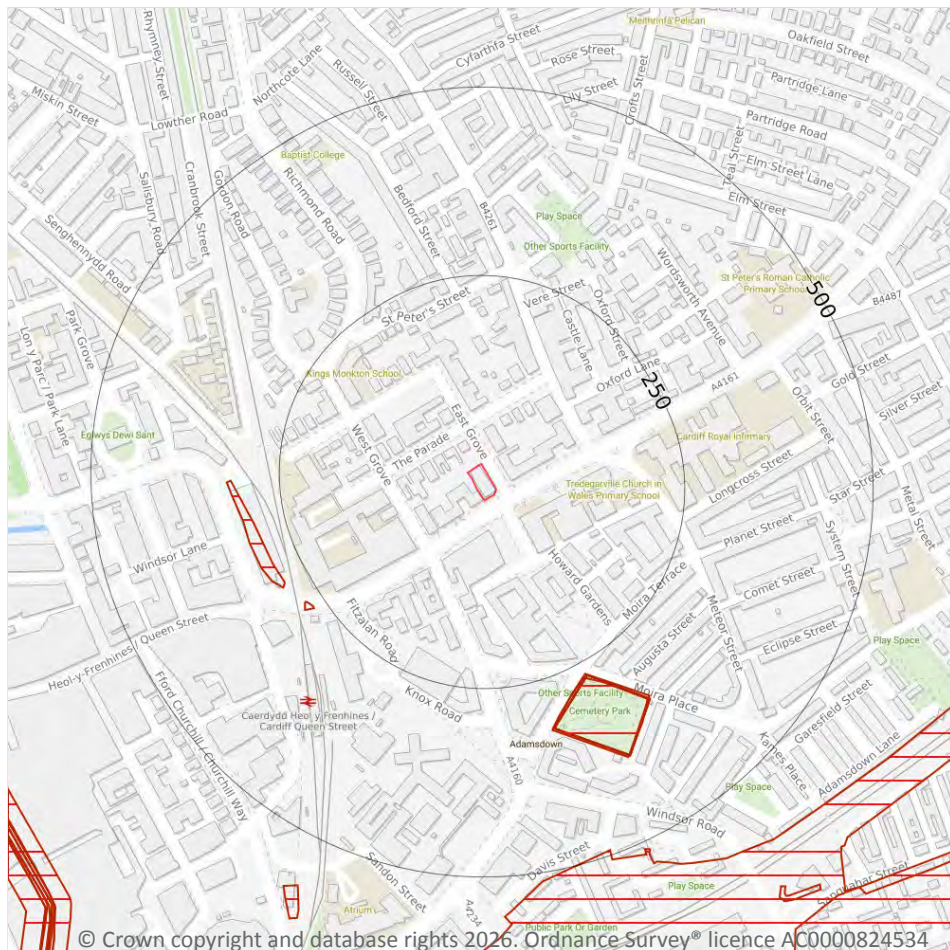
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on [page 111](#) >

Location	Hazard rating	Details
On site	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.

This data is sourced from the British Geological Survey.



18 Mining and ground workings



- Site Outline
- Search buffers in metres (m)
- BritPits
- ▭ Surface ground workings
- ▭ Underground workings
- ▭ Underground mining extents
- ▭ Historical mineral planning areas
- ▭ TCA non-coal mining
- Non Coal Mining
- ▭ Sporadic underground mining of restricted extent possible
- ▭ Localised small scale underground mining possible
- ▭ Small scale mining possible
- ▭ Underground mining known or likely within or in close proximity
- ▭ Underground mining known within or in very close proximity

18.1 BritPits

Records within 500m

0

BritPits (an abbreviation of British Pits) is a database maintained by the British Geological Survey of currently active and closed surface and underground mineral workings. Details of major mineral handling sites, such as wharfs and rail depots are also held in the database.

This data is sourced from the British Geological Survey.



18.2 Surface ground workings

Records within 250m**0**

Historical land uses identified from Ordnance Survey® mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

This data is sourced from Ordnance Survey®/Groundsure.

18.3 Underground workings

Records within 1000m**1**

Historical land uses identified from Ordnance Survey® mapping that indicate the presence of underground workings e.g. mine shafts.

Features are displayed on the Mining and ground workings map on [page 113 >](#)

ID	Location	Land Use	Year of mapping	Mapping scale
-	960m S	Unspecified Shafts	1965	1:10560

This data is sourced from Ordnance Survey®/Groundsure.

18.4 Underground mining extents

Records within 500m**0**

This data identifies underground mine workings that could present a potential risk, including adits and seam workings. These features have been identified from BGS Geological mapping and mine plans sourced from the BGS and various collections and sources.

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m**0**

Boundaries of mineral planning permissions for England and Wales. This data was collated between the 1940s (and retrospectively to the 1930s) and the mid 1980s. The data includes permitted, withdrawn and refused permissions.

This data is sourced from the British Geological Survey.



18.6 Non-coal mining

Records within 1000m

0

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

This data is sourced from the British Geological Survey.

18.7 JPB mining areas

Records on site

0

Areas which could be affected by former coal and other mining. This data includes some mine plans unavailable to the Coal Authority.

This data is sourced from Johnson Poole and Bloomer.

18.8 The Coal Authority non-coal mining

Records within 500m

0

This data provides an indication of the potential zone of influence of recorded underground non-coal mining workings. Any and all analysis and interpretation of Coal Authority Data in this report is made by Groundsure, and is in no way supported, endorsed or authorised by the Coal Authority. The use of the data is restricted to the terms and provisions contained in this report. Data reproduced in this report may be the copyright of the Coal Authority and permission should be sought from Groundsure prior to any re-use.

This data is sourced from The Coal Authority.

18.9 Researched mining

Records within 500m

0

This data indicates areas of potential mining identified from alternative or archival sources, including; BGS Geological paper maps, Lidar data, aerial photographs (from World War II onwards), archaeological data services, websites, Tithe maps, and various text/plans from collected books and reports. Some of this data is approximate and Groundsure have interpreted the resultant risk area and, where possible, specific areas of risk have been captured.

This data is sourced from Groundsure.

18.10 Mining record office plans

Records within 500m**0**

This dataset is representative of Mining Record Office and/or plan extents held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m**0**

This dataset is representative of BGS mine plans held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.12 Coal mining

Records on site**0**

Areas which could be affected by past, current or future coal mining.

This data is sourced from the Coal Authority.

18.13 Brine areas

Records on site**0**

The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

This data is sourced from the Cheshire Brine Subsidence Compensation Board.

18.14 Gypsum areas

Records on site**0**

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

Records on site	0
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Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

18.16 Clay mining

Records on site	0
-----------------	---

Generalised areas that may be affected by kaolin and ball clay extraction.

This data is sourced from the Kaolin and Ball Clay Association (UK).



19 Ground cavities and sinkholes

19.1 Natural cavities

Records within 500m

0

Industry recognised national database of natural cavities. Sinkholes and caves are formed by the dissolution of soluble rock, such as chalk and limestone, gulls and fissures by cambering. Ground instability can result from movement of loose material contained within these cavities, often triggered by water.

This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m

0

Industry recognised national database of mining cavities. Degraded mines may result in hazardous subsidence (crown holes). Climatic conditions and water escape can also trigger subsidence over mine entrances and workings.

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m

0

This data identifies sinkhole information gathered from media reports and Groundsure's own records. This data goes back to 2014 and includes relative accuracy ratings for each event and links to the original data sources. The data is updated on a regular basis and should not be considered a comprehensive catalogue of all sinkhole events. The absence of data in this database does not mean a sinkhole definitely has not occurred during this time.

This data is sourced from Groundsure.

19.4 Historical incidents

Records within 500m

0

This dataset comprises an extract of 1:10,560, 1:10,000, 1:2,500 and 1:1,250 scale historical Ordnance Survey® maps held by Groundsure, dating back to the 1840s. It shows shakeholes, deneholes and other 'holes' as noted on these maps. Dene holes are medieval chalk extraction pits, usually comprising a narrow shaft with a number of chambers at the base of the shaft. Shakeholes are an alternative name for suffusion sinkholes, most commonly found in the limestone landscapes of North Yorkshire but also extensively noted around the Brecon Beacons National Park.

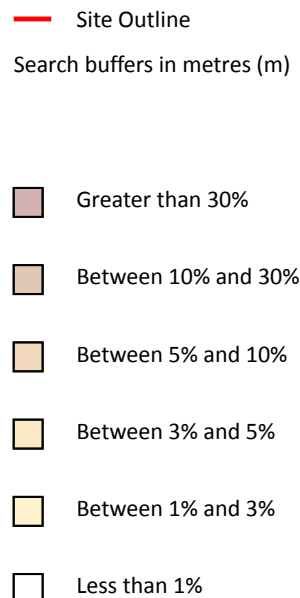
Not all 'holes' noted on Ordnance Survey® mapping will necessarily be present within this dataset.



This data is sourced from Groundsure.



20 Radon



20.1 Radon

Records on site

1

The Radon Potential data classifies areas based on their likelihood of a property having a radon level at or above the Action Level in Great Britain. The dataset is intended for use at 1:50,000 scale and was derived from both geological assessments and indoor radon measurements (more than 560,000 records). A minimum 50m buffer should be considered when searching the maps, as the smallest detectable feature at this scale is 50m. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain (1:100,000 scale).

Features are displayed on the Radon map on [page 120](#) >

Location	Estimated properties affected	Radon Protection Measures required
On site	Less than 1%	None



This data is sourced from the British Geological Survey and UK Health Security Agency.



21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m

2

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km². In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km²; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
35m W	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m

6

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km²).

Location	Arsenic (mg/kg)	Bioaccessible Arsenic (mg/kg)	Lead (mg/kg)	Bioaccessible Lead (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Nickel (mg/kg)	Tin (mg/kg)
On site	28	4.9	339	233	0.3	77	44	53	7
3m S	28	4.9	267	183	0.3	80	51	55	9
27m E	29	5.1	240	165	0.3	78	44	56	7
32m E	28	4.9	150	103	0.3	83	50	58	8
35m W	27	4.7	447	307	0.3	72	68	46	13
49m N	27	4.7	396	272	0.3	74	37	49	6

This data is sourced from the British Geological Survey.



21.3 BGS Measured Urban Soil Chemistry

Records within 50m

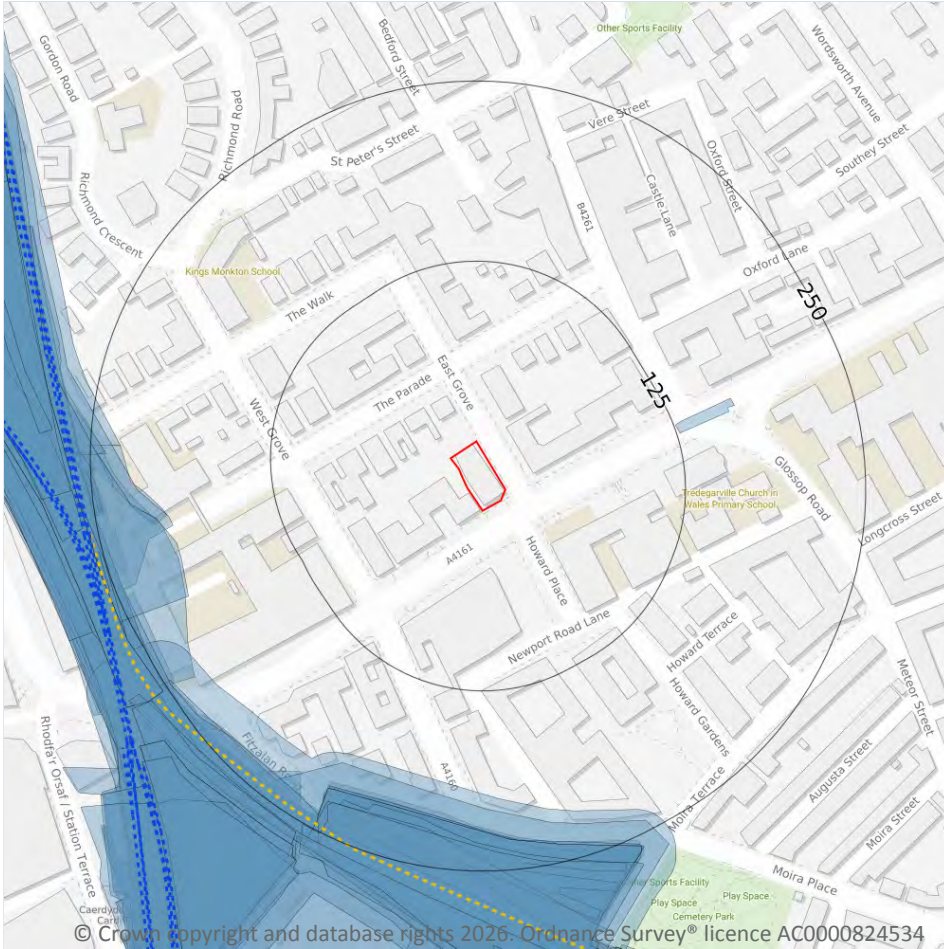
0

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km².

This data is sourced from the British Geological Survey.



22 Railway infrastructure and projects



- Site Outline
- Search buffers in metres (m)
- C2 Crossrail 2 Stations
- Crossrail 2 Route
- Crossrail 2 Worksites
- Crossrail 2 Safeguarding
- Crossrail 2 Headhouses
- Railway stations
- Active railways
- Active tunnels
- Abandoned railways
- Historic railways
- Historic tunnels
- Underground stations
- Underground Lines
- Royal Mail tunnels
- HS2 optimised route
- HS2 Stations
- HS2 Depots
- HS2 Surface Safeguarding
- HS2 Subsurface Safeguarding

22.1 Underground railways (London)

Records within 250m

0

Details of all active London Underground lines, including approximate tunnel roof depth and operational hours.

This data is sourced from publicly available information by Groundsure.

22.2 Underground railways (Non-London)

Records within 250m

0

Details of the Merseyrail system, the Tyne and Wear Metro and the Glasgow Subway. Not all parts of all systems are located underground. The data contains location information only and does not include a depth assessment.



This data is sourced from publicly available information by Groundsure.

22.3 Railway tunnels

Records within 250m	0
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Railway tunnels taken from contemporary Ordnance Survey® mapping.

This data is sourced from the Ordnance Survey®.

22.4 Historical railway and tunnel features

Records within 250m	33
----------------------------	-----------

Railways and tunnels digitised from historical Ordnance Survey® mapping as scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560.

Features are displayed on the Railway infrastructure and projects map on [page 124 >](#)

Location	Land Use	Year of mapping	Mapping scale
126m E	Tramway Sidings	1880	2500
188m S	Railway Sidings	1899	10560
197m S	Railway Sidings	1965	10560
198m W	Railway Sidings	1947	10560
199m W	Railway Sidings	1922	10560
201m W	Railway	1920	-
201m W	Railway	1901	-
208m W	Railway Sidings	1920	2500
214m S	Railway Sidings	1955	2500
214m S	Railway Sidings	1916	10560
214m S	Railway Sidings	1938	10560
214m S	Railway Sidings	1955	2500
215m S	Railway Sidings	1953	1250
215m S	Railway Sidings	1953	1250
215m S	Railway Sidings	1901	2500
215m S	Railway Sidings	1920	2500
215m S	Railway Sidings	1942	2500



Location	Land Use	Year of mapping	Mapping scale
217m S	Railway Sidings	1901	10560
221m SW	Railway	1940	-
222m S	Railway Sidings	1955	2500
223m S	Railway Sidings	1881	10560
224m S	Railway Sidings	1922	10560
229m W	Railway	1920	-
229m SW	Railway Sidings	1955	2500
230m SW	Railway Sidings	1953	1250
230m SW	Railway Sidings	1880	500
230m SW	Railway Sidings	1882	2500
239m W	Railway Sidings	1920	2500
240m W	Railway	1901	-
240m SW	Railway Sidings	1955	2500
242m SW	Railway Sidings	1953	1250
244m W	Railway Sidings	1920	2500
247m W	Railway Sidings	1880	500

This data is sourced from Ordnance Survey®/Groundsure.

22.5 Royal Mail tunnels

Records within 250m

0

The Post Office Railway, otherwise known as the Mail Rail, is an underground railway running through Central London from Paddington Head District Sorting Office to Whitechapel Eastern Head Sorting Office. The line is 10.5km long. The data includes details of the full extent of the tunnels, the depth of the tunnel, and the depth to track level.

This data is sourced from Groundsure/the Postal Museum.



22.6 Historical railways

Records within 250m

1

Former railway lines, including dismantled lines, abandoned lines, disused lines, historic railways and razed lines.

Features are displayed on the Railway infrastructure and projects map on [page 124 >](#)

Location	Description
244m SW	Razed

This data is sourced from OpenStreetMap.

22.7 Railways

Records within 250m

0

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways.

This data is sourced from Ordnance Survey® and OpenStreetMap.

22.8 Crossrail 2

Records within 500m

0

Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an underground tunnel through London.

This data is sourced from publicly available information by Groundsure.

22.9 HS2

Records within 500m

0

HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

This data is sourced from HS2 Ltd.



Data providers

Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see <https://www.groundsure.com/sources-reference> ↗.

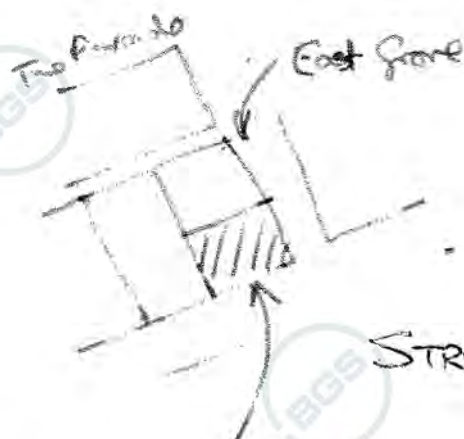
Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: www.groundsure.com/terms-conditions-april-2026/ ↗.



Appendix D

Historic Borehole Records



File with
ST17NE/243

29 Newport Rd

STRUCTURES / 112

2478/LML/DC

Sun Alliance
Building

10th January, 1962.

Messrs. Hurst Peirce & Malcolm,
Artillery House,
Artillery Row,
Westminster,
LONDON, S.W.1.

For the attention of Mr. Combe.

(Sun Alliance & London)

Dear Sirs,

Alliance Assurance Building - Cardiff.

As promised we now have pleasure in enclosing three copies of the Preliminary Borehole Section Sheets for the drilling recently completed at the above site. The descriptions given are largely based on those used by the foreman driller and may need modification when the results of all the tests are available.

Regarding the stratum of "clayey sand" encountered above the red clay or red marls. As you are aware, very high penetration values were recorded in this stratum and this has suggested that the stratum comprises of a soft sandstone. However from the general appearance of the small disturbed samples, and the result of a single sieve analysis, it would appear that the material is a very well graded sand which alone, provided the particles were deposited in a suitable manner, could account for the high penetration values. Nevertheless, there is obviously a possibility that the sand is cemented in some way, although the addition of acid has shown that this is not a calcareous cement.

The term rock marl has been used to denote a very hard marl, but by normal rock standards of course, the material could be counted as no more than a soft rock.

The results of two sulphate analyses, made on samples of ground-water, with concentrations of 12 and 8 parts SO_3 per 100,000 parts water, with a pH of 7.2 and 7.1 respectively, indicate that no special cement should

/Contd.

ST 17 NE / 243

- 2 -

be required to prevent the deterioration of foundation concrete by sulphate attack.

We trust that this information will meet your immediate requirements.

Yours faithfully,
for and on behalf of
GROUND EXPLORATIONS LTD.

L.M. Lake.

No exact Site for each borehole.



File with

ST17NE/243

Box 1906 7681

December 1961

ASSURANCE BUILDING, CARDIFF.

Planner, Hurst Paire & Malcolm

Artillery House, Artillery Row, London, S.W. 1.

Research Bd.

Glamorgan

Glamorgan

14'0"

6

14'6"

20.12.61

20.12.61

4101 2'6"; 4102 4'0"; 4103 5'0"; 4105 10'0"; 4106 13'0";
4107 14'0"; 4132 14'6"; 4133 15'6"; 4136 18'0"; 4137 20'0";
4138 Water.
4135 16'6"-18'0"

4104 6'0".

Made ground (asphalt, bricks, sandy clay, etc.)

Firm sandy clay with scattered gravel

Gravel and clayey sand

Slightly clayey sand with scattered rock fragments
(? cemented)

Firm red clay with scattered rock fragments

Firm grey/green sandy clay

Firm red marl, with bands of grey/green marl

Red rock marl, with layers of green

2	6	3	6
1	0	4	6
6	6	11	0
4	0	15	0
1	6	16	6
1	0	17	6
0	6	18	0
2	0	20	0

20 0 20 0

ST 17 NE / 243

PRELIMINARY

December 1961

RENEWAL ASSURANCE BUILDING, CARDIFF.

Mr Eric Ernest Peirce & Malcolm,

621 Mary House, Artillery Row, London, S.W. 1.

RENEWAL Bld.

Cardiff

Glamorgan

12.12.61

6

12.12.61 (bridge)

12.12.61

11.12.61

4108 2'6"; 4109 4'0"; 4110 4'6"; 4112 8'6"; 4113 10'6";
4114 12'6"; 4115 14'6"; 4116 15'6"; 4118 12'6"; 4119 21'0";
4120 1'6";
4121 1'0"-17'6".

4122 5'0".

Made ground (clay, etc.)
Firm sandy clay with scattered gravel
Gravel and clayey sand
Slightly clayey sand gritty at some levels, and
containing scattered rock fragments (? cemented)
Stiff red mud, much at some levels, with layers of
gravel and grit
Soft grey/green siltstone
Stiff red mud with scattered rock fragments
Red rock layers

3	0	3	0
1	6	4	6
2	6	8	0
5	0	13	0
2	6	15	6
1	6	17	0
1	0	18	0
3	0	21	0

21 0 21 0

ST 17 NE 243.

December 1961

ASSURANCE BUILDING, CARDIFF

Engineers: Morris Pearce & Malcolm

Artillery House, Artillery Row, London, S.W. 1.

General Ed.

Cardiff

Glamorgan

1212

6

1213

1214

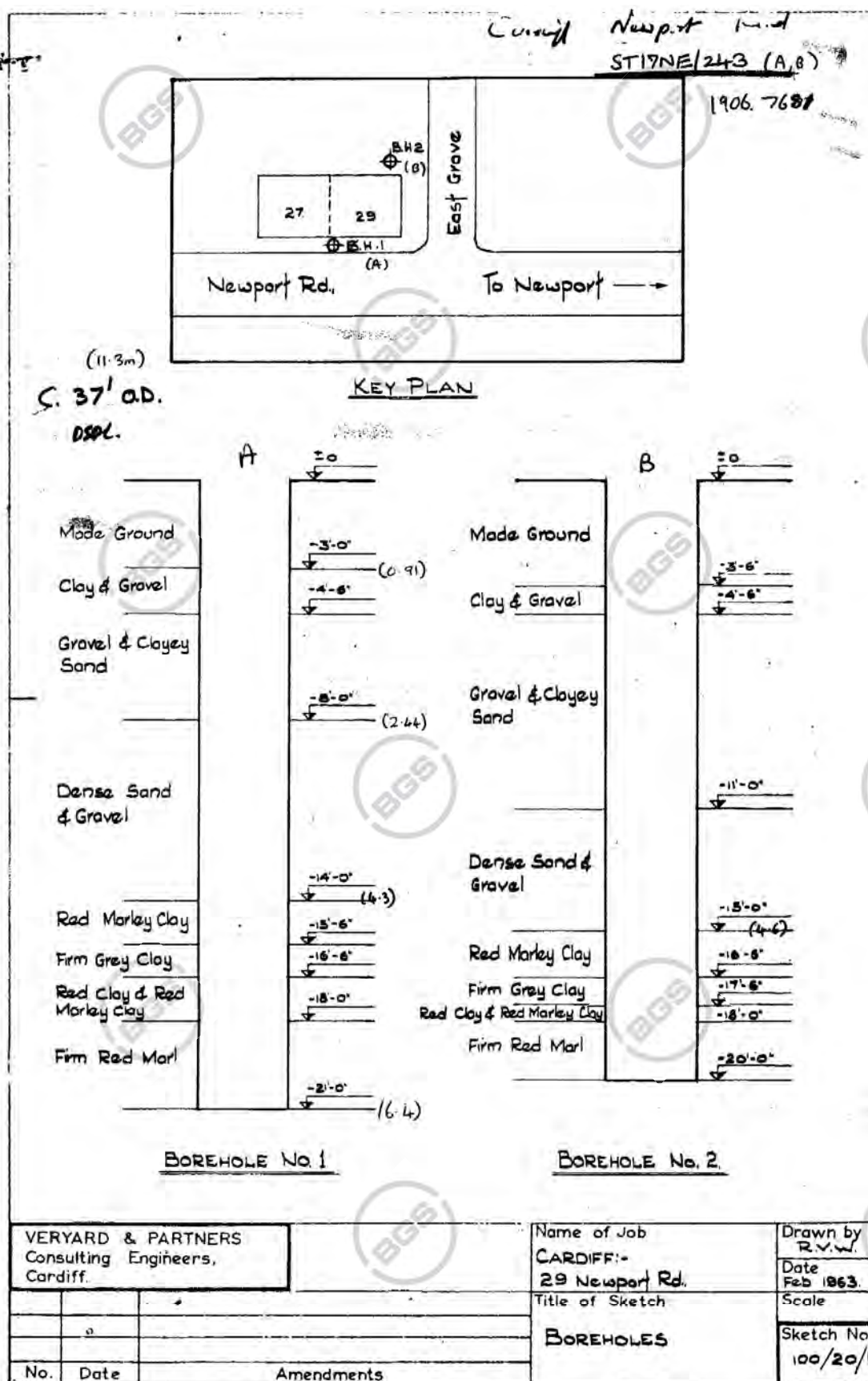
16.22.61

4122 4'6"; 4122 4'6"; 4123 7'0"; 4124 9'0"; 4125 11'0";
4126 13'0"; 4127 15'6"; 4129 18'0"; 4130 20'0"; 4131 Water.

4132 22'0"-17'6".

Base ground (clay, etc., etc.)
Firm silty and sandy clay with gravel
Mottled grey and grey sand
Slightly silty and (connected)
Soft to firm grey sand
For rock mar.

3	5	3	6
2	5	6	0
1	0	7	0
0	0	15	0
0	0	18	0
2	0	20	0



ST 17 NE/243

REPORT ON EXPLORATION OF GROUND CONDITIONS AT MILITARY ENGINEERING BUILDING, NEWPORT ROAD, CARMARTHEN.

1. INTRODUCTION.

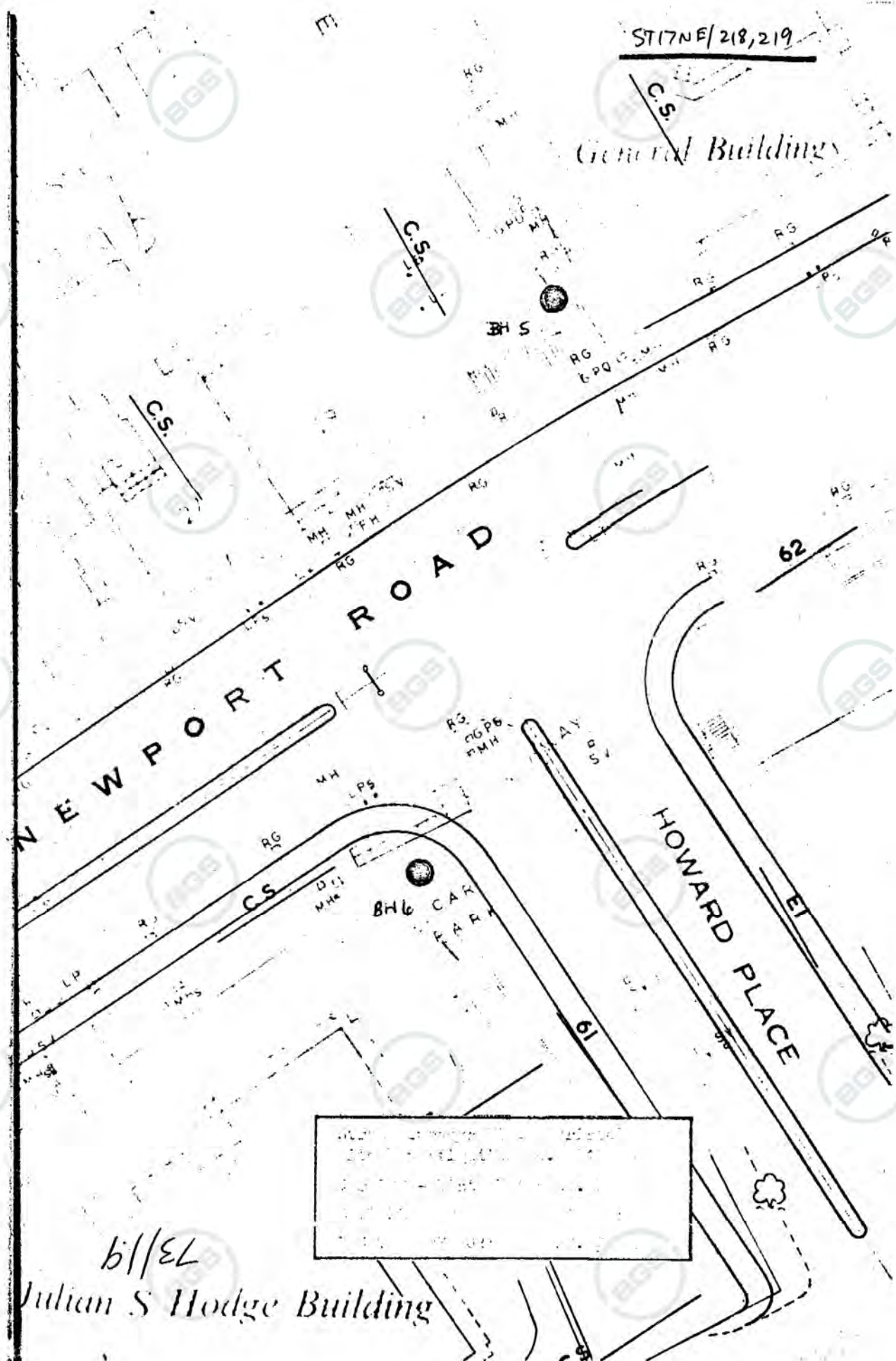
It is proposed to erect a single storey building on this site and an investigation of the ground conditions is made so that the foundations of the proposed structures could be designed safely and economically. For the purpose of the investigation, two test borings were drilled to determine the position of strata and to obtain samples of the different soils encountered suitable for use in laboratory tests.

The recommendations made and opinions expressed in this report are based on the boring records, examination of disturbed samples of the strata encountered, and the results of the laboratory tests.

2. BORINGS.

Two borings were drilled on this site at the positions shown on the Engineer's Site Plan. The descriptions, depths and test reports of the borings and strata encountered are given on the following sheets as follows:—
Sheet 1, page 1, describes the strata encountered and the depths at which the samples were taken and the ground-water conditions observed during drilling.

The boring records indicate that the site is covered by a surface thickness of 3 ft. 6 ins. of made ground which is underlain by a stratum of firm sandy clay containing scattered gravel. The sand is a mixture of dense gravel and clayey sand. The foregoing soils are found between 7 ft. and 11 ft. below the surface, at which depths the ground is composed of a mass of extremely dense sand, which is a mixture of the foregoing soils and is found below the surface where, generally, it is composed of hard and gravelly sand. In the lower part of the boring, a thickness of about 2 ft. of red clay and a grey clay is observed. The red clay is very hard and the grey clay is soft and silty. The red clay is observed at a depth of slightly less than 10 ft. below the surface and the grey clay is observed at a depth of 12 ft. below the surface.





RDIFF JOB: Distributor Road Phase II
BORING METHOD: 150 mm S&A
DATE: 29 Nov - 1 Dec 73

Scheme No. 73/19

VERT. SCALE 1:50

B.H. No. 6 ST17NE/219

DEPTH.		SAMPLING DETAILS	PENETRATION TESTS	BORING DETAILS	GROUND WATER	BOREHOLE FINDINGS.		ORD. DATUM.	
M.	FT.					LEGEND	DESCRIPTION.	M.	FT.
0				Hand dug trial pit			Tarmac carpark surface on FILL of demolition material - loose bricks, mortar, timber, building stone etc.	12.00	
1									
2				29 Nov ↓					
3			CPT N=124 (62 for 6")	Water added			Very compact brown clayey sandy coarse GRAVEL with cobbles	9.30	
4		B1	CPT N=222 (74 for 4")	Chisel 5 hrs					
5		B2							
6		U1 B3 NR		30 Nov ↓			Soft, becoming firm red/brown silty clay MARL Occasional hard blocks (weathered from mudstone)	6.40	
7		U2					Hard red/brown fine sandy silty clay MARL with occasional grey/green specks. Fissured and friable.		
8		P3 ΔW1	SPT N=81		48 hrs		Becoming weak, fissured mudstone		
9		P4	SPT N=201 (67 for 4")	Trace 1 Dec				2.90	

KEY TO SYMBOLS:-
D = Disturbed sample P = SPT Spoon sample (to scale) U = Undisturbed 100 mm. (4") sample.
Δ W = Water sample B = Bulk disturbed sample S = Water struck V = Current water level V = Morning water level.
V = Depth cased NR = No recovery R = Depth of standpipe filter G = Natural gas struck I = Hard boring (hours spent).

SPECIAL REMARKS:-

S. Glamorgan Offices.

32-36 Newport Rd
(Gerrard)

17 NE 722

5/227

FRAM GERRARD LTD
PENDLEBURY ROAD, SWINTON, MANCHESTER

BOREHOLE RECORD SHEET

Client MAURICE BAGULEY AND PARTNERS

Job No. EKAL/40056/1/100

Date 25th and 26th November 1971

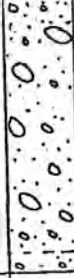
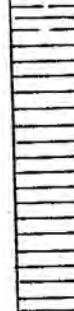
Location CARDIFF

Borehole No. 1

Diameter 3.34" Rotary

Ground Level

Scale 1/2 inch to 1 foot

Description	O.S.D.	Legend	Depth	Thick- ness	Sample	S.P.T. "N" Value	Water Levels
			0'0				
Soil and sand fill			1'6	1'6			
Stiff, brown, sandy, clay.			3'0	1'6			
Dense, sand, gravel and cobbles				17'0			
			19'0 20'0				
Red clayey marl. Becoming very hard at 23'0.			(6'1)		X20'0	54	26-11-71 +4.8
					X25'6	50(6')	
				(20'0)	X30'0	50(1 1/2')	
					X35'0	50(1 1/2')	
			40'0		X40'0	50(1')	
Borehole complete.							



ST 17 NE 722

FRAM GERRARD LTD
PENDLEBURY ROAD, SWINTON, MANCHESTER

BOREHOLE RECORD SHEET

Client MAURICE BACHLEY AND PARTNERS

Job No. C/GSL/46056/44P

Date 20th and 21st Nov. 1971

Location CARDIFF

Borehole No. 3

Diameter 3 3/4" - Rotary

Ground Level

Scale 1 inch to 1 foot

Description	O.S.D.	Legend	Depth 0' 0"	Thick- ness	Sample	S.P.T. "N" Value	Water Levels
Top soil			0' 0"	1' 0"			
Firm, brown, sandy, gravelly clay.			1' 0"	3' 0"			
Dense, clayey, sand, gravel and boulders.			4' 0"	10' 0"	55(9) 46(9)		
Red clayey marl becoming harder with depth. Hard at 22' 0".			14' 0" (4' 3")	15' 0"	13		+6.6
				20' 0"	41(9)		
				25' 0"	50(7)		
				30' 0"	50(6)		
				35' 0"	50(2)		
				40' 0"	50(1)		
				45' 0"	50(1)		
				50' 0"	50(1)		
				55' 0"	23		
				60' 0"	50(8)		

Softened band 52' 0" - 55' 6".

Borehole complete.

Undisturbed Sample ☐

Disturbed Sample ☒

Water Sample ☐

Standard Penetration ☒

CON.157



ST 17 NE / 722

FRAM GERRARD LTD
PENDLEBURY ROAD, SWINTON, MANCHESTER

BOREHOLE RECORD SHEET

Client.....MAURICE BACHLEY AND PARTNERS.....

Job No.....C1551/110516/360

Date 22nd and 23rd November 1971

Location.....CARDIFF.....

Borehole No.....5.....

Diameter 3 3/4" ROTARY

Ground Level.....

Scale 1/2 inch to 1 foot

Description	O.S.D.	Legend	Depth	Thick- ness	Sample	S.P.T. "N" Value	Water Levels
Soil			0'0	1'0			
Fine, brown, sandy, gravelly clay.			1'0	4'6			
			5'6		X5'0	40(6)	
Dense, clay bound gravel and cobbles.				8'0	X10'0	50(9)	
			13'6				+ 6.8
			(41)		X15'0	23	
Red clayey marl. becoming hard at 25'0					X20'0	42	
					X25'0	60(6)	
					X30'0	50(1)	
				4'6	X35'0	50(2)	
					X40'0	50(2)	
					X45'0	50(3)	
					X50'0	50(4)	
					X55'0	50(9)	
Borehole complete.			60'0		X60'0	50(7)	

Undisturbed Sample ☐

Disturbed Sample ☒

Water Sample ☒

Standard Penetration ☒

CON.157

ST 17 NE / 722

FRAM GERRARD LTD
PENDLEBURY ROAD, SWINTON, MANCHESTER

BOREHOLE RECORD SHEET

Client MAURICE BAGWELL AND PARTNERS

Job No. C/CL/46056/460

Date 19th and 20th November 1971

Location CARDIFF

Borehole No. 7

Diameter 3 3/4" ROTARY

Ground Level

Scale 1/2 inch to 1 foot

Description	O.S.D.	Legend	Depth 0'0 1'0	Thick- ness	Sample	S.P.T. "N" Value	Water Levels
Soil fill			0'0 1'0	1'0	0 2'0 3'0 4'0 5'0	31(6)	
Stiff, brown, sandy clay.			4'0	10'6			
Dense, clayey sand and gravel.			14'6 (4.1)		15'0 20'0 25'0 30'0 35'0 40'0 45'0 50'0 55'0 60'0	17 43 50(6) 32(6) 50(11) 50(2) 13 50(2) 27 50(5)	+ 6.8
Red clayey marl.							
Becoming hard at 23'0.							
Clayey marl 43'0-47'0							
Clayey 55'0-56'0.							
Borehole complete							

Disturbed Sample ☐

Disturbed Sample ☐

Water Sample

Standard Penetration

CON 157



ST 17 NE / 722 .

FRAM GERRARD LTD
PENDLEBURY ROAD, SWINTON, MANCHESTER

BOREHOLE RECORD SHEET

Client MAURICE BAGULEY AND PARTNERS

Job No. E.C.S. 1/4055/4.0

Date 19th and 15th November 1971

Location CARDIFF

Borehole No. 8

Diameter 6 inches (S & A)

Ground Level

Scale 1/2 inch to 1 foot

Description	O.S.D.	Legend	Depth	Thick- ness	Sample	S.P.T. "N" Value	Water Levels
Fill: ashes.			0' 0	1' 6			
Soft, brown sandy silty clay.			3' 6	2' 6	0 4' 0 5' 0 6' 0		
Brown, medium, clayey sand.			6' 0	6' 0	10' 0 11' 6 12' 0	17	11' 6 (15-11-71) after 15 hrs
Firm, sandy clay			12' 0	1' 0	12' 0		
Coarse sand and gravel			12' 0	1' 0			
Dense, clayey sand, gravel pebbles			14' 0	4' 0	15' 0 16' 0	50 (9) 40 (9)	3 hrs chiselling gravel 15-11-71 + 5' 4
Red clayey marl.			17' 0 18' 0 (5' 5)	(12' 0)	22' 0 27' 0	40 (9) 55 (9)	7 hrs chiselling marl. Bore dry when drilled.
Hard at 28' 0.			30' 0				
Borehole complete.							

Undisturbed Sample ☐

Disturbed Sample ☐

Water Sample

Standard Penetration ☒

CON.157
11/11/71



ST 17 NE / 722 ..

FRAM GERRARD LTD
PENDLEBURY ROAD, SWINTON, MANCHESTER

BOREHOLE RECORD SHEET

Client.....MAURICE BAGULEY AND PARTNERS.....

Job No.....51551/44054/460

Date 23rd and 24th November 1971

Location.....CARDIFF

Borehole No.....9

Diameter 3 3/4" ROTARY

Ground Level.....

Scale 1/2 inch to 1 foot

Description	O.S.D.	Legend	Depth	Thick- ness	Sample	S.P.T. "N" Value	Water Levels
Soil and fill			0'0	2'0			
Firm, brown sandy clay.			2'0	7'0			
Dense sand and gravel.			9'0	7'6	10'0	19	
Red clayey marl.			16'2 (5'0)		16'0	41	+ 5.9
Becoming hard at 20'0.					20'0	52(11)	
					25'0	50(2)	
					30'0	50(12)	
					35'0	50(11)	
					40'0	50(12)	
					45'0	50(12)	
					50'0	50(2)	
					55'0	50(5)	
Clayey 60'0-61'6.					60'0	50	
Borehole complete							

Undisturbed Sample ☐

Disturbed Sample ☒

Water Sample ☐

Standard Penetration ☒

CON.157



ST 17 NE 722

FRAM GERRARD LTD
PENDLEBURY ROAD, SWINTON, MANCHESTER

BOREHOLE RECORD SHEET

Client.....MESSRS. MAURICE BAGULEY AND PARTNERS.

Job No.....ALCL/394/40050

Date 27th to 28th February 1971

Location ...CARDIFF.....

Borehole No.....10.....

Diameter...4 INCHES (S.P.A.)...

Ground Level.....

Scale 1/2 INCH TO 1 FOOT.....

Description	D.S.D.	Legend	Depth	Thick- ness	Sample	S.P.T. "N" Value	Water Levels
Paving slab on fill.			0'0 1'6	1'6			27-271
Dense, well graded, sand, gravel cobbles and boulders.			1'6 10'0	14'6	X 8'0 X 10'0	50(6) 50(2)	Chiselling 6 hrs. 25-271 am Bore Dry
Hard red marl.			14'6 (4'4)		X 15'0 X 20'0 16'0 X 25'0	24 57(9) 55(6)	+6.5
Softened red marl, bottom 6" sandy.			30'6 32'0	1'6	A 30'0 X 22'0	11 50(2)	30'0 (26-271 pm) 4 hrs chiselling 26-2-72 Met water 22'0
Hard red marl.					(8'0) X 37'0	50(2)	8 hrs chiselling
End of bore.			40'0				

Undisturbed Sample ☐

Disturbed Sample ☐

Water Sample

Standard Penetration ☒

CON 157



ST 17 NE 722

FRAM, GERRARD LTD
PENDLEBURY ROAD, SWINTON, MANCHESTER

BOREHOLE RECORD SHEET

Client.....MAURICE BAGULEY AND PARTNERS.....

Job No.....C/CSL/42056/460.....

Date.....30th November 1971.....

Location.....CARDIFF.....

Borehole No.....11.....

Diameter.....6 inches (S&A).....

Ground Level.....

Scale.....1/2 inch to 1 foot.....

Description	O.S.D.	Legend	Depth	Thick- ness	Sample	S.P.T. "N" Value	Water Levels
Soil and fill			0'0	1'6			
Firm, brown sandy clay.			1'6	3'0			
Dense, clayey sand, gravel cobbles and boulders.			4'6		X 5'0	50(9)	
				12'0	X 10'0	42(6)	
			16'6		X 15'0	50(9)	Met water 15'0 +5.9
Hard red marl			(5'0)		X 20'0	45(9)	
				(3'6)	X 25'0	50(6)	6 hrs chiselling gravel & marl.
			30'0		X 30'0	50(4)	Bore dug on completion.
Borehole complete.							

Undisturbed Sample ☐

Disturbed Sample ☒

Water Sample ☐

Standard Penetration ☒

CON.157



ST 17 NE 722

FRAM GERRARD LTD
PENDLEBURY ROAD, SWINTON, MANCHESTER

BOREHOLE RECORD SHEET

Client.....MAURICE FAGGLEY AND PARTNERS.....

Date...2nd December 1971...

Job No.....C/CSE/46056/460

Location.....CARDIFF

Diameter...6 inches...(S.D.A.)

Borehole No.....12

Scale...1/2 inch to 1 foot

Ground Level.....

Description	O.S.D.	Legend	Depth	Thick- ness	Sample	S.P.T. "N" Value	Water Levels
Soil Fill			0'0	1'6			
Firm, brown sandy clay			1'6	2'6			
Very dense, clayey sand, gravel, cobbles and boulders.			4'0		X 5'0	51(6'')	
				11'6	X 10'0	50(6'')	
			15'6		X 5'0	14	Met water ~ 15'0. + 62
Firm, red clayey marl becoming hard at 21'0.			(247)		X 20'0	45(9'')	
					(4'6)	X 25'0	50(6'')
			20'0		X 30'0	50(3'')	Chiselled thru 3'0 1 hr marl
Borehole Complete							

Undisturbed Sample ☐

Disturbed Sample ☐

Water Sample

Standard Penetration ☒

CON.157

ST 17 NG / 722

FRAM GERRARD LTD
PENDLEBURY ROAD, SWINTON, MANCHESTER

BOREHOLE RECORD SHEET

Client MAURICE EAGLEY AND PARTNERS

Date 25.11.2011

Job No. 6/CSL/44255/160

Location CARDIFF

Diameter 6 INCHES (S.A.A.)

Borehole No. 13

Scale 1/8 inch to 1 foot

Ground Level

Description	O.S.D.	Legend	Depth	Thick- ness	Sample	S.P.T. "N" Value	Water Levels
Soil fill			0'0 1'6	1'6			
Very dense, clayey sand, gravel, cobbles and boulders			15'6		X 5'0 SO (9") X 10'0 SO (11") X 15'0 SO (9")		4 hrs chiselling boulders. + S. 7
Hard, red, mort.			17'0 (5'2)		X 20'0 SO (9") (13'0) X 25'0 SO (6")		Shrs chiselling no
			30'0		X 30'0 SO (6")		Met no water
Borehole complete							

Undisturbed Sample ☐

Disturbed Sample ☒

Water Sample ☐

Standard Penetration ☒

CN4141



ST 17 NE 722

FRAM GERRARD LTD
PENDLEBURY ROAD, SWINTON, MANCHESTER

BOREHOLE RECORD SHEET

Client MAURICE BAGULEY AND PARTNERS

Date 14 December 1971

Job No. 1155/405.6/4.50

Location CARRIF

Borehole No. 17

Diameter 6 inches

Scale 1/2 inch to 1 foot

Ground Level.....

Description	O.S.D.	Legend	Depth	Thick- ness	Sample	S.P.T. "N" Value	Water Levels
Soil fill			0'0	2'6			
Very dense, clayey sand, gravel cobbles and boulders			2'6		5'0	46	
				15'0	10'0	55(9)	
					14'0		14'0 (2-12-71)
					15'0	50(8)	Met water 15'0
			17'6				+56
Red clayey mud becoming hard at 25'0.			(53)		20'0	52	
				(12'6)	25'0	54	
					30'0	50(4)	Chiselling 6 hrs.
Borehole complete			30'0				

Undisturbed Sample ☐
CON 147

Disturbed Sample ☒

Water Sample ☐

Standard Penetration ☒



ST 17 NE / 722.

FRAM GERRARD LTD
PENDLEBURY ROAD, SWINTON, MANCHESTER

BOREHOLE RECORD SHEET

Client MESSRS. MAURICE BAGULEY AND PARTNERS.

Date 27th and 28th February 1971

Job No. A/C/L/308/46050

Location CARDIFF

Diameter 6 INCHES (S&A)

Borehole No. 15

Scale 1/2 INCH TO 1 FOOT.

Description	O.S.D.	Legend	Depth	Thick- ness	Sample	S.P.T. "N" Value	Water Levels
Paving slabs on clayey gravel fill			0'0	2'6			27-2-71
Dense, clayey, sand, gravel and cobbles.			2'6		X 5'	50(9')	
			10'0	11'0	X 10'	50(6')	Chiselled 4 hrs 28-2-71 Bore dry.
			13'6				+ 6.8
Stiff, red, mud.			(4'1)	4'0	15'0	16'0	
Hard red mud.			11'6		20'0	41(6')	
				10'6	25'0	50(4')	
Very hard red mud.			23'0		(2'0)	30'0	Chiselled 4 hrs. Met no water
End of bore.			30'0				

Undisturbed Sample ☐

Disturbed Sample ☐

Water Sample

Standard Penetration X

CON.157

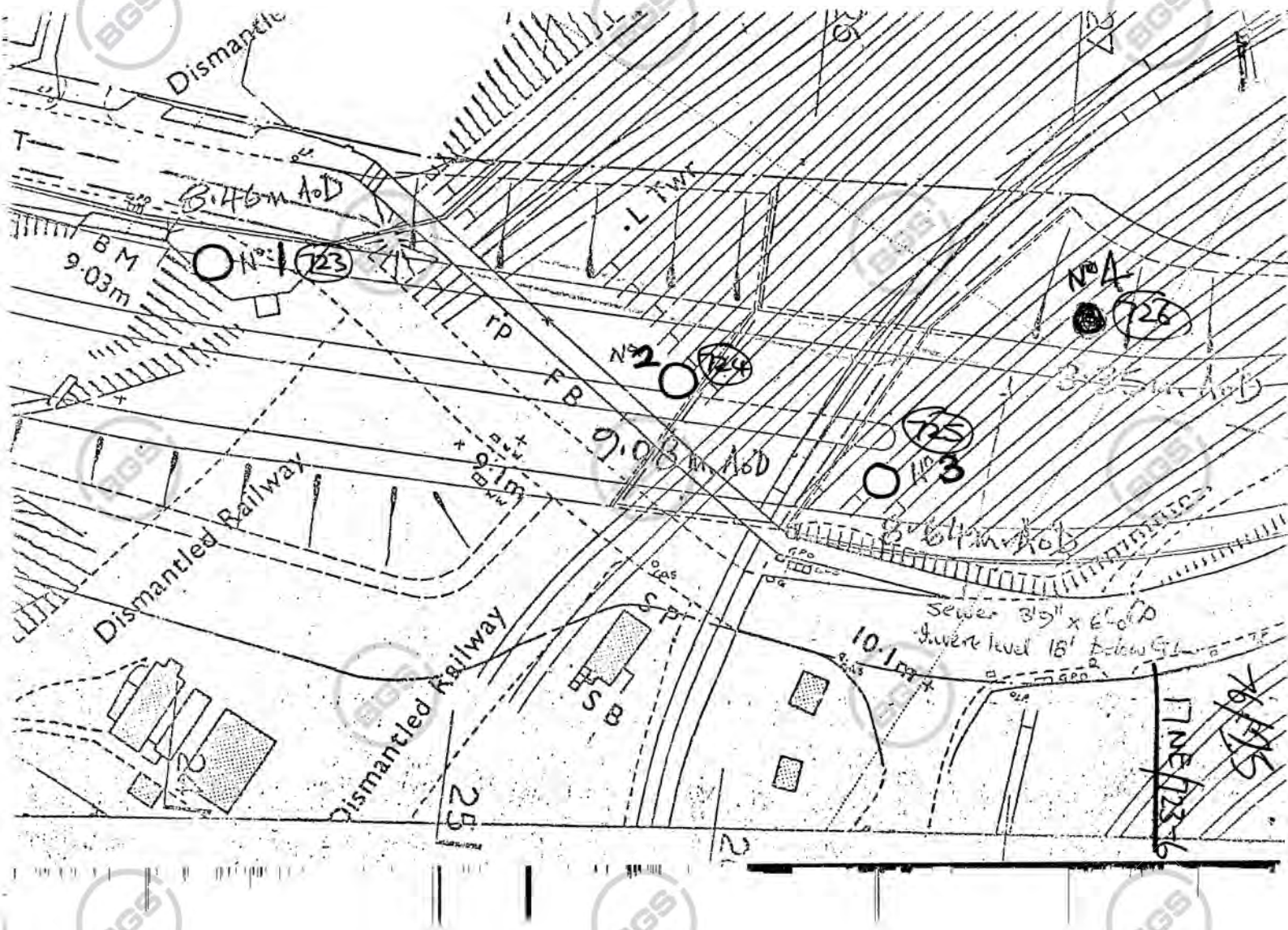


FIG.4.

S/91

ST17NE/
868

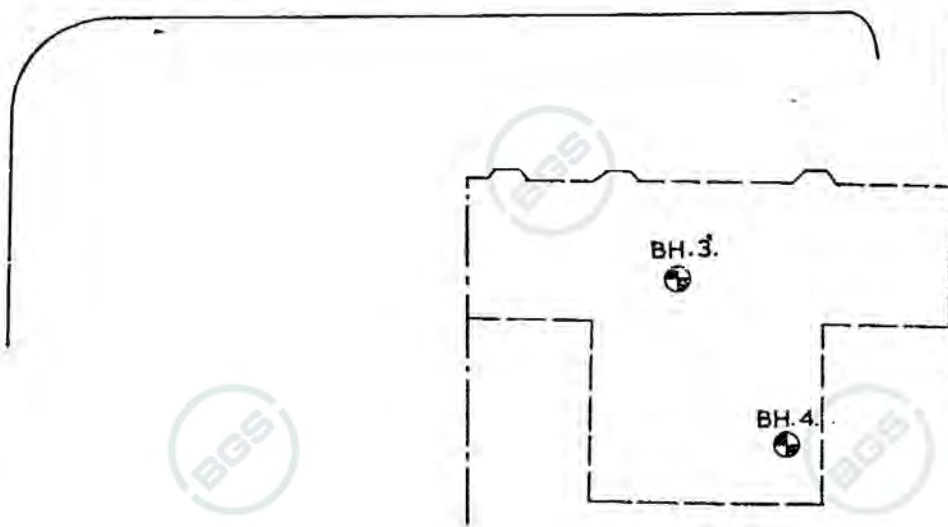
SITE INVESTIGATION FOR PROPOSED DEVELOPMENT,

38 to 40 NEWPORT ROAD, CARDIFF

(South side of road)

site plan showing approximate position of boreholes.

NEWPORT ROAD



SCALE : 1/500.

ST 17 NE 868

FIG. 1.

BOREHOLE LOG

LOCATION S.F.1219/1, HEMPSTADT ROAD, CARDIFF.

CARRIED OUT FOR Messrs. M.B. Boyer and Partners, Consulting Engineers.

BOREHOLE No. 3.

DIAMETER: 8in.

GROUND LEVEL:

DATE: 5th - 8th January, 1965.

DESCRIPTION OF STRATA	Sample	LEGEND	DEPTH	THICK- NESS	INDEX PROPERTIES.
MISCIL. FINE brown friable sandy silty CLAY, gravel traces.	1		0'0"	0'0"	M.C. 2
	2		0'6"	2'0"	15
	3		1'0"		
Very COMPACT fine to medium brown clayey SAND and silted GRAVEL, few COBBLES, becoming less clayey with depth.	4			10'0"	
	5				
	6				
	7				
	8		14'0"	1'0"	
SOILS. STIFF red brown silty silty SAND (FIRM to STIFF at surface).	9		15'0"	2'0"	16
	10				12
	11		17'0"		
HARD red brown silty SAND.	12			4'0"	6
	13		27'3"		
			END OF BOREHOLE.		

Note:

GROUND WATER was encountered at 11ft.0in. and rose
quickly to 9ft.0in. below G.L.

Final WATER level was nil (Borehole collapsed to
9ft.0in. below G.L. on withdrawal of casing tubes).

G. K. N. REINFORCEMENTS LTD.
SOIL MECHANICS LABORATORY

SCALE: 1 in. to 5 ft.

⊙ DISTURBED SAMPLE
■ UNDISTURBED SAMPLE

ST 17 NE 868

FIG.2.

BOREHOLE LOG

LOCATION S.Y. 1219/1. NEWPORT ROAD, CARDIFF.

CARRIED OUT FOR Messrs. E.C. Moyer and Partners, Consulting Engineers.

BOREHOLE No. 4.

DIAMETER: 8in.

GROUND LEVEL:

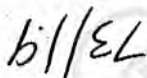
DATE: 8th - 11th January, 1965.

DESCRIPTION OF STRATA	Sample	LEGEND	DEPTH	THICK- NESS	INDEX PROPERTIES.
FILL, gravel, ash and brick rubble.	1		G.L.	2'0"	None
SOFT brown sandy silty CLAY, some GRAVEL.	2		2'0" 2'0"	1'0"	12
Very CONCRETE mixed brown SAND and mixed GRAVEL, few COBBLES, (LOCALLY CONCRETE at surface).	3			11'0"	
FIRM grey green silty MARL.	4		14'0"	2'0"	16
STIFF red brown friable silty MARL.	5		15'0"		14
	6		18'6"	2'0"	8
	7				21
	8				7
Hard red brown silty MARL, grey green traces.	9			1'0"	6
	10			penetrated.	
	11		29'3"		3
					2
END OF BOREHOLE.					
<u>Notes:</u> GROUND WATER was encountered at 11ft. 6in. below G.L. WATER was sealed by casing tubes at 15ft. 6in. below G.L. final water level 12 hours after completion of borehole and withdrawal of casing tubes was 5ft. 6in. below G.L.					

G. K. N. REINFORCEMENTS LTD.
SOIL MECHANICS LABORATORY

SCALE: 1 in. to 1 ft.

● DISTURBED SAMPLE
■ UNDISTURBED SAMPLE



Julian S Hodge Building

CARDIFF JOB. Distributor Road Phase II
BORING METHOD. 150 mm S&A
DATE. 26-28 Nov 73

Scheme No 43/13

VERT. SCALE 1:50

B.H.No. 5 ST17NE / 215
1908 70 182

DEPTH.		SAMPLING DETAILS	PENETRATION TESTS	BORING DETAILS	GROUND WATER	BOREHOLE FINDINGS.		ORD. DATUM	
M.	FT.					LEGEND	DESCRIPTION.	M.	FT.
0				Hand dug trial pit			Tarmac road formation on FILL of limestone rubble	10.90	
1			CPT $\bar{N} = 148$ (74 for 6")	Water added Chisel 2 hrs 26 Nov			Very compact brown clayey sandy coarse GRAVEL with cobbles	10.30	
2			CPT $\bar{N} = 163$ (68 for 5")	Chisel 5 hrs					
3					48 hrs 28 Nov				
4		B2 DWI U1	CPT $\bar{N} = 122$ (61 for 6")				Firm/stiff red/brown silty clay MARL with grey/green patches & streaks. Fissured and with occasional black stained faces. Occasional small gravel.	6.60	
5					5 pm 27 Nov		Stiff MARL as above. No gravel. Becoming hard and friable.	5.30	
6		D1 U2		27 Nov					
7		P4	SPT $\bar{N} = 126$ (84 for 8")				Hard red/brown silty clay MARL Friable and fissured. Frequent blocks of weak mudstone. Occasional grey/green patches. Becoming weak fissured mudstone, red/brown with occasional grey/green specks.	4.20	
8		P5	SPT $\bar{N} = 153$ (53 for 4")						
9		P6	SPT $\bar{N} = 288$ (72 for 3")					1.80	
								ZERO O.D.	

KEY TO SYMBOLS:-

D = Disturbed sample	P = SPT Spoon sample (to scale)	U = Undisturbed 100 mm. (4") sample.
W = Water sample	B = Bulk disturbed sample	S = Water struck.
SE = Depth cased	NR = No recovery	92 = Depth of standpipe filter
		U = Current water level
		M = Morning water level.
		N = Natural gas struck.
		I = Hours boring (hours spent).

SPECIAL REMARKS:- 3 hrs standing 28 Nov due parked cars



J. GERRARD & SONS LIMITED
SWINTON, MANCHESTER.

BOREHOLE RECORD SHEET

ST17NE/241

A

C. 1915 7686

Job No. C/CSL/219

Date 12.13.6-1969

Location CARDIFF

Carried out for MESSRS MAURICE BAGULEY AND PARTNERS

Borehole No. 1

Diameter 6 INCHES

Ground Level c 36' (11m)
D.S.O.L.

Scale 1/2 INCH TO 1 FOOT

Description	O.S.D.	Legend	Depth	Thick- ness	Sample	S.P.T. Value	Water Levels
Topsoil			0'0	0'9			
Stiff, brown, sandy, gravelly clay.			0'9	2'0			
Dense, sand, gravel cobbles and boulders.			2'9		2'0 3'6 5'6-6'0 62(6) 8'5-7'0 9'6-10'6 27		
Red and grey green MARL. Partly weathered to stiff, clay at top. Becoming hard at 20'0 approximately.			12'0 (3.66)		12'6 14'0 15'6-16'0 55(6) 20'0-20'6 49(3) 26'0-26'6 75(4) (28'6) 30'0-30'6 75(6) 35'0-35'6 25(5) 38'0		
			40'0		40'0-40'6 75(6) End of Bore.		Bore Dry on completion.

Disturbed Sample ☐

Disturbed Sample ☐

Water Sample ☒

Standard Penetration ☒

CON.157

J. GERRARD & SONS LIMITED

SWINTON, MANCHESTER.

ST17NE(241

B

BOREHOLE RECORD SHEET

Job No. C/28/219

Date 10.8.11.6-1969

Location CARDIFF

Carried out for MESSRS. MAURICE BAGDLEY AND PARTNERS

Borehole No. 2

Diameter 6 INCHES

Ground Level

Scale 1/8 INCH TO 1 FOOT

Description	O.S.D.	Legend	Depth	Thick-ness	Sample	S.P.T. Value	Water Levels
Formacodon			0'2	0'6			
Firm, brown boulder clay.			2'6	2'0			
Very dense, sand, gravel, cobbles and boulders.				8'6	X5'0-6'0 63(6')		
					B.S. 9'0		
					X9'0-10'0 61(6')		
			11'0 (3'5)		11'6		
					12'0		
Red and grey-green Marl. Very stiff clayey consistency at top, becoming hard at 15'0. Some softer thin bands at 20'0-25'0 and 34'0-35'6.					X15'0-15'6 75(5')		
					X20'0-24'0 75(4')		
					X25'0-25'5 75(5')		
				(35'0)	X20'0-21'3 56(9')		
					X25'0-26'3 58(9')		
					X40'0-41'3 64(9')		
			44'0 (14'0)		X45'0-46'0 40(6')		Bore Dry. End of Bore.

und Sample

CG. 4.137

Disturbed Sample

Water Sample

Standard Penetration

J. GERRARD & SONS LIMITED
SWINTON, MANCHESTER.

BOREHOLE RECORD SHEET

ST17NE/241C

Job No. C/CSL/219

Date 6-7-6-1969

Location **CARDIFF**

Carried out for MESSRS MAURICE BAGULEY AND PARTNERS

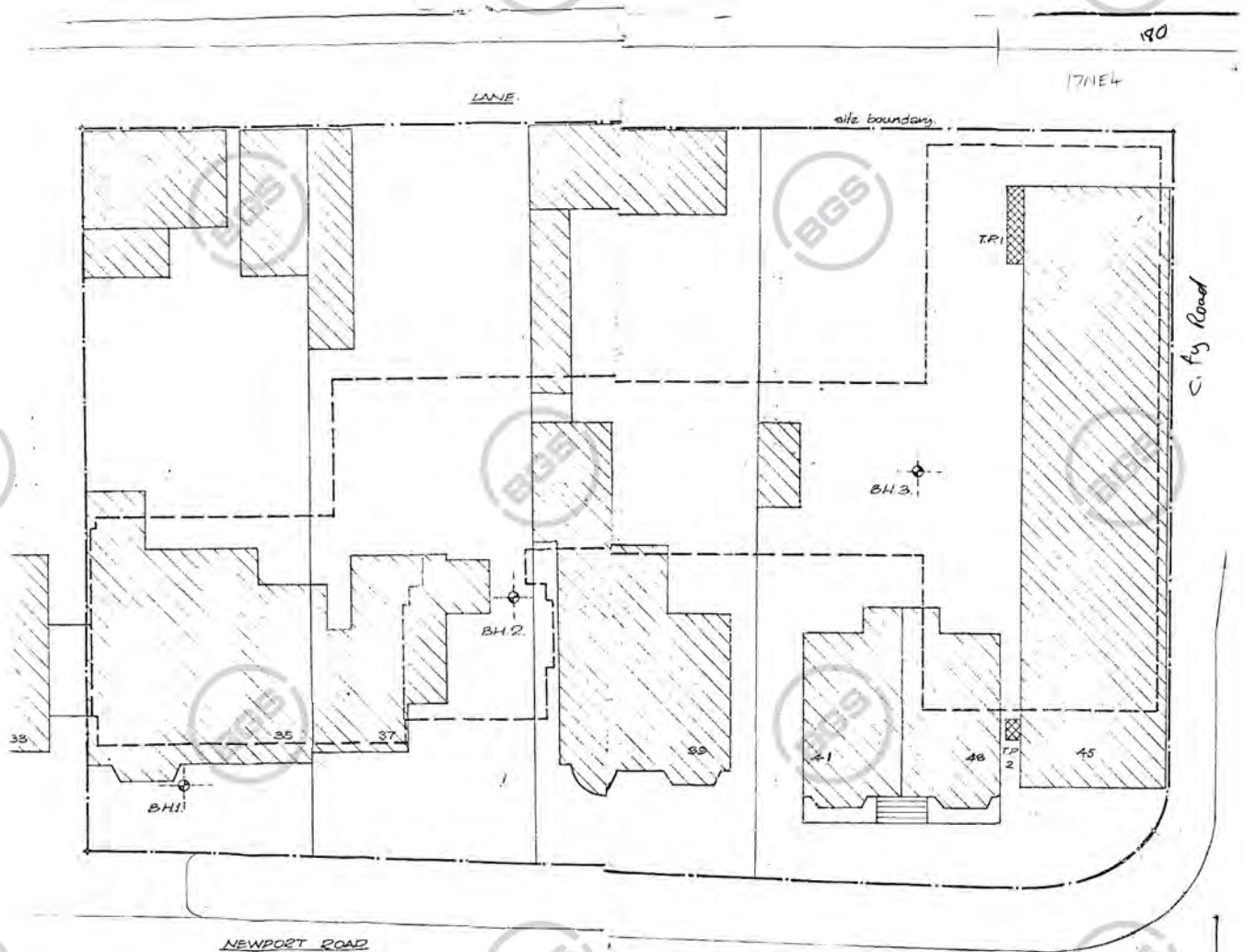
Borehole No. 3

Diameter 6 INCHES.....

Ground Level

Scale 1/8 INCH TO 1 FOOT

Standard Penetration



Appendix E

Regulatory Correspondence

Caroline Moule

From: foiunit@valeofglamorgan.gov.uk
Sent: 04 June 2026 10:36
To: sophie.thomas@tecon.co.uk
Subject: EIR Request - Case Ref: Case 00210672
Attachments: CLEIR-26-83.docx

Dear Sophie Thomas

Thank you for your request for information on 6th May about: Ty Cambria House, 29No. Newport Road, Cardiff, CF24 0TP

Please see the responses to your questions below (and attached):

Ty Cambria House, 29No. Newport Road, Cardiff, CF24 0TP

I am writing to ask if you could conduct a search for the following details in order for us to complete an environmental review of the above mentioned site. I can provide a site plan if required.

1. Pre-license landfill sites within 500m of the subject site, including: ? license holder ? location of landfill/grid reference ? nature of fill material ? dates of operation ? details of any leachate/landfill gas problems

Please see the attached document.

2. Pollution incidents/known areas of contaminated land within 500m of the subject site, including: ? location/grid reference ? previous uses ? nature/source of pollution ? any further details

Please see the attached document.

3. Part B APC authorisations within 500m of the subject site, including: ? authorisation holder ? location/grid reference ? nature of authorisation

There are none

4. Private water supplies within 500m of the subject site, including: ? location/grid reference ? details of source and abstraction purpose

Please see the attached document.

5. Storage of Petroleum Hydrocarbons.

An officer from the SRS will get in touch with you week commencing 8th June to arrange the relevant searches.

6. Records of any previous Site Investigations on or in close proximity to the site

Please see the attached document.

7. Records of any unexploded ordnance in the site area

8. Any known problems with ground gas in the site area

Please see the attached document.

9. Any potential issues regarding naturally elevated contaminant concentrations

Please see the attached document.

10. Any other information held by your authority which may have an impact upon the contaminative status of the site

Please see the attached document.

If you are dissatisfied with the handling of your request, you have the right to ask for an internal review. Internal review requests should be made within 40 working days of the date of this correspondence and should be addressed to: The Monitoring Officer, Civic Offices, Holton Road, Barry, CF63 4RU.

If you are not content with the outcome of the internal review, you have the right to apply directly to the Information Commissioner for a decision.

The Information Commissioner can be contacted at:
Information Commissioner's Office - Wales

Second Floor, Churchill House

Churchill Way,

Cardiff

CF10 2HH

029 20678400 / Fax:029 20678399

wales@ico.org.uk

Yours sincerely

Information Governance Officer/ Swyddog Llywodraethu Gwybodaeth
Director's Office - Resources / Swyddfa'r Cyfarwyddwr - Adnoddau
Vale of Glamorgan Council / Cyngor Bro Morgannwg
tel / ffôn: 01446 700111
e-mail / e-bost: foiunit@valeofglamorgan.gov.uk or dpo@valeofglamorgan.gov.uk

*Consider the environment. Please don't print this e-mail unless you really need to.
Ystyriwch yr amgylchedd. Peidiwch ag argraffu'r neges hon oni bai fod gwir angen.*

Visit our Website at www.valeofglamorgan.gov.uk
Ewch i'n gwefan yn www.bromorgannwg.gov.uk

[Find us on Facebook / Cewch ddod o hyd i ni ar Facebook](#)
[Follow us on Twitter /Dilynwch ni ar Twitter](#)

Correspondence is welcomed in Welsh or English / Croesewir Gohebiaeth yn y Gymraeg neu yn Saesneg.

FOI Ref: 00210672
Our Ref: SRS/E/CLEIR-26-83

Date: 03 June 2026

Dear Sirs,

Re: Request for Environmental Information
Environmental Information Regulations 2004
Site: Ty Cambria House, Newport Road, Cardiff, CF24 0TP

The Shared Regulatory Services (SRS) Environment Team considers that your request is a request for environmental information as defined by Regulation 2 of the Environmental Information Regulations 2004. The response to your request is provided below, in relation to the questions addressed by this department

Pre-licence landfill sites within 500m of the subject site, including: licence holder, location of landfill/grid reference, nature of fill material, dates of operation, details of any leachate/landfill gas problems

SRS is not aware of any landfill sites located within 500m of the subject site.

Known areas of contaminated land within 500m of the subject site, including: location/grid reference, previous uses, nature/source of the pollution, any further details

There are no properties within 500m of the subject site that have been identified by the council as 'contaminated land' as defined by section 78(a) of Part 2A of the Environmental Protection Act 1990.

Private water supplies within 500m of the subject site, including: location/grid reference, details of source and abstraction purpose

There are no known private water supplies within 500m of the subject site.

Records of any previous site investigations on or in close proximity to the site

SRS does not hold any records of any site investigations on or in close proximity to the site at this time.

Any known problems with ground gas in the site area

SRS is not aware of any ground gas problems in the site area.

Any other information held by your authority which may have an impact upon the contaminative status of the site.

SRS can confirm that the above property has not been identified by this Council as "contaminated land" as defined by section 78(a) of Part 2A of the Environmental Protection Act 1990. SRS is not aware of any

reasons that would affect the future classification of the property and the property is unlikely to be investigated under the Part 2A of the EPA 1990 anytime in the near future.

Environment Team
Shared Regulatory Services
Bridgend, Cardiff & the Vale of Glamorgan

Appendix F

Brimstone Site Investigation

STAGE 1 PRELIMINARY UXO RISK ASSESSMENT

Report Ref: PRA-26-3052 | Author: WS | Reviewer: CB



Innovation Centre Medway, Maidstone
Road, Chatham, ME5 9FD
020 7117 2492
www.brimstoneuxo.com

Client: Tweedie Evans Consulting Ltd
Project: Ty Cambria House, Cardiff
Date: 05/05/2026

INTRODUCTION

The Stage 1 Preliminary Risk Assessment aims to identify potential sources of unexploded ordnance (UXO) that may impact the site. The assessment determines if further investigation through a Stage 2 Detailed UXO Risk Assessment is necessary.

This desktop study follows the Construction Industry Research and Information Association (CIRIA) C681 Guidelines: ‘Unexploded Ordnance, a Guide for the Construction Industry’ (published in 2009). It incorporates multiple historical datasets, including available wartime records, Ordnance Survey (OS) mapping, aerial imagery and the Brimstone UXO Sources Database.

THE SITE

National Grid Ref: ST 19058 76826 **What3Words:** wedge.losses.public

Location: Situated in Cardiff, within the county of Glamorgan, approximately 310m north-east of Cardiff Queen Street railway station.

Site Composition: Comprises Ty Cambria House, a six-storey structure, and an area of hardstanding.

Surroundings: Bound to the north by hardstanding, to the east by East Grove, to the south by Newport Road and to the west by Cardiff Sixth Form College.



THE PROPOSED WORKS

Site Investigation (SI) Works	SI works are proposed, comprising two hand dug trial pits for foundation exposures, to 1.5m bgl.
Development Works	The proposed development works on Site comprise the demolition of the existing structure and construction of a new 23-storey structure. The depths of associated excavations / foundations were unknown at the time of writing.

SITE HISTORY

Pre-WWII	Pre-WWII (1938) OS mapping indicates that the Site comprised a residential structure, alongside a large garden area, presumably comprising open ground.
WWII-era	No significant developments can be identified on Site.
Post-WWII	By 1999, the WWII-era structures on Site had been cleared, and Ty Cambria House, a six-storey structure, was constructed. The remainder of the Site comprised hardstanding. The construction of Ty Cambria House will have disturbed ground to very shallow (<1m bgl), shallow (1-2m bgl) and deep (>2m bgl) depths on Site.

ENEMY ACTION DURING WWI

WWI German Bombing	Cardiff did not experience any air raids during WWI.
--------------------	--

ENEMY ACTION DURING WWII	
British District Bombing Density Statistics	The Site is situated in the WWII-era County Borough of Cardiff, which sustained 41.7 bombs / 1,000 acres, a moderate bombing density.
Evidence of Bomb Strikes	Nine bomb strikes are recorded within an approximate 500m radius of the Site in Cardiff bomb census mapping. The closest of these was approximately 50m north-west of the Site. Note, this mapping only covers four air raids in 1942 and 1943, so is far from comprehensive of the Luftwaffe bombing campaign and does not cover the heaviest period of bombing in Cardiff (early 1941).
Evidence of Bomb Damage	A comparison of pre- and post-WWII OS mapping reveals areas of structural clearance approximately 40m south-east and 70m west of the Site respectively. This may be indicative of bomb damage occurring. No WWII-era photography of sufficient resolution to analyse the ground cover on Site was available at the preliminary stage.
Local Bombing Decoy Sites	None within a significant distance. The closest recorded decoy was approximately 5.7km south-west.
Local German Bombing Targets	The closest identifiable primary Luftwaffe target was a port installation, Cardiff Bute West, approximately 880m south of the Site. Railway infrastructure approximately 250m west may have been identified as a target of opportunity.
BRITISH / ALLIED MILITARY ACTIVITY	
Potential Source of UXO	Details
WWII Home Guard (HG) Activity	Soldiers of the 16 th , 21 st and 22 nd Glamorganshire (Cardiff) HG Battalions will have been active locally during WWII. Armed HG troops on patrol are unlikely to have accessed the Site or utilised it in any significant way due to its developed nature.
Historic or Current Military Activity	No evidence of activity occurring on Site found at this stage within an in-house geo data set or a local Historic Environment Record (HER).
WWII Light and / or Heavy Anti-Aircraft (LAA and HAA) Batteries	15 permanent HAA batteries were active within range of the Site during WWII. LAA guns likely defended vulnerable points in the wider study area. Luftwaffe activity in the region was relatively frequent and as a result these guns would have fired a considerable amount of ordnance. It is possible that an unexploded AA shell struck the Site and penetrated to a shallow depth in the open ground.
LIKELIHOOD OF UXB DETECTION	
Access Levels	Likely frequent in the area occupied by structures; this will have been lower if periods of evacuation / repairs took place. Likely less frequent in the areas of open ground.
Ground Cover	Likely conducive in the developed areas on Site; less conducive in the areas of open ground.

RISK MITIGATING FACTORS

Likelihood of UXO Remaining	The risk associated with (any) very shallow, shallow and deep buried UXO will have likely been partially mitigated.
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CONCLUSIONS

German UXO:

- Evidence of multiple high explosive bombing incidents within close proximity to the Site has been identified in available records, which are very limited at the preliminary stage.
- Two areas of structural clearance, potentially the result of bomb damage, have been identified within an approximate 100m radius of the Site. The closest of these was located approximately 40m south-east.
- Access levels may have been partially infrequent on Site, and the ground cover across areas of the Site likely presented conditions un conducive to the visual detection of UXBs.
- Whilst relatively significant post-war works have taken place across much of the Site, this is not anticipated to have been conducted down to the maximum bomb penetration depth (typically between 9m – 13m bgl depending on the underlying geology), and a UXB could feasibly remain in situ in-between / beneath existing foundations.
- Based on the above, further research is recommended to better determine the likelihood of a UXB encounter during proposed works.

British / Allied UXO:

- No evidence of significant military activity specifically on Site has been found and none is likely to have occurred.
- It is possible that an unexploded British AA shell struck the Site during WWII. Any such UXO could have penetrated the open ground on Site to shallow depths and may remain in situ.

RECOMMENDATIONS

SI Works	A Stage 2 Detailed Risk Assessment is not considered necessary prior to SI works commencing. <i>Note, this applies to the SI works that Brimstone were made aware of at the time of writing (hand dug trial pits). If additional works are planned, a reassessment would be required to determine if they are at risk.</i> However, the possibility of UXO remaining on Site cannot be completely ruled out at desktop stage. Therefore, a UXO Safety Briefing to all personnel conducting ground works would be considered prudent.
Development Works	A Stage 2 Detailed Risk Assessment is recommended in order to further assess the risk to proposed works. In lieu of a Detailed UXO Assessment, Brimstone recommends on-Site support for any planned ground works.

Appendix G

Risk Methodologies and Evaluation

Risk Evaluation

The qualitative assessment methodology presented in CIRIA publication C552 (2001) titled '*Contaminated Land Risk Assessment: A Guide to Good Practice*' has been used by TEC for the basis of evaluating potential risk.

The method requires an assessment of the:

- magnitude of the probability or likelihood of the risk occurring (Table 1); and
- magnitude of the potential consequence or severity of the risk occurring (Table 2)

Table 1. 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 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 an 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.

Table 2. 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 ("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 exceeding 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 two factors is determined using Table 3 and the resulting level of risk is described in Table 4. The evaluation can be applied to each of the scenarios identified in the risk model and the overall risk assessed.

Table 3. Combination of Consequence with 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 4. Description of risks and likely action required

Very High Risk	There is a high probability that severe harm could arise to a designated receptor from an identified hazard, or there is evidence that severe harm to a designated receptor is currently happening. This risk, if realised, is likely to result in a substantial liability. Urgent investigation (if not undertaken already) and remediation are likely to be required.
High Risk	Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation (if not undertaken already) is required and remedial works may be necessary in the short-term and are likely over the longer-term.
Moderate Risk	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild. Investigation (if not already undertaken) is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the long-term.
Low Risk	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.
Very Low Risk	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.

Using the risk model the pollutant linkages are identified and a preliminary estimate of risk undertaken. If there is no pollutant linkage identified, then there is no risk. If the estimate of risk for all the linkages and exposure scenarios is very low at this stage then it is likely that no further assessment will be required.