

CAR PARK, GODSTONE ROAD, ST MARGARETS, TW1 1JS Phase 1 Contaminated Land Assessment

Client: Godstone Development Limited

Engineer: Create Consulting Engineers Limited

109-112 Temple Chambers

3-7 Temple Avenue

London EC4Y OHP

Tel: 020 7822 2300

Email: enquiries@createconsultingengineers.co.uk

Web: <u>www.createconsultingengineers.co.uk</u>

Report By: Colin Buchanan BSc (Hons), FGS

Approved By: Thomas Bennett MSc (Hons), FGS

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Phase 1 Contaminated Land Assessment – Revision CAR PARK, GODSTONE ROAD, ST MARGARETS

CAR PARK, GODSTONE ROAD, ST MARGARETS, TW1 1JS Phase 1 Contaminated Land Assessment Revision B

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Revision and Date	Amendment Details	Revision Prepared By	Revision Approved By
Rev A 01/09/20	Updated to include revised proposed development plan	СВ	ТВ
Rev B 11/03/22	Updated to include revised proposed development plan	СВ	СВ

1.0 INTRODUCTION

Brief

1.1 Create Consulting Engineers Ltd was instructed by Godstone Developments Limited to undertake a Phase 1 Contaminated Land Assessment of the car park adjacent to St Margarets Business Centre, Godstone Road, St Margarets, TW1 1JS (the 'Site').

Project Context

- 1.2 The Client intends to submit a planning application for the development of the Site to provide 3No. residential dwellings (Class C3) with private gardens, parking and associated landscaping.
- 1.3 The proposed development layout is illustrated in Figure 1.1 below.



Figure 1.1: Proposed Development Plan (Silverline Architects Drawing P-001)

Objective

1.4 To undertake a Phase 1 Contaminated Land Assessment comprising a desk study review of existing information relating to the site and surrounding area and conduct a site walkover survey, in accordance with best practice and guidance such as that set out in Environment Agency's Model Procedures for the Management of Land Contamination, CLR 11 2004.

Scope of Work

- 1.5 The scope of works for this study comprises a review of the following information sources:
 - British Geological Survey online mapping data;
 - Environment Agency online mapping data;
 - Available historical Ordnance Survey mapping (Appendix B);
 - Groundsure Insight report (Appendix C);
 - Web searches related to the site and surrounding area; and
 - Google Earth imagery.
- 1.6 A Conceptual Site Model (CSM) will then be developed based on the findings of the assessment and potential risks in the context of the proposed development undertaken using the source-pathway-receptor approach.
- 1.7 A Site Walkover Survey was undertaken to assess the site condition and surrounding land uses and a photographic record is provided in Appendix A.

2.0 SOURCES OF INFORMATION

2.1 The information contained in this report is based on a review of already available information pertinent to the Site.

Records Review

2.2 Key reports, drawings and accessed websites pertinent to this assessment are detailed in Table 2.1, below:

Document/Website	Author/Publisher	Date Accessed
Flood Maps, Groundwater Mapping, Landfill Sites, Pollution Incidents, Reservoir Flood Map – www.environment-agency.gov.uk	Environment Agency (EA)	July 2020
BGS Geology of Britain Viewer - https://mapapps.bgs.ac.uk/geologyofbritain	British Geological Survey	July 2020
BGS Geoindex – Geology and borehole records - www.bgs.ac.uk/geoindex	British Geological Survey	July 2020
Proposed Development Drawings P-001 to P- 004	Silverline Architects	August 2020
Insight Report (Ref: GS-6850666)	Groundsure Ltd	7 July 2020
Historical Ordnance Survey Maps (Ref: GS-6850665)	Groundsure Ltd	7 July 2020
UXO Risk Mapping) - www.zerticauxo.com	Zetica UXO	July 2020
Public Health England Radon Map of UK	UKRadon.org, 2020	July 2020
Google Maps & Google Earth	Google	July 2020

Table 2.1: Key Information Sources

Site Visit

2.3 A Site Walkover Survey was undertaken on 8 July 2020.

3.0 SITE LOCATION AND DESCRIPTION

Site Location

- 3.1 The Site comprises an irregular parcel of land located on the corner of Godstone Road (to the north) and Winchester Road (to the east) in St Margarets, and adjacent to the main railway line (to the southeast). The Site is located at approximate National Grid Reference 516644E, 174121N and the nearest postcode is TW1 1JS.
- 3.2 The Site location is shown in Figure 3.1, below



Figure 3.1: Site Location Plan

Site Description

- 3.3 The Site comprised an irregular parcel of land occupying an area of approximately 0.06 hectares (Source: Groundsure Insight Report) and situated in a predominantly residential area although with a business centre to the southwest.
- 3.4 A walkover survey of the Site and its surroundings was undertaken on 8 July 2020 and a description of the survey findings is provided below and a photographic record is included in Appendix A.

- 3.5 The Site comprised an area of hardstanding, formerly providing an overflow car park for the adjacent business centre although is now surplus to requirements and accessed via Winchester Road to the south. The parking area incorporated a central surface water drainage run (see Plate P1, Appendix A) and vegetation (shrubs and mature trees) to the north, east, west, and an extended area to the southwest (see Plates P2-4, Appendix A).
- 3.6 The Site boundaries were delineated by Godstone Road to the north, a high wall with residential dwellings to the west, an electricity substation within St Margarets Business Centre to the south west, Winchester Road to the south and east, and with the mainline railway line beyond Winchester Road to the south.
- 3.7 There was no sign of any mobile contaminants across the Site.
- 3.8 Photographs of the Site and surrounding area are included in Appendix A.

Surrounding Area

- 3.9 The Site was located within a predominantly residential area with houses to the west, north and east (Plates P6 and 7, Appendix A). To the southwest was St Margarets Business Centre (Plate P5, Appendix A) comprising seven units and occupied by a range of commercial enterprises. In the eastern corner of the business centre site was an electricity substation, immediately adjacent to the Site. This comprised an open unit (with one unit removed) on a concrete block with gravel surround (Plate P8, Appendix A). To the south, beyond Winchester Road, lies the mainline railway into London with further residential dwellings beyond.
- 3.10 An overview of the surrounding area is provided in Figure 3.2, below:



Figure 3.2: Surrounding Land Use Plan (Google Earth, 2019)

4.0 ENVIRONMENTAL SETTING

Geology

- 4.1 Reference has been made to the BGS 1:50,000 Solid and Drift map of the area, which indicates that the Site is directly underlain by superficial Kempton Park Gravels, over The London Clay Formation bedrock.
- 4.2 There are several BGS borehole records in close proximity to the Site, although the logs do not provide any clear indication of ground conditions.
- 4.3 The Groundsure Insight report (Appendix C) provides data on coal and non-coal mining areas and potential ground stability hazards for the UK that may affect the site. The mining and potential ground stability hazards identified in the Groundsure report are summarised in Table 4.1, below:

Details	On-site	Risk
Coal Mining Affected Area	No	No Hazard
Non-Coal Mining Affected Area	No	No Hazard
Brine affected Areas	No	No Hazard
Potential for Collapsible Ground Stability Hazards	Yes	Very Low
Potential for Compressible Ground Stability Hazards	No	Negligible
Potential for Ground Solution Stability Hazards	No	Negligible
Potential for Landslide Ground Stability Hazards	Yes	Very Low
Potential for Running Sand Ground Stability Hazards	Yes	Very Low
Potential for Shrinking or Swelling Clay Ground Stability Hazards	No	Negligible

Table 4.1: Mining and Potential Ground Stability Hazards

Hydrogeology

- 4.4 The Kempton Park Gravel deposits are classified as a Principal Aquifer providing a high level of water storage and may support water supply/river base flow on a strategic scale.
- 4.5 The underlying London Clay Formation is classified as Unproductive, with negligible significance for water supply or river base flow.
- 4.6 According to the Environment Agency, the Site is not located within a designated groundwater source protection zone with no active groundwater abstractions within 1km of the Site.

Hydrology

4.7 There are no water features on the Site. According to the environmental database report, the closest water feature is an inland river (River Crane) located approximately 267m to the west of the Site.

4.8 There are no current surface water abstraction licences within 1km of the Site.

Radon

4.9 The Site is in a lower probability radon area as less than 1% of properties are above the action level, as shown in Figure 4.1, below:

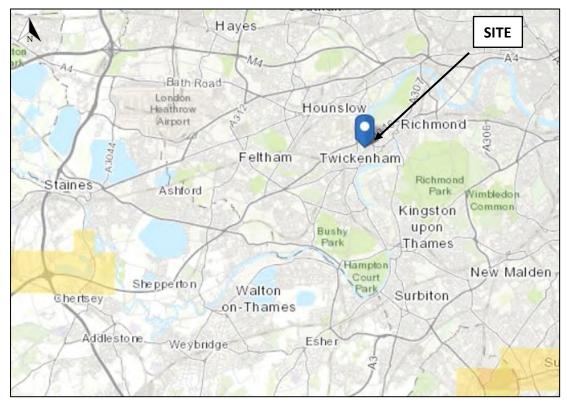


Figure 4.1: Public Health England Radon Map of UK (UKRadon.org, 2020)

4.10 Based on the location of the Site, no radon protective measures are necessary in the construction of new dwellings or extensions.

Ecology

- 4.11 According to data from the Groundsure report, there are no Sites of Special Scientific Interest (SSSI), Nature Reserves, Special Areas of Conservation (SAC), Special Protection Areas (SPA), Areas if Natural Outstanding Beauty (AONB) or any other environmental designations within 250m of the Site.
- 4.12 There are a number of Conservation Areas identified within 250m of the Site including Amyand Park Road (29m to SE), Crown Road (120m to NE) and Twickenham Park (234m to E).
- 4.13 The Site does not fall within a Nitrite Vulnerable Zone.

Sensitivity

- 4.14 The sensitivity of each of the identified receptors is rated depending upon the environmental setting of the Site, the likelihood for pollutant linkages to be present and potential consequence of those potential pollutant linkages. The assessment approach adopted is based on guidance set out in the *Guidance for the Safe Development of Housing on Land Affected by Contamination R&D 66* document.
- 4.15 The Site sensitivity with regards to groundwater within the Kempton Park Gravels directly underlying the site is designated as **M1** (**Moderate**), described as underlain by *a major or minor aquifer, moderately vulnerable, with probable use (direct or via baseflow to river).*
- 4.16 The Site sensitivity to surface water is designated as **H2 (High)**, described as *'Within catchment and reasonable proximity (less than 500m) of high quality watercourse*.
- 4.17 With regard to river quality classification, The General Quality Assessment (GQA) was the Environment Agency's national indicator for water quality in rivers and canals, from 1990 until 2009. These assessments were made for Biological, Chemical and Nutrients and undertaken at sample points for discrete river stretches. In 2007 the England GQA river network was reduced to the GQA Headline Indicator river network, with the GQA replaced by the Water Framework Directive in 2009.

5.0 SITE HISTORY

Ordnance Survey Mapping

- 5.1 The Site history has been assessed by reviewing available historical ordnance survey mapping and Google Earth images. The historical plans which have been reviewed comprised only readily available records and may be limited; however, the information available to date indicates that additional searches are unlikely to add to our understanding of the Site.
- 5.2 The historical development of the Site is summarised in Table 5.1 below and historical ordnance survey mapping is included in Appendix B.

Dates	Site Use	Surrounding Land Use			
	The Site formed part of open	Undeveloped land and orchards formed the			
	undeveloped land.	boundaries to north, west and south, with a			
1865		dwelling c.90m to northwest. Turk's Lane (now			
(1:2,500)		Winchester Road) formed the eastern site			
(1.2,300)		boundary and the mainline railway (Windsor			
		Line) surveyed 15m to south with buildings			
		beyond.			
	No changes evident.	Residential development has occurred to the			
1896		south beyond railway and 170m to the north. St			
(1:2,500)		Margaret's Station is surveyed 200m to			
		northeast.			
	Site is occupied by Poultry	Poultry Appliance Works formed a building along			
1912	Appliance Works (along with adjacent area to SW, currently	northern boundary (including southern area of subject Site), with further minor buildings and			
(1:10,560)	occupied by St Margarets	number of large sheds. The current adjacent			
and	Business Centre), with a building	houses and roads (Godstone Road and			
1915	occupying the majority of the	Winchester Road) were surveyed at this time.			
(1:2,500)	southern site area and an open	windinester Roday were surveyed at this time.			
	area in the north.				
1933	No changes evident.	No significant changes evident.			
(1:10,560)					
	The buildings on the Site (and	The smaller buildings / sheds in site to SW (now			
1935	adjacent to SW) is now surveyed	St Margarets Works) replaced by other small			
(1:2,500)	as occupied by St Margarets	buildings. No other significant changes evident.			
	Works (Metal Engraving).				
1948	No changes evident.	No significant changes evident.			
(1:10,560)					
	Part of Works building occupying	The Works site to the SW has extended further			
4000	the Site has been extended to	to the southwest and with further small			
1960	north and this area clearly forms	buildings and tanks shown in the main area. No			
(1:1,250)	part of this work site. A number	other significant changes evident.			
	of possible tanks are shown in the centre of the Site.				
	centre of the site.				

Dates	Site Use	Surrounding Land Use				
1973	Minor changes to northern area	The Works to southwest extended to southwest				
(1:1,250)	shown.	again. No other significant changes evident.				
	The Site is surveyed as car park	The site to southwest is surveyed as St Margarets				
1991	with landscaped surrounds and	Business Centre with substation in corner				
(1:1,250)	access via Winchester Road	adjacent to subject site. No other significant				
	(current layout)	changes evident.				
1999 Google	No changes evident.	No significant changes evident.				
Earth Image						
2003	No changes evident.	No significant changes evident.				
(1:1,250)						
2019 Google	No changes evident.	No significant changes evident.				
Earth Image						
2020	No changes evident.	No significant changes evident.				
(1;10,000)						

Table 5.1: Historical Site Uses

Unexploded Ordnance (UXO)

- 5.3 Given the location of the Site and its proximity to London, it is possible that this area will have been affected by bomb damage during World War II.
- 5.4 A basic historical bomb record search was undertaken in the vicinity of the Site and the results are included in Figure 5.1 below.

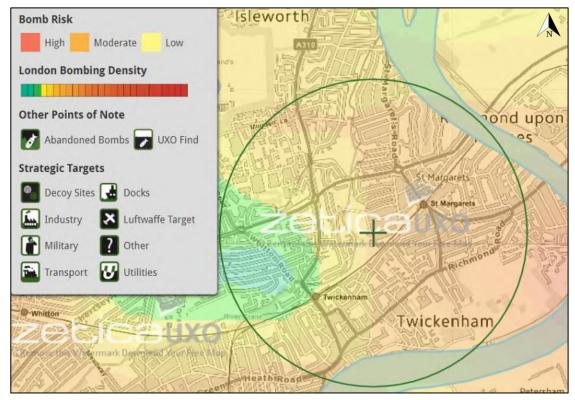


Figure 5.1: Unexploded Ordnance (UXO) Risk Map

5.5 This assessment should only be used as an indication of the possible presence of UXO in the area and should not be used as a definitive guide as to the presence or absence of UXO. The assessment indicates that there is a low to low / moderate probability of UXO being present with no target sites identified within close proximity of the Site.

6.0 REVIEW OF AVAILABLE ENVIRONMENTAL INFORMATION

6.1 Information on potentially significant environmental issues and controls at the Site and surrounding area may be held on public records by regulatory authorities. This information is sourced directly from the regulatory authorities and from the Groundsure database.

6.2 A copy of the Groundsure Insight report is provided in Appendix C and a summary is provided in Table 6.1, below:

Public Record	On site or off site	Features				
Landfill & Waste Sites (Environment	On site	There are no recorded licensed or known historical or current landfill sites or registered waste sites located on the Site.				
Agency, Local Authority & British Geological Survey)	Off site	There is 1No. known historical landfill site within 500m of the Site; 430m to NW, no records held. There is 1No. registered waste sites within 500m of the Site, comprising a Special Waste Transfer Station 397m to NE.				
	On site	The Site is currently occupied by a car park formerly used as on overflow car park for the adjacent business centre. The Site is shown to have formerly been occupied by Poultry Appliance Works (1912 to 1933) and more recently by St Margarets (Engraving) Works with tanks identified (1959-73).				
Industrial Site Uses (Historical Ordnance Survey Mapping)	Off site	 There are several current industrial sites within 250m of Site: Electricity Substations 2m to W, 174m to W, 191m to E and 236m to SE; St Margarets Business Centre occupants (industrial products assembly and retail) 44m to SW; and Industrial Estate 209m to N. There are several potentially contaminative historical industrial sites within 250m of Site, including: Electricity Substations 1m W, 37m SW, 172m W and 188m to E; Railway Sidings / Line 6m to SE; Smithy 95m to SE (1894) and 159m to E; and Nurseries 176m to SE, 201m to S and 214m to SE. 				
Environmental	On site	There are no records of any permits, incidents or registers relating to the Site.				
Permits, Incidents and Registers (Environment Agency)	Off site	 The following permits, incidents or registers within 250m of Site: Revoked Waste Oil Burner Part B permit 236m to N; Current Dry Cleaning permit 248m to N; Licensed discharge for sewage discharge 237m to SW; and Cat 3 (minor) sewage pollution incident 167m to SE, 2003. 				

Table 6.1: Publicly Available Information

7.0 QUALITATIVE RISK ASSESSMENT

- 7.1 In accordance with guidance outlined by the Environment Agency's Model Procedures for the Management of Land Contamination, CLR11 (2004), a qualitative risk assessment has formulated for the site. A Preliminary Conceptual Model has been developed using potential source-pathway-receptor linkages using a combination of the likelihood of a pollution event to occur, taking account of the presence of a hazard (or source) and integrity of a pathway, versus the consequence of a pollution occurrence, which is essentially a measure of the severity of a hazard to an identified receptor (such as future sensitive end-users).
- 7.2 The presence of contamination (as a potential hazard) does not necessarily mean that there is a risk. It is the exposure pathway and the quantity of contamination that reaches the receptor which may determine the effect on a receptor.
- 7.3 The risk classification for both likelihood and consequence is based on methodology presented in Contaminated Land Risk Assessment, A Guide to Good Practice (CIRIA C552, 2001) and has been developed from procedures outlined in the EA's CLR11 Model Procedures. The DETR, with the EA and Institute of Environment & Health, has also published guidance on risk assessment (Guidelines for Environmental Risk Assessment and Management). The guidance states that the designation of risk is based upon a consideration of both:
 - The magnitude of the potential consequence (severity) of risk occurring which takes into account both potential severity of the hazard and sensitivity of the receptor; and
 - The likelihood of an event occurring (probability) which takes into account both the presence of the hazard and receptor and the integrity of the pathway.
- 7.4 The magnitude of consequence (severity) and likelihood (probability) is defined in the CIRIA guidance, together with examples. The two classifications are then compared to obtain an estimation of risk for each pollution linkage, ranging from "very high risk" to "very low risk" (Appendix D). A description of the risks and likely actions are as follows:

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.

If this risk is realised, it is likely to result in significant environmental and financial liability to current and/or future site owners/occupiers. Urgent investigation (if not already undertaken) and remediation is likely to be required.

High Risk:

Harm is likely to arise to a designated receptor from an identified hazard.

If risk is realised, it is likely to present a sizeable environmental and financial liability to current and/or future site owners/occupiers. Urgent investigation is required and remediation work may be necessary in the short term and 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 the harm would be relatively mild.

Investigation is normally required to clarify the risk and determine the potential environmental liability. Some remedial works may be required over the longer 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.

Limited investigation may be recommended to clarify the risk, dependant on the sensitivity of the receptor and view point of those of interest. Any remedial works are likely to be fairly limited.

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 likely to be mild or minor.

- 7.5 The benefit of estimating the risk in this way is that it can be revised after each investigation phase as the conceptual model and corresponding pollution linkages are refined.
- 7.6 The risk assessment is based on the proposed residential development with private gardens, parking and soft landscaped areas.
- 7.7 The results of this risk assessment are presented in Table 7.1, overleaf. Should the development proposal change, the risk assessment should be revised accordingly.

Car Park, Godstone Road, St Margarets

Phase 1 Contaminated Land Assessment

Source	Pollutant	Pathway	Receptor	Likelihood of Occurrence	Consequence (severity)	Potential Risk	Possible Mitigation Measures	Residual Risk
	Asbestos-containing soils (ACSs), metals, hydrocarbons and volatile organic compounds	Direct exposure, inhalation or ingestion of contaminated soils, dust or vapours during construction or operation	Future Site Residents	Likely	Medium	Moderate	Potential exposure to contaminants associated with former industrial site uses in private gardens and vapours through buildings. Site investigation to confirm presence of contamination and associated risks, with remediation or mitigation measures implemented to mitigate risk, if warranted.	Low
Potential contamination associated with historical			Construction Workers	Likely	Mild	Moderate / Low	Risks can be readily mitigated through use of Personal (or Respiratory) protective Equipment.	Low
industrial site use (Poultry Appliance Works / Engraving Works) and subsequent removal of structures and redevelopment		Vertical migration via leaching or lateral migration down hydraulic gradient	Controlled waters (groundwater & surface water)	Likely	Mild	Moderate / Low	Vulnerable principal aquifer, not locally used. Site investigation to confirm contaminant levels and risk to aquifer, with remediation measures is necessary.	Low
		Permeation of water supply pipes by organic contaminants present in the underlying ground.	Water supply pipes (future residents)	Low Likelihood	Medium	Moderate / Low	Potential for underlying organic contamination arising from former industrial site use to impact on water supply pipes. Soil investigation required to quantify risk to end-users and mitigation measures employed if required.	Low
	Ground gases (methane and carbon dioxide)	Inhalation of harmful (asphyxiant) ground gases or accumulation of explosive gases	Future Site Residents	Unlikely	Medium	Low	No potential sources identified. No action necessary.	-
			Construction Workers	Unlikely	Mild	Very Low	No below ground works – no action required.	-
Potential contamination associated with industrial site use (Poultry Appliance Works / Engraving Works) and current business centre with substation adjacent to SW	Polychlorinated Biphenyls (PCBs), hydrocarbons and volatile organic compounds	Lateral migration of organic contamination from off-site sources and exposure to harmful volatile vapours	Future Site Residents	Low Likelihood	Medium	Moderate / Low	Potential for lateral migration through underlying permeable soils. Site investigation recommended to assess presence of contamination at / near boundary adjacent to southwest and potential exposure risk given proximity, with remediation measures employed if required.	Low
World War 2 Bombs	Unexploded Ordnance (UXO)	Direct contact and explosion of UXO during any below groundworks including site investigations, excavation and services/ foundation formation	Enabling / Construction Workers	Low Likelihood	Medium	Moderate / Low	Low to moderate risk identified. Preliminary UXO Risk Report required to further assess risk and UXO survey provided for below ground works, if necessary.	Low

Table 7.1: Qualitative Risk Assessment

Ref: CB/CC/P20-2043/01 Rev B

8.0 CONCLUSIONS & RECOMMENDATIONS

Conclusions

- 8.1 It is proposed to redevelop the existing car park site to provide 3No. residential dwellings with private gardens, parking and a soft landscaped area.
- 8.2 The environmental sensitivity of the site has been assessed as **moderate** with respect to groundwater and **high** with respect to surface water on the basis of the underlying principal aquifer (although no use) and distance to the local water course.
- 8.3 Based on the findings of this contaminated land risk assessment, the following potential pollutant linkages were identified (see Table 7.1 above):
 - Potential pollutants associated with historical site use and potential poor quality
 Made Ground associated with site development;
 - Potential impact from historical contamination on water supply pipes;
 - Potential pollutants associated with adjacent historical site use (Poultry Application Works/Engraving Shed) and current site use (Business Centre/Substation) to the southwest; and
 - Potential presence of Unexploded Ordnance (UXO) beneath the Site.
- The potential for contamination to be present within the proposed development area is considered to pose a **moderate** risk to future site residents through direct exposure in garden areas and vapour intrusion into proposed buildings. The potential for on-site migration of contamination from adjacent historical industrial sites and existing business centre/substation is considered to pose a **moderate/low** risk. The risk of permeation of any organic contaminants, again if present, through water service pipes has been assessed as **moderate/low**.
- 8.5 Any exposure risk to construction workers associated with contamination has been assessed as **moderate/low** although these can be readily mitigate through the use of Personal (or Respiratory) Protective Equipment.
- 8.6 The risk posed to groundwater and surface water from on-site contamination is considered to be **moderate/low**, on the basis of the underlying principal aquifer and nearby watercourse would be vulnerable to pollution.
- 8.7 The potential UXO risk posed is considered to pose a **moderate/low** risk at the Site.

Recommendations

- 8.8 In order to further assess the potential risk posed to future site residents, environmental receptors and water supply pipes from contamination on the Site, or from adjacent sites, it is recommended that a Phase 2 Site Investigation be undertaken at the Site, which can be secured through planning condition, with details submitted for agreement with the Local Planning Authority prior to commencement of works.
- 8.9 The investigation should comprise the drilling of shallow boreholes to enable the collection of made ground and natural soils samples and the installation of monitoring wells with gas taps to enable volatile vapour monitoring and groundwater sampling if necessary. The investigation should target specific risks related to direct exposure in private gardens/soft landscaped areas, volatile vapour risk beneath houses and soil quality in water supply runs.
- 8.10 If unacceptable exposure risk is considered to be present, remediation and/or vapour protection measures may be needed to mitigate any potential risk.
- 8.11 Prior to any site investigation works, or development, it is recommended that a preliminary (and detailed, if necessary) UXO Risk Assessment be completed to confirm the UXO risk on the Site.

9.0 CONSTRAINTS AND LIMITATIONS

- 9.1 The copyright of this report is vested in Create Consulting Engineers Ltd and the Client, Godstone Development Limited. The Client, or his appointed representatives, may copy the report for purposes in connection with the development described herein. It shall not be copied by any other party or used for any other purposes without the written consent of Create Consulting Engineers Ltd or the Client.
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- 9.3 Create Consulting Engineers Ltd has endeavoured to assess all information provided to them during this appraisal. Should additional information become available which may affect the opinions expressed in this report, Create Consulting reserves the right to review this information and, if warranted, to modify the opinions presented in the report accordingly.
- 9.4 The report summarises information from a number of external sources and is unable to offer any guarantees or warranties for the completeness or accuracy of information relied upon. Information from third parties has not been verified by Create Consulting Engineers Ltd unless otherwise stated in this report.
- 9.5 It should be noted that the risks which are identified in this report are perceived risks based on the available information at the time of writing and that the actual risks associated can only be assessed following a physical investigation of the site.
- 9.6 The conclusions resulting from this study are not necessarily indicative of future conditions or operating practices at or adjacent to the site.

10.0 REFERENCES

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APPENDICES

APPENDIX A

SITE PHOTOGRAPHS



Create Consulting Engineers Limited, 109-112 Temple Chambers, 3-7 Temple Avenue, London, EC4Y 0HP Tel: 0207 822 2300

Email: enquiries@createconsultingengineers.co.uk

Plate P1: Site with access from Winchester Road and central drainage run (looking northwest)

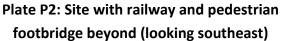




Plate P3: Vegetation in SW corner with substation and business centre beyond (looking west)



Plate P4: Site at junction with Godstone Road and Winchester Road, with mature trees and shrubs (looking southwest)







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Plate P5: St Margarets Business Centre and substation to southwest (looking west)

Plate P6: Houses fronting onto Godstone Road to west of Site (looking northwest)



Plate P7: Winchester Road to east of Site with houses beyond (looking northeast)



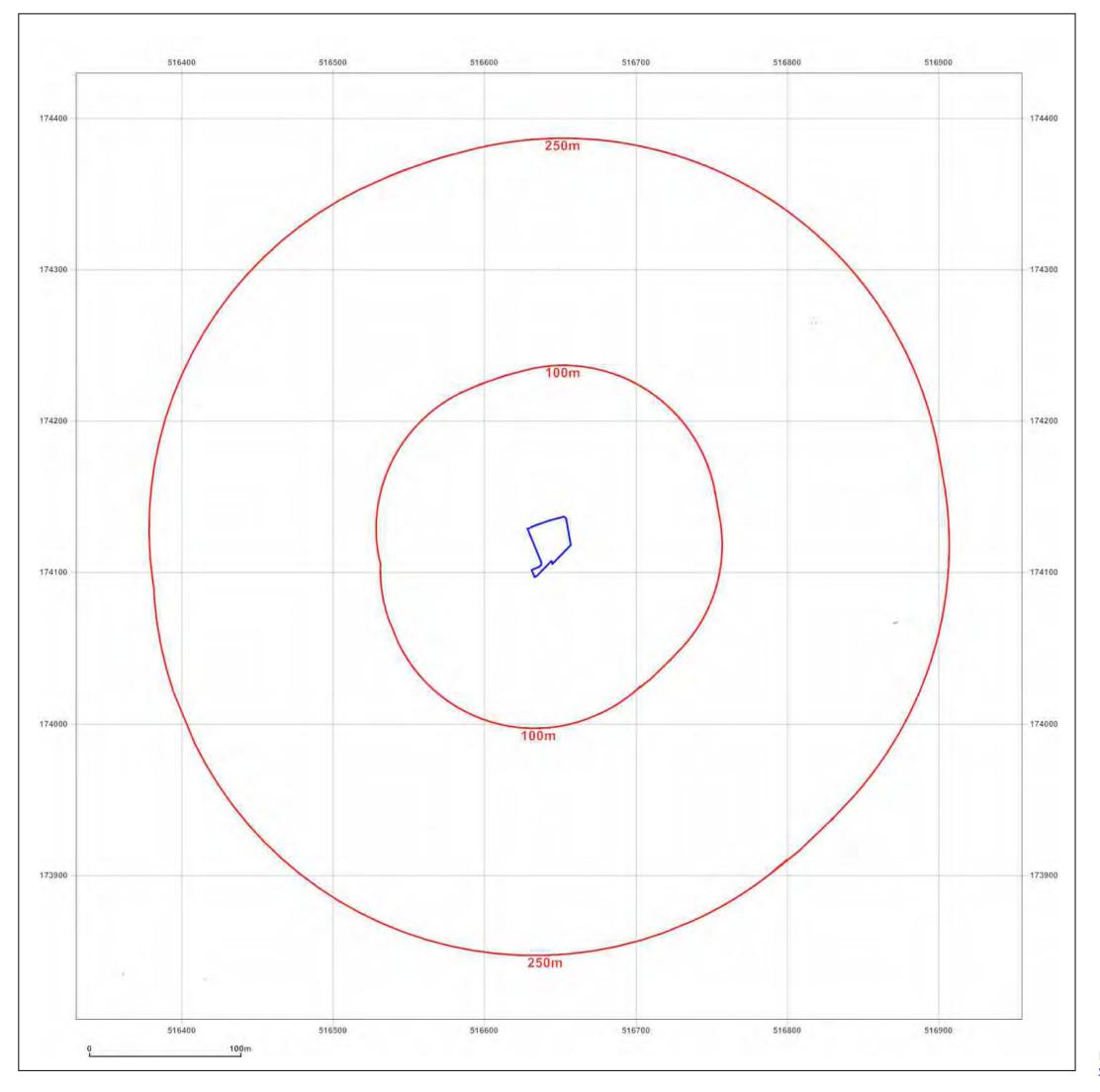
Plate P8: Electricity substation adjacent to southwest of Site with grave surface.





APPENDIX B

HISTORICAL ORDNANCE SURVEY MAPS





CAR PARK AT ST MARGARETS BUSINESS CENTRE, GODSTONE ROAD, ST MARGARETS, TW1 1JS

Client Ref: P20-2043 **Report Ref:** GS-6850665 516642, 174117 **Grid Ref:**

Map Name: County Series

Map date: 1865 Scale: 1:2,500 **Printed at:** 1:2,500 Surveyed 1865 Revised 1865 Edition N/A Copyright N/A Levelled N/A

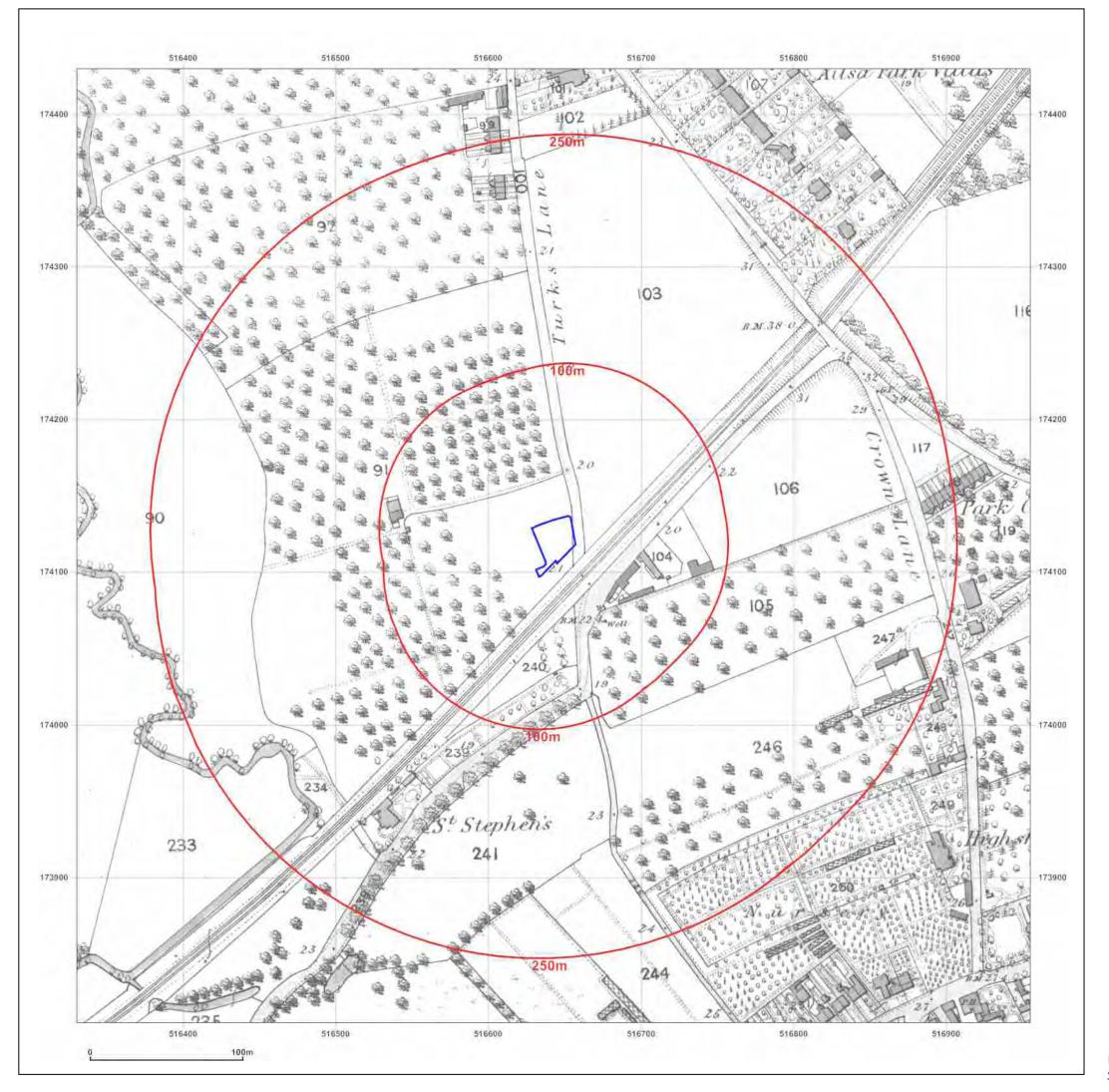


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CAR PARK AT ST MARGARETS BUSINESS CENTRE, GODSTONE ROAD, ST MARGARETS, TW1 1JS

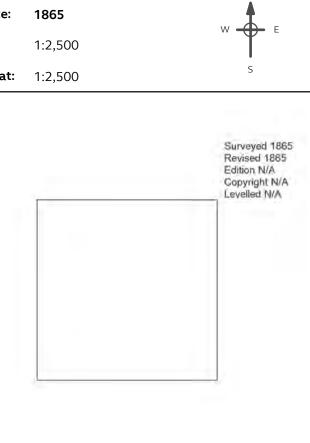
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Map Name: County Series

Map date:

Scale:

Printed at: 1:2,500



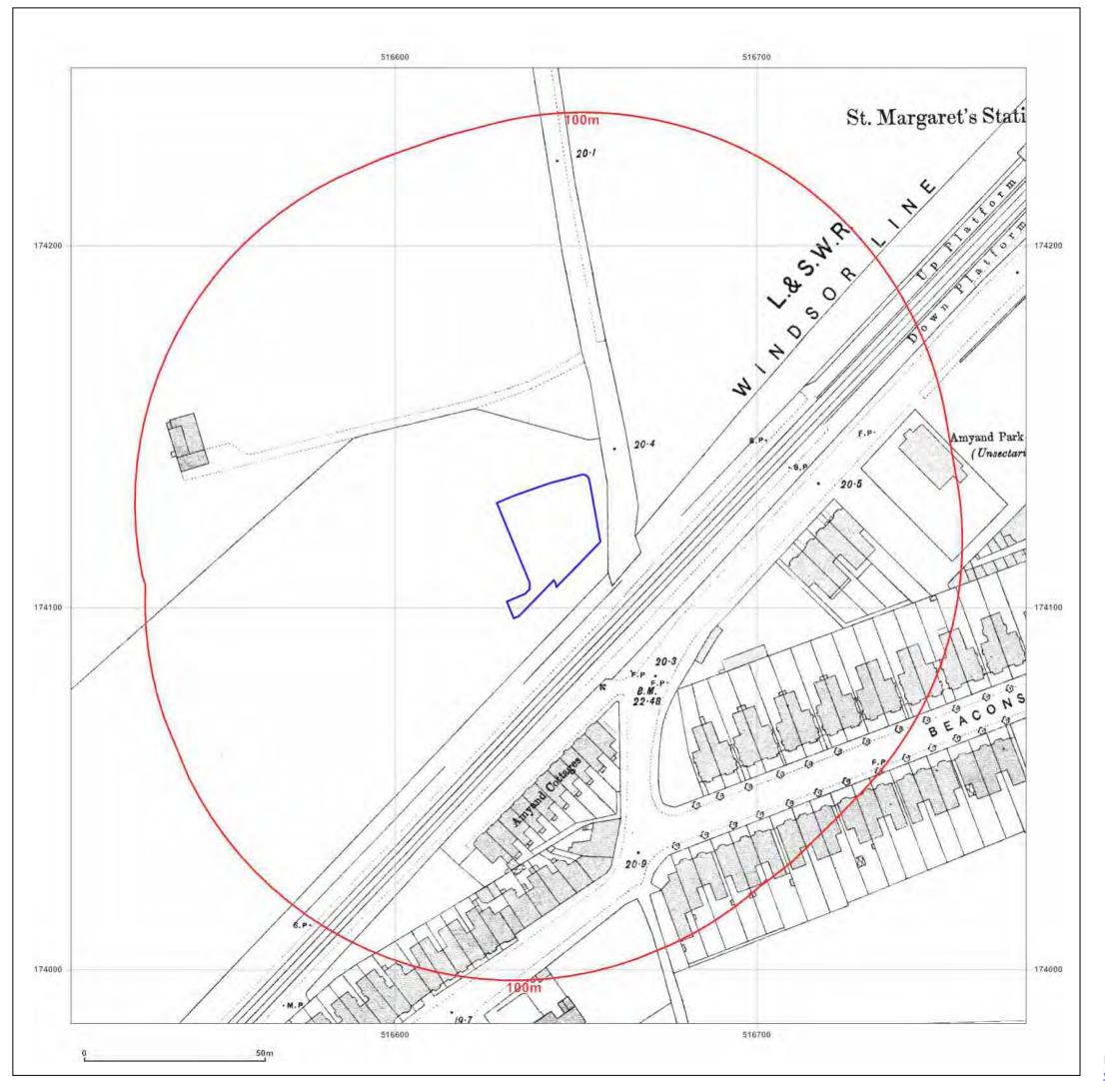


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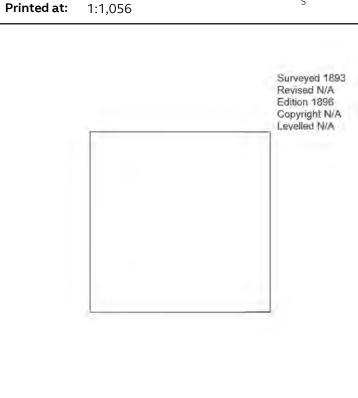
CAR PARK AT ST MARGARETS BUSINESS CENTRE, GODSTONE ROAD, ST MARGARETS, TW1 1JS

Client Ref: P20-2043 **Report Ref:** GS-6850665 516642, 174117 **Grid Ref:**

Map Name: 1056 Scale Town Plan

Map date: 1896

Scale: 1:1,056



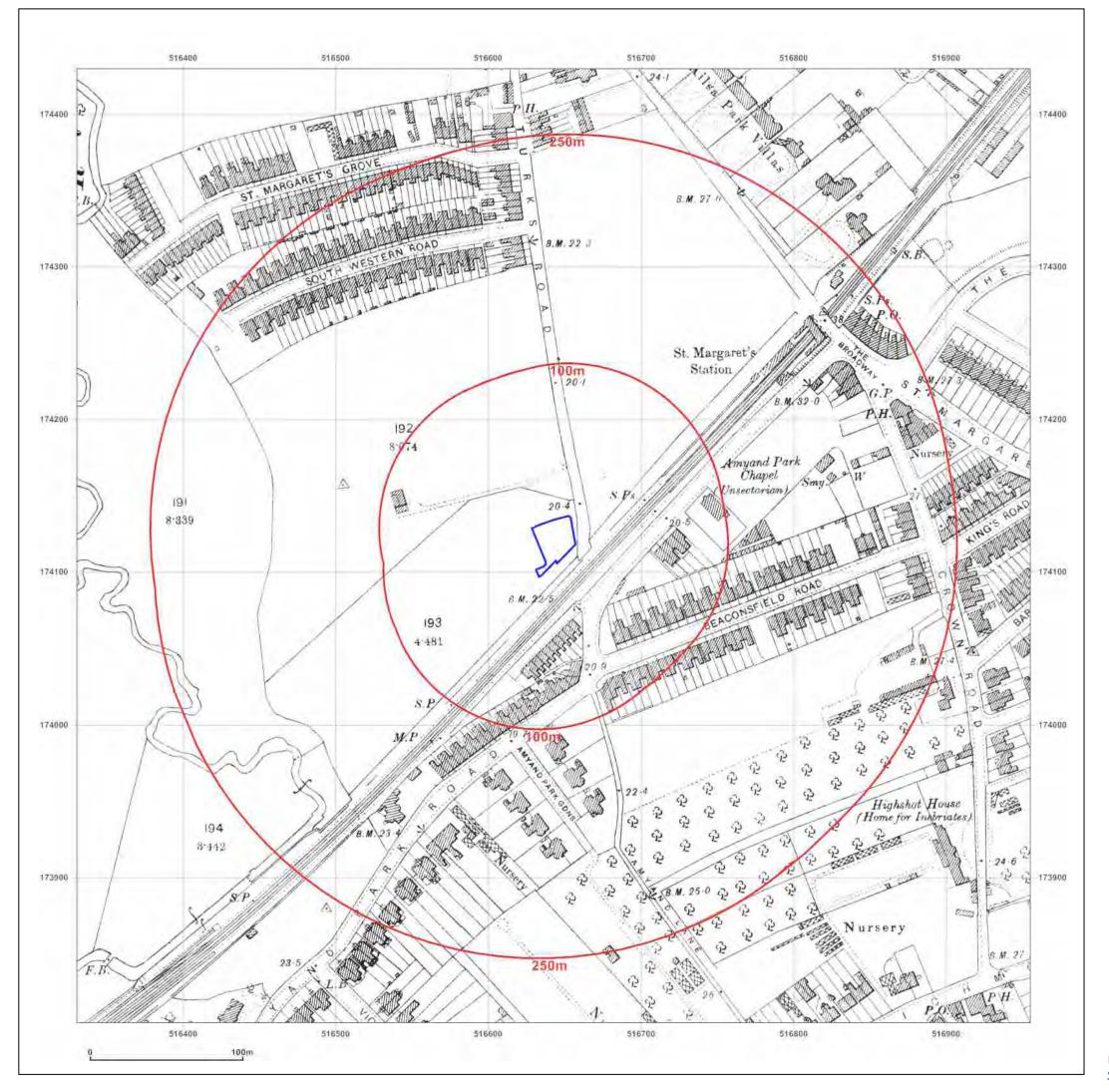


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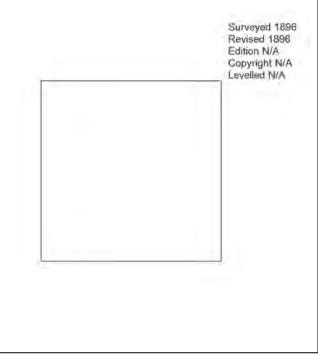
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Report Ref: GS-6850665
Grid Ref: 516642, 174117

Map Name: County Series

Map date: 1896

Scale: 1:2,500

Printed at: 1:2,500



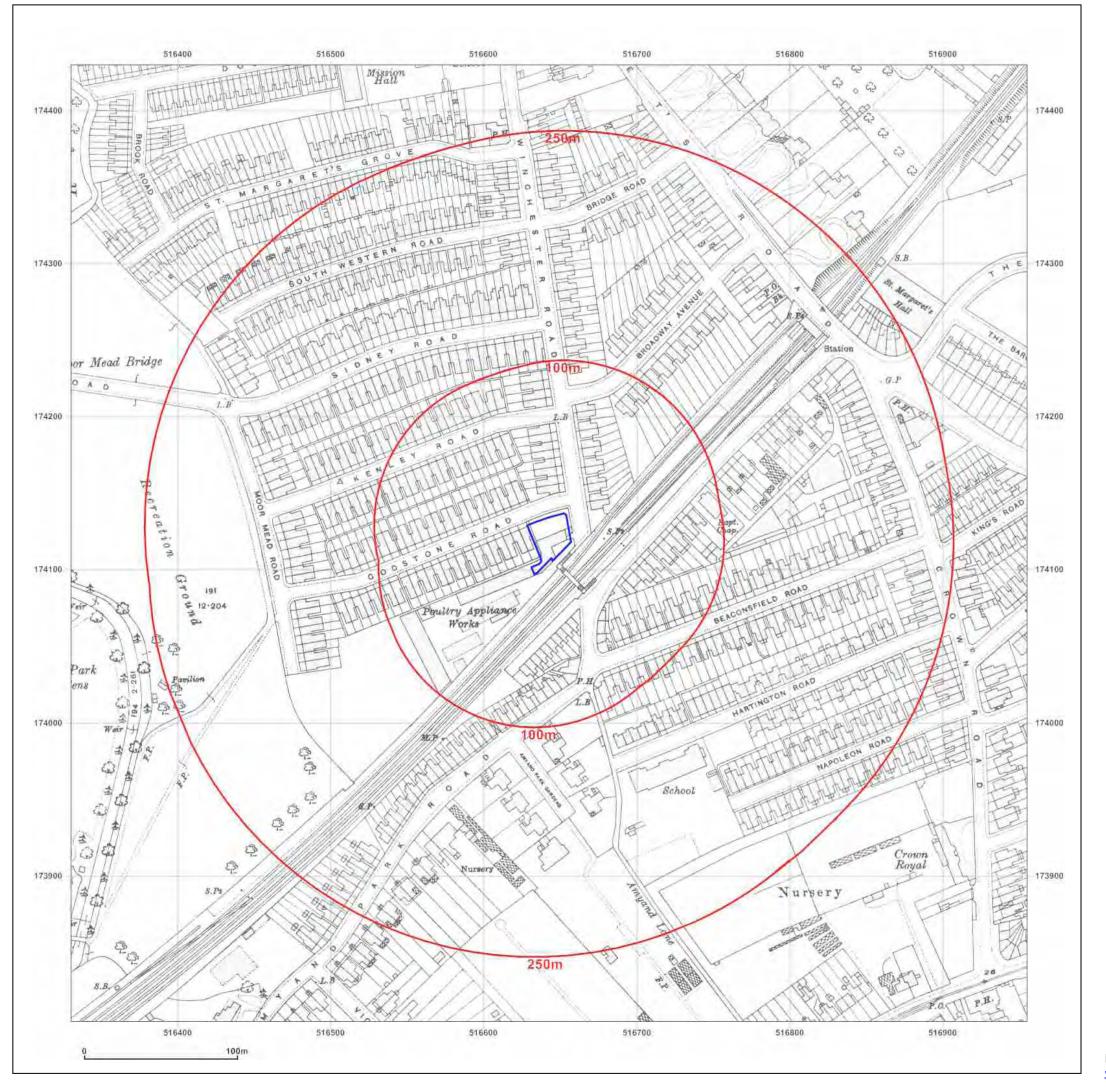


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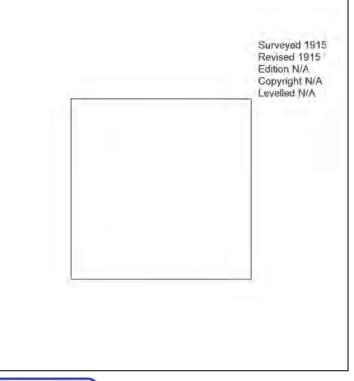
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Grid Ref: 516642, 174117

Map Name: County Series

Map date: 1915

Scale: 1:2,500

Printed at: 1:2,500



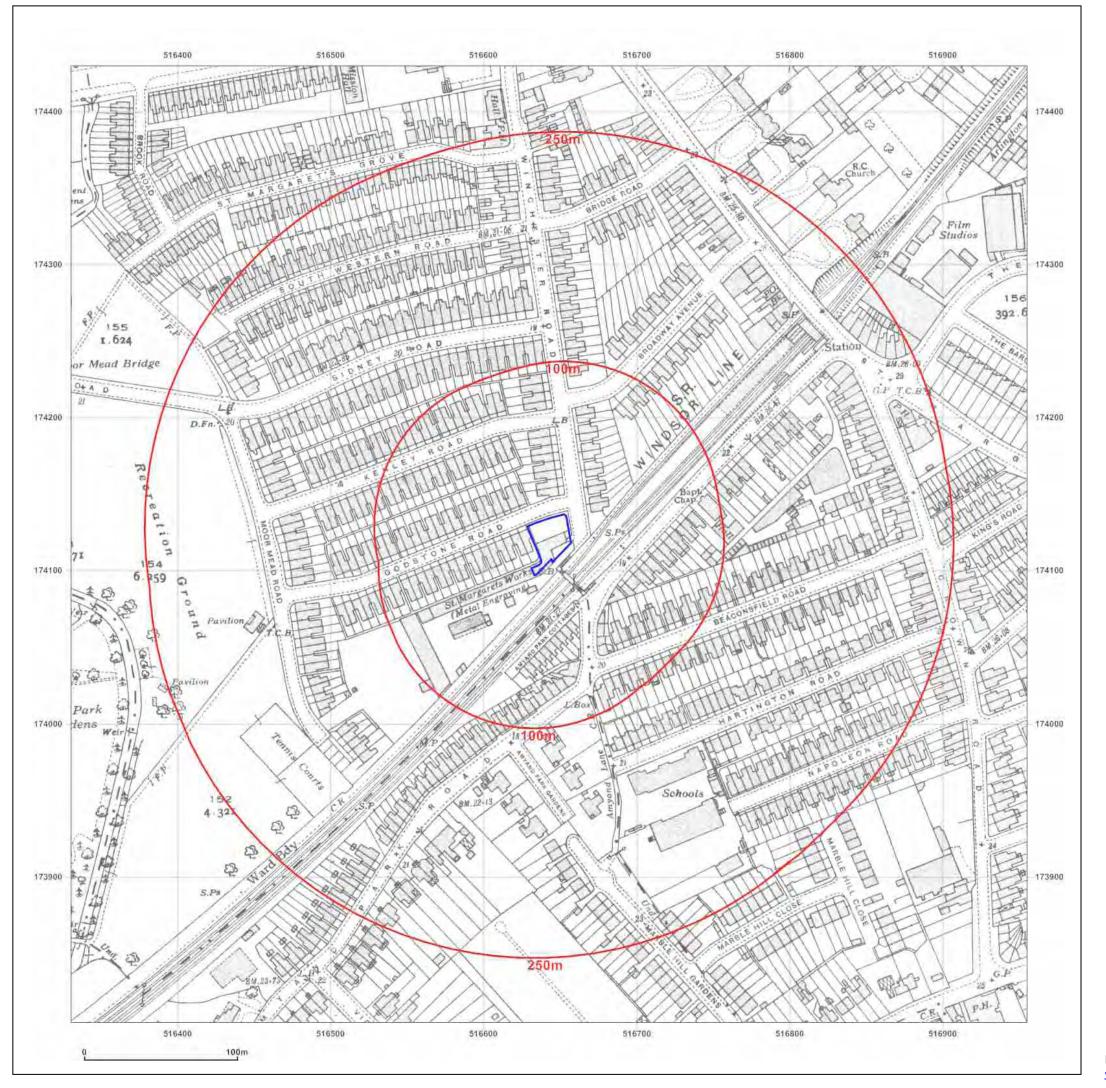


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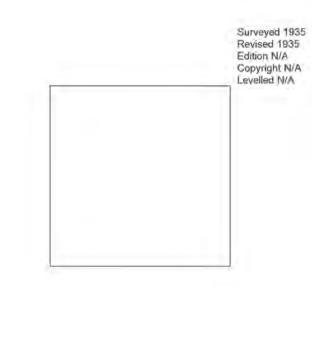
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Grid Ref: 516642, 174117

Map Name: County Series

Map date: 1935

Scale: 1:2,500

Printed at: 1:2,500



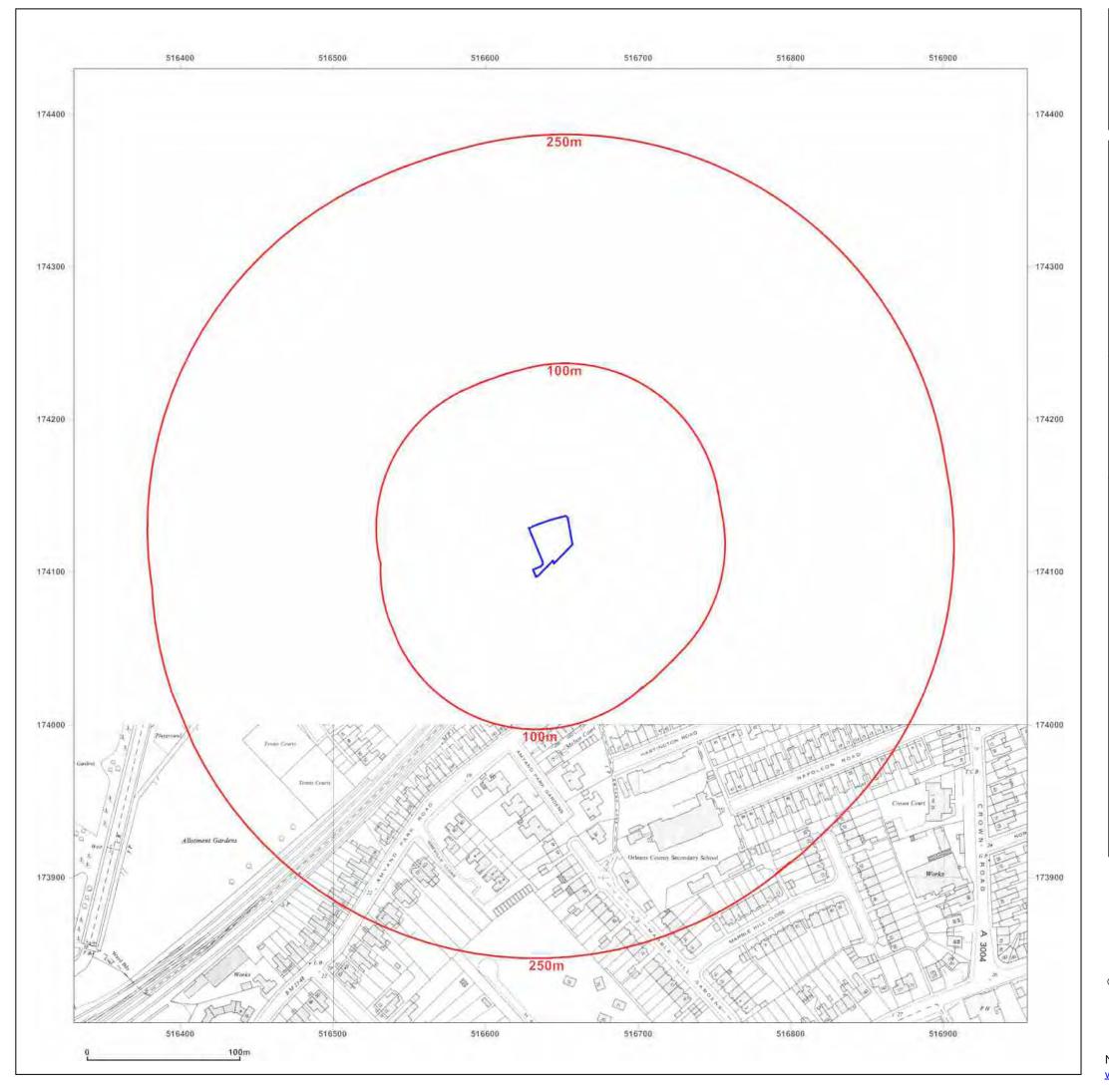


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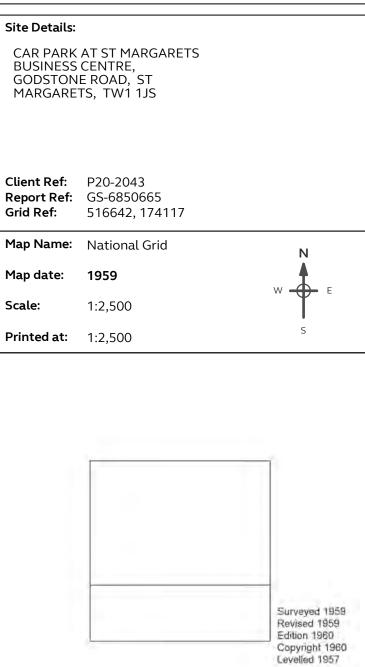
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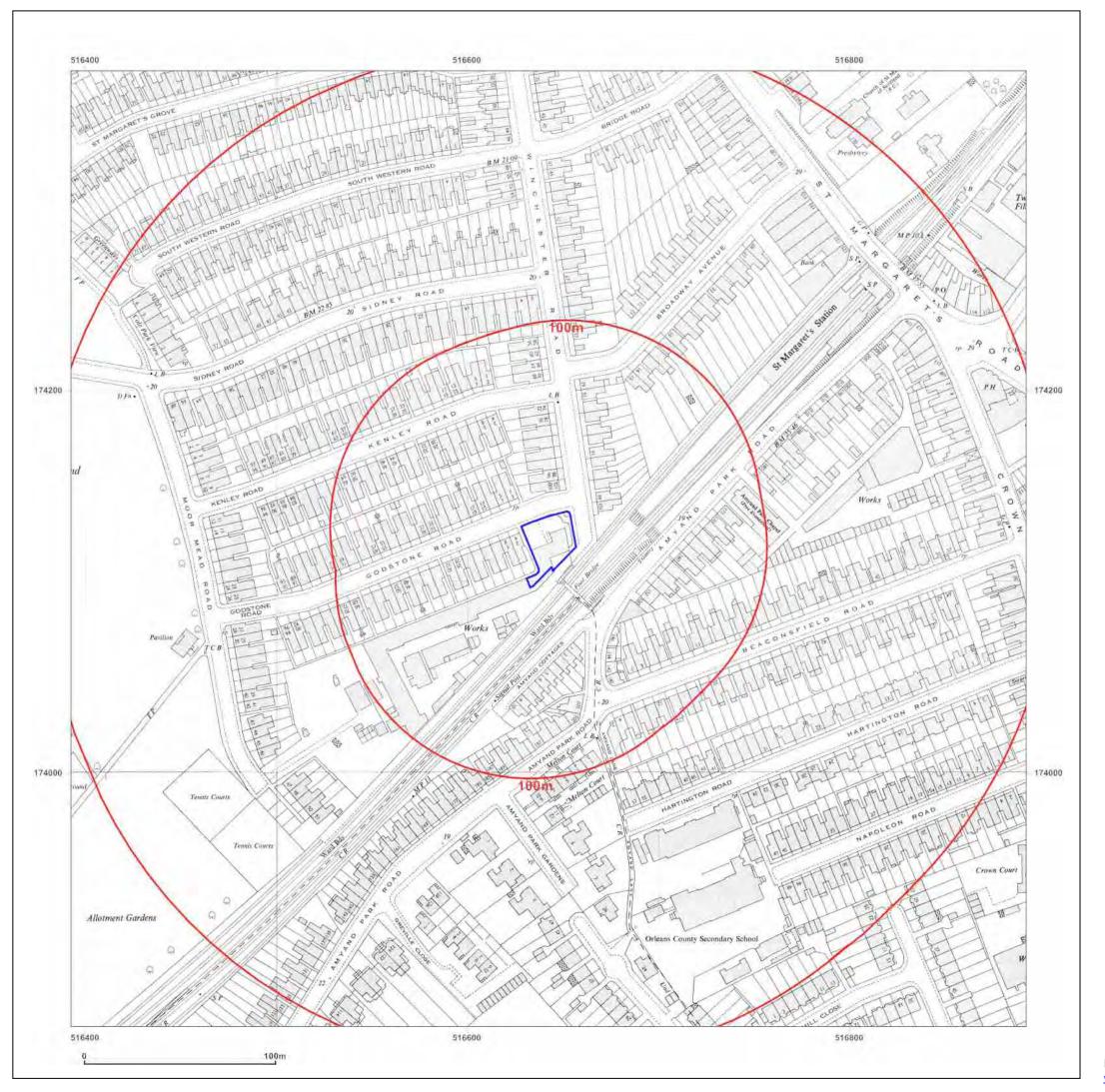


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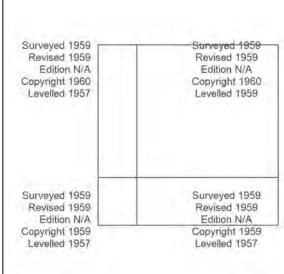
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Report Ref: GS-6850665
Grid Ref: 516642, 174117

Map Name: National Grid

Map date: 1959-1960

Scale: 1:1,250

Printed at: 1:2,000



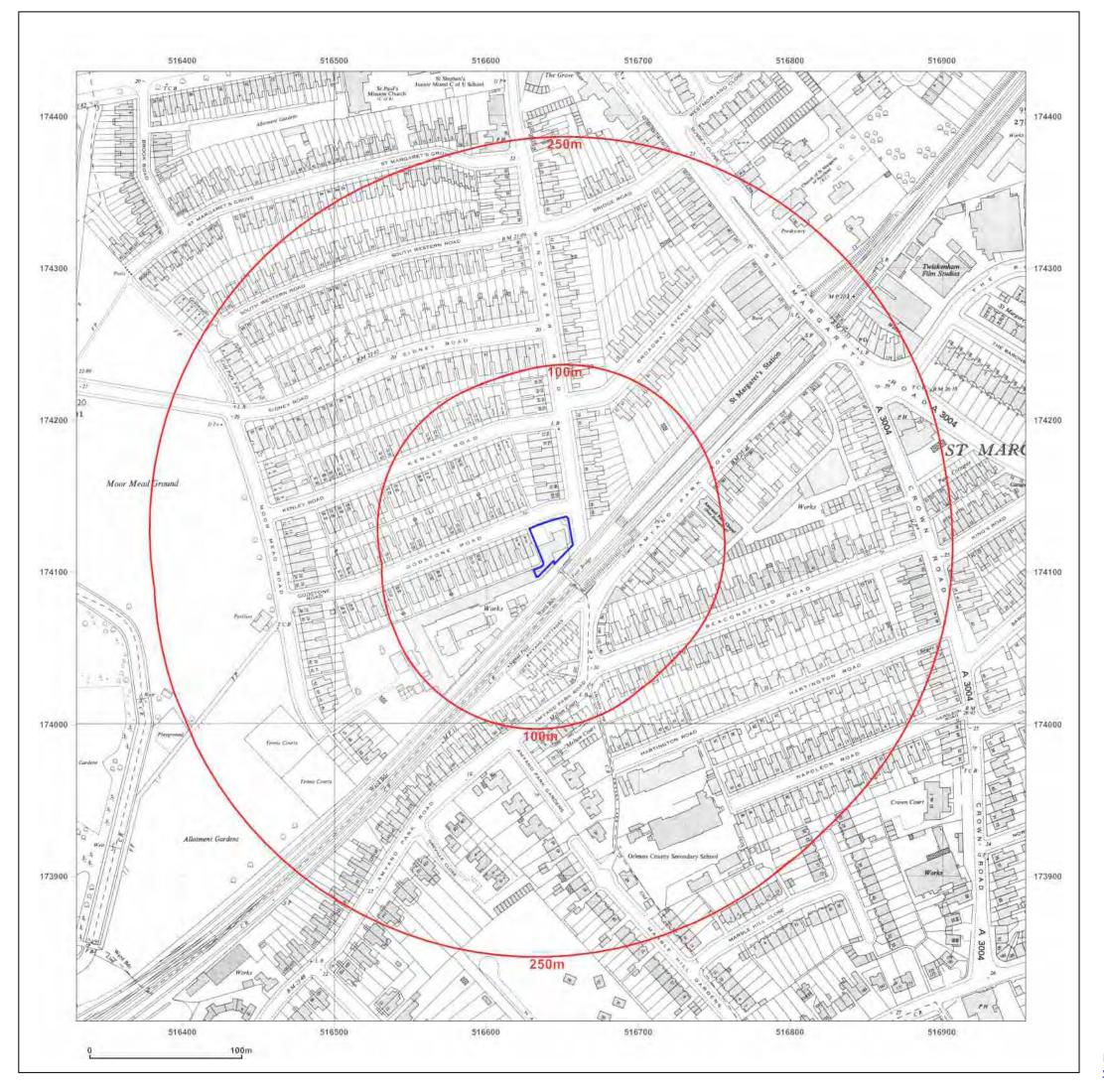


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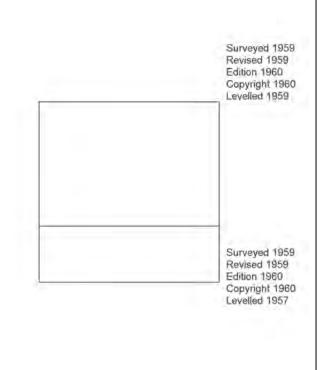
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Grid Ref: 516642, 174117

Map Name: National Grid

Map date: 1959-1960

Scale: 1:2,500

Printed at: 1:2,500



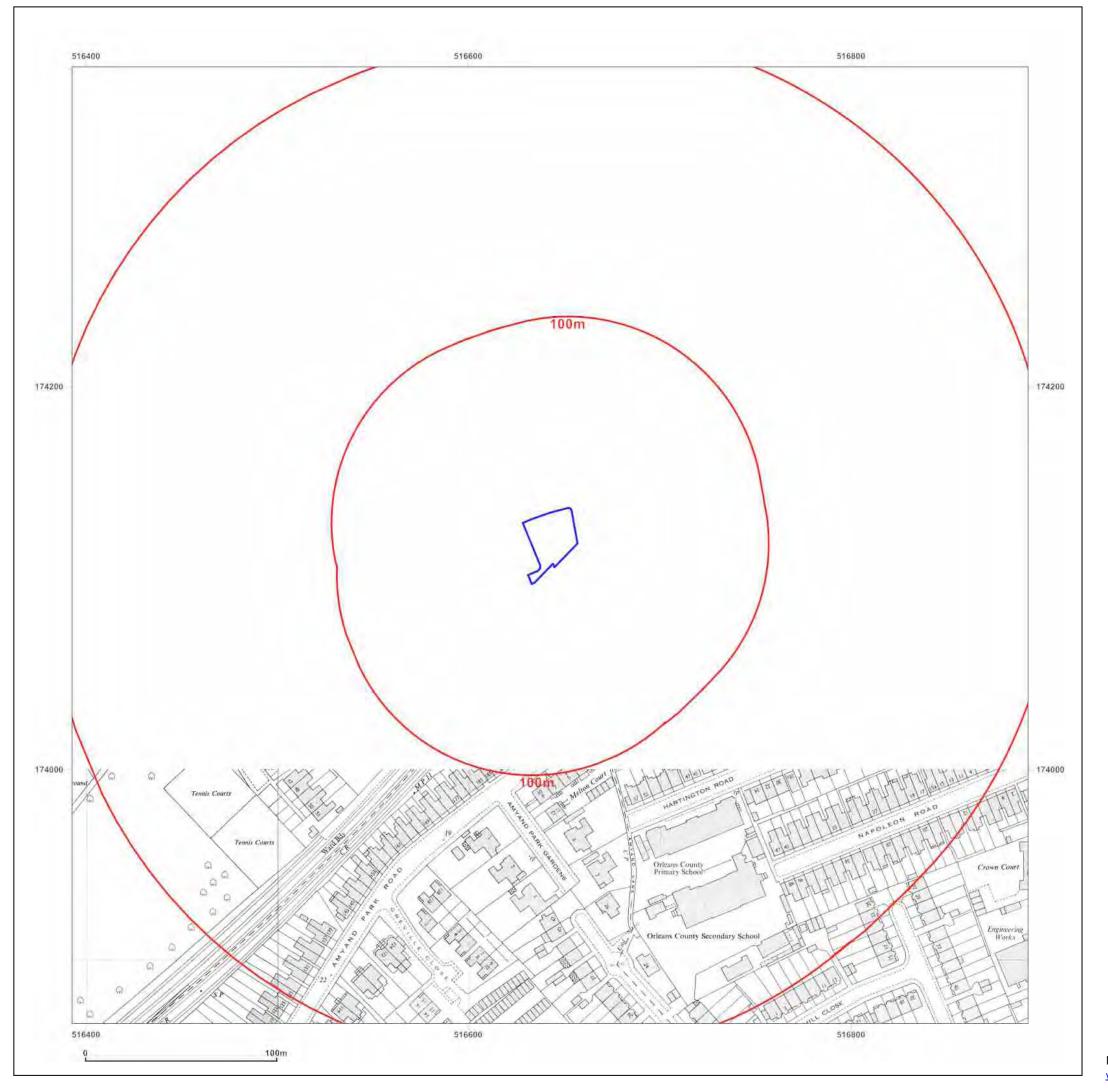


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 Report Ref:
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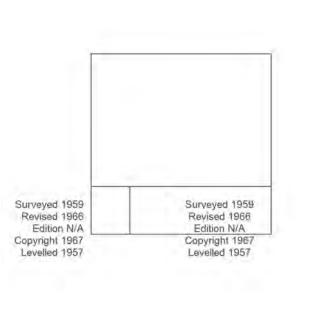
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Map Name: National Grid

Map date: 1967

Scale: 1:1,250

Printed at: 1:2,000



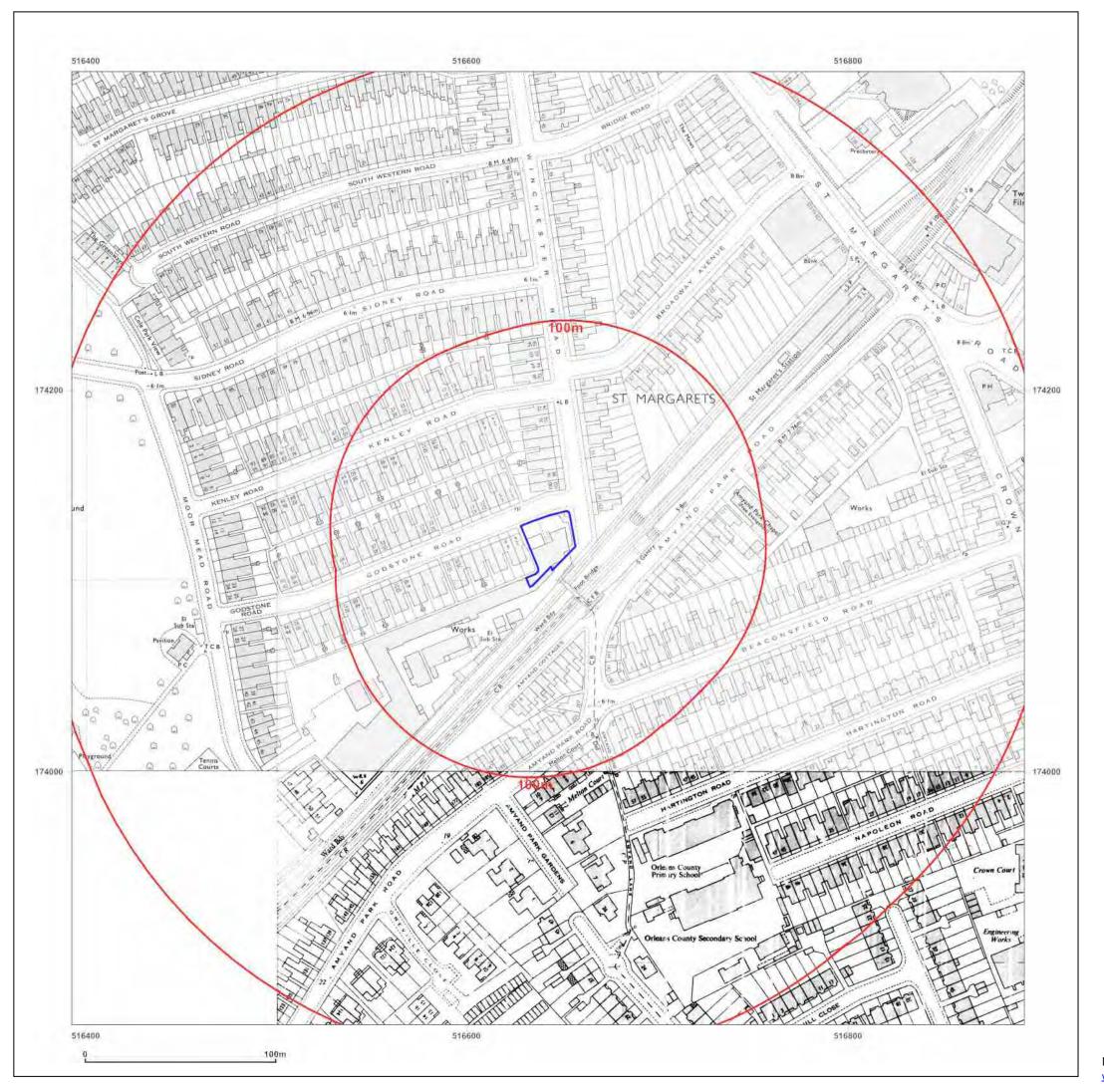


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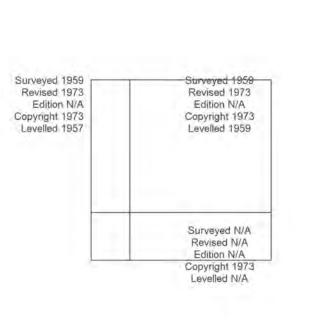
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Report Ref: GS-6850665
Grid Ref: 516642, 174117

Map Name: National Grid

Map date: 1973

Scale: 1:1,250

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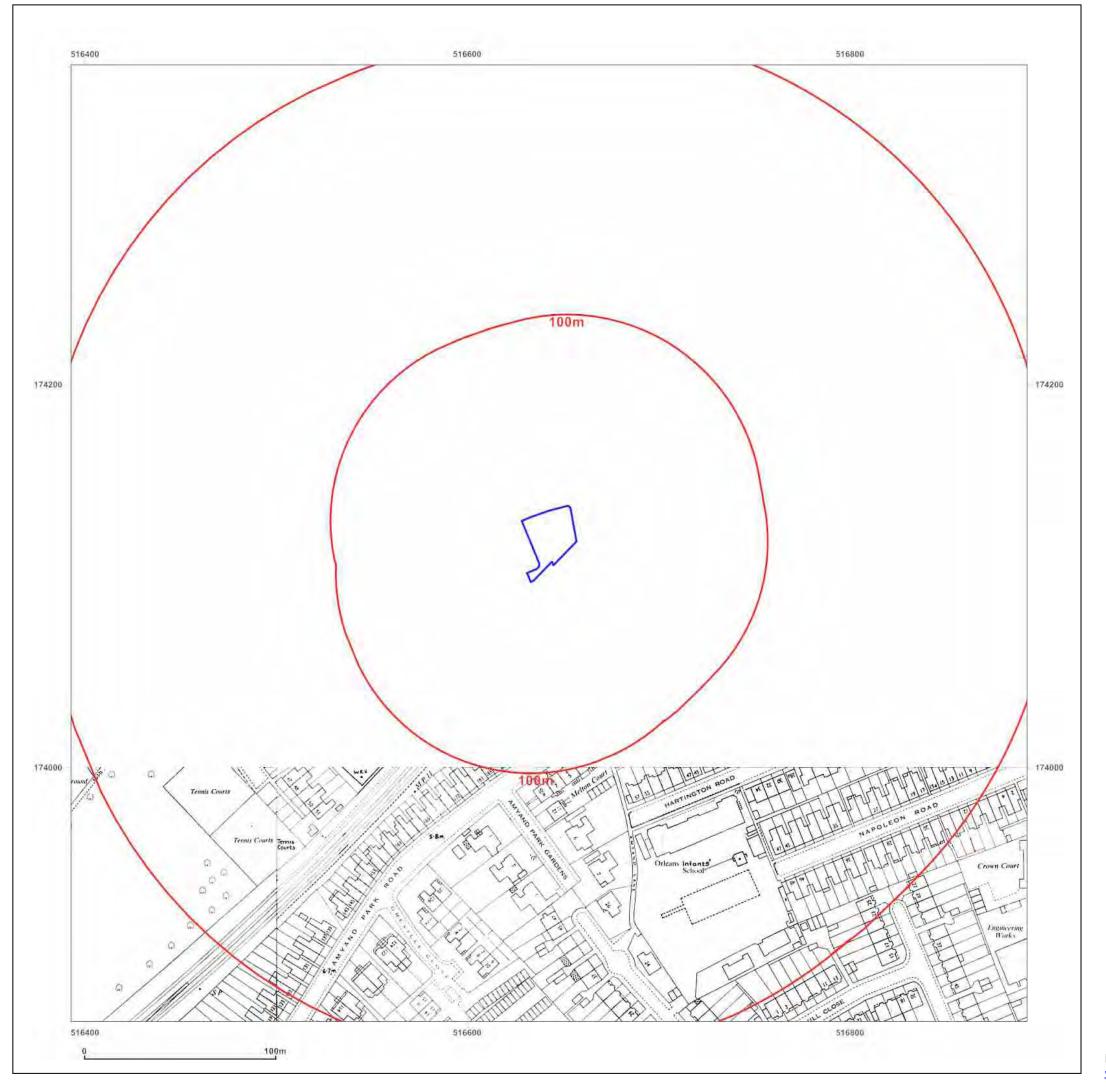


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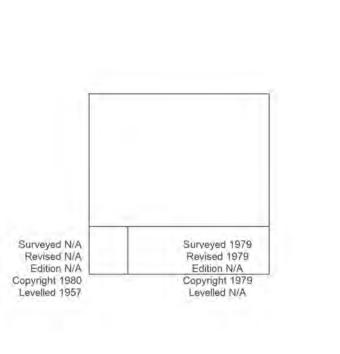
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Map Name: National Grid

Map date: 1979-1980

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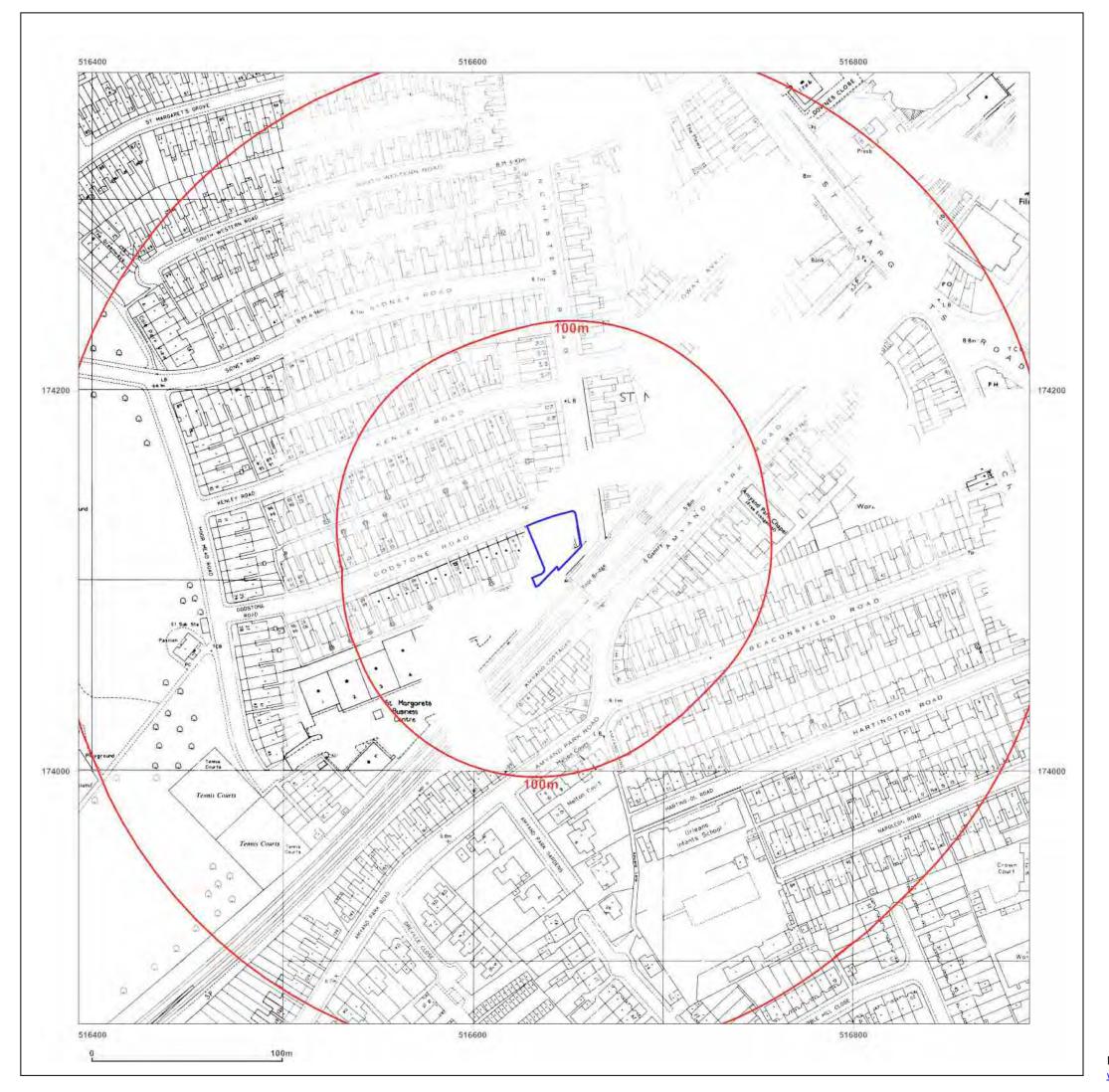


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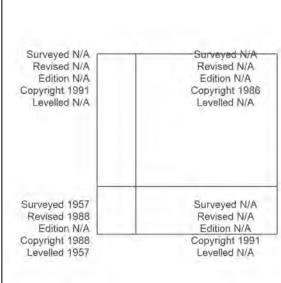
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Grid Ref: 516642, 174117

Map Name: National Grid

Map date: 1986-1991

Scale: 1:1,250

Printed at: 1:2,000



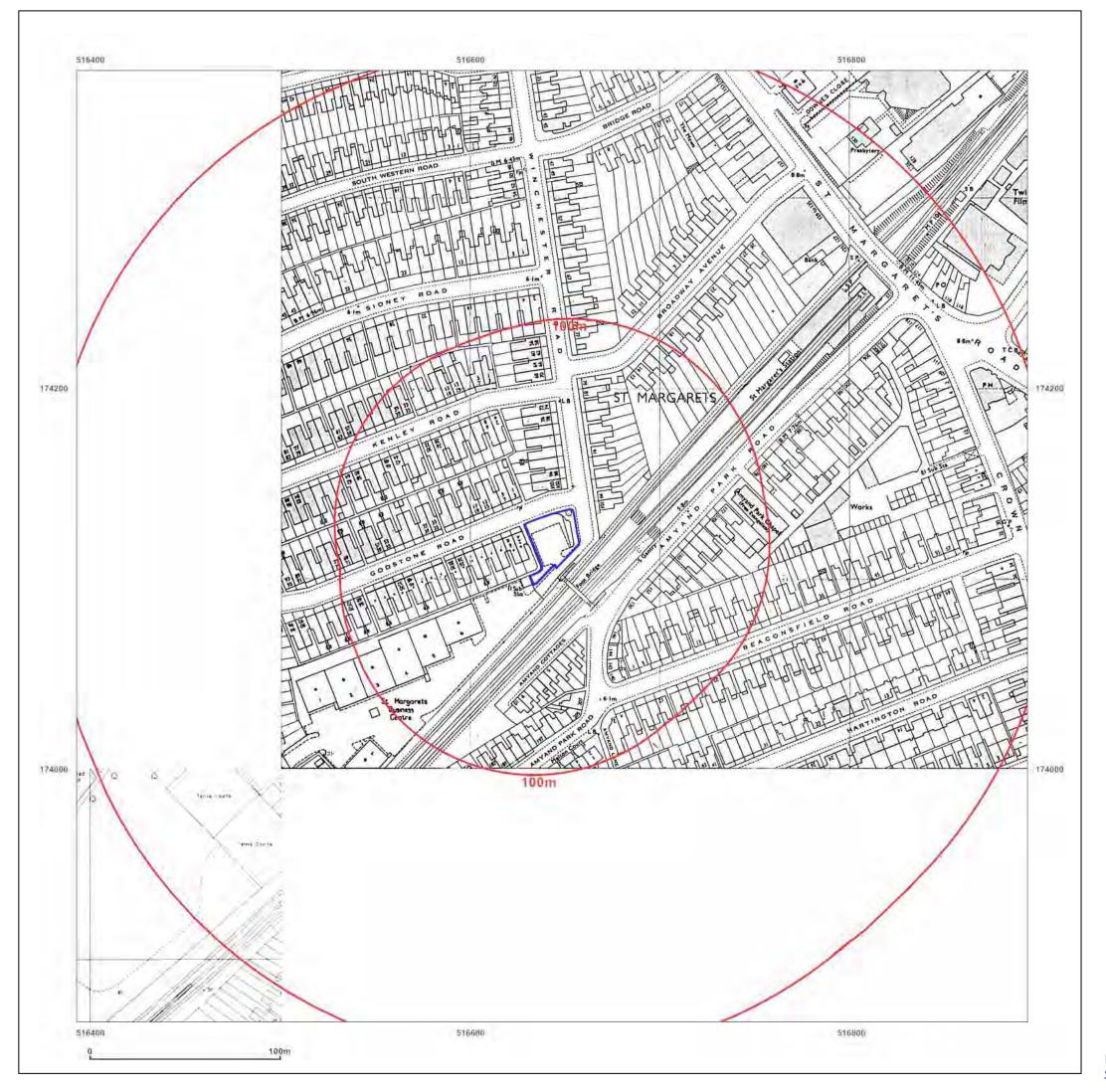


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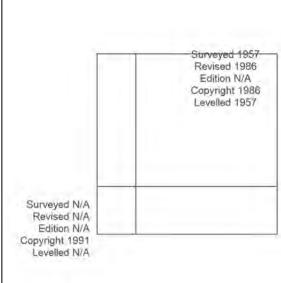
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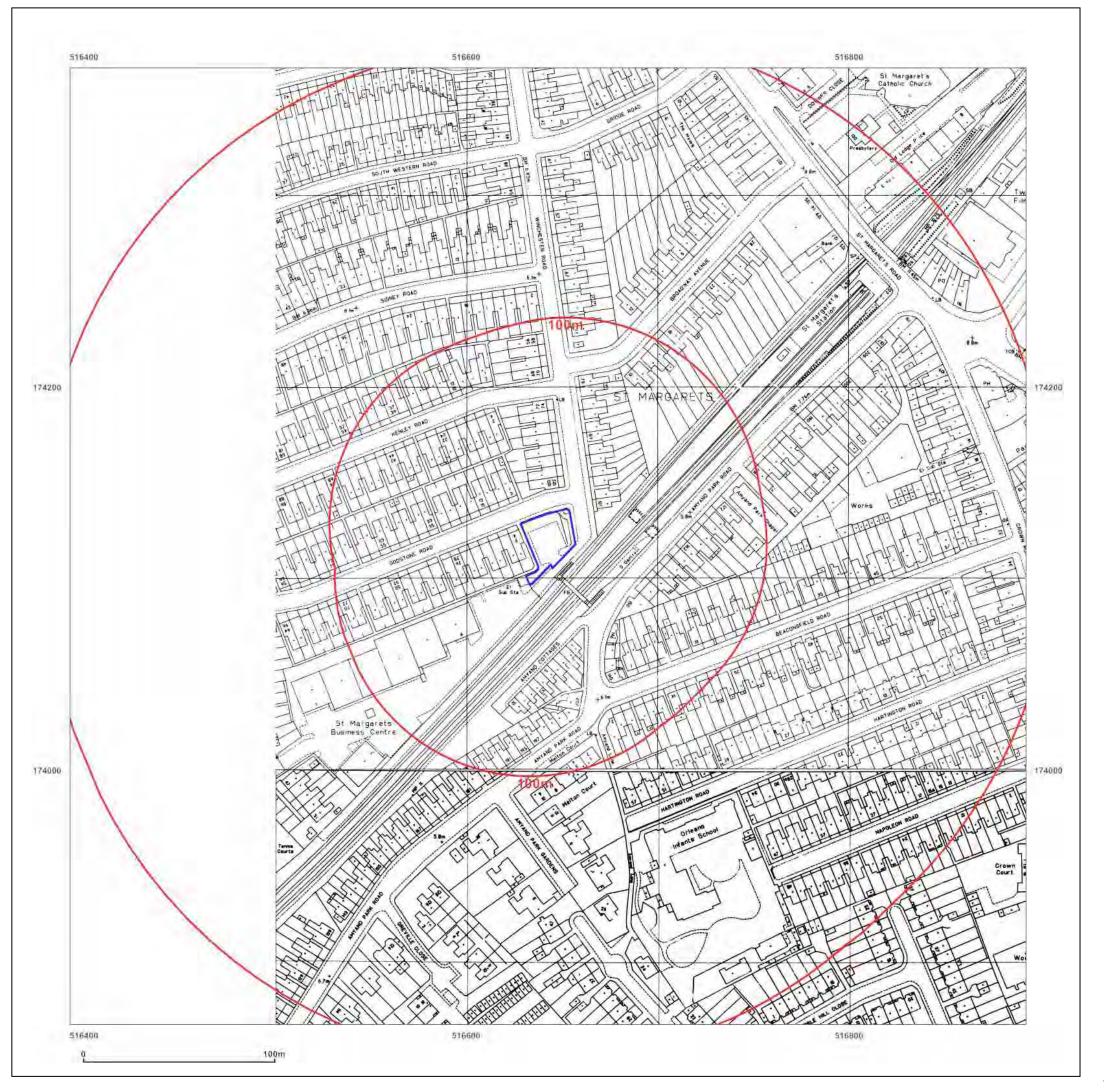


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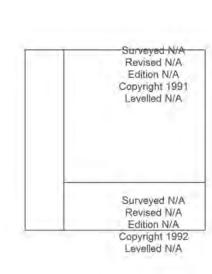
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Grid Ref: 516642, 174117

Map Name: National Grid

Map date: 1991-1992

Scale: 1:1,250

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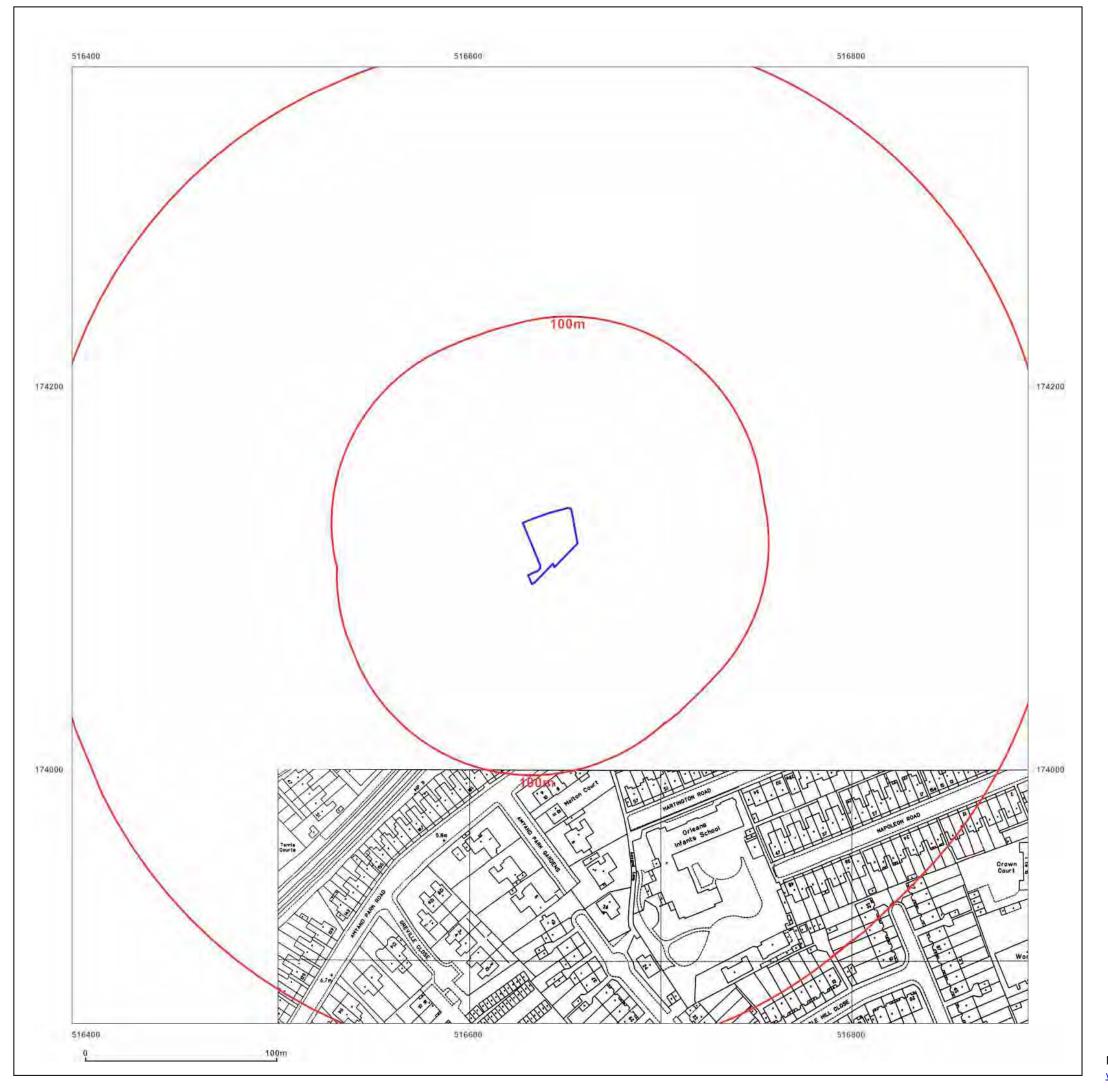


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 Client Ref:
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 Report Ref:
 GS-6850665

 Grid Ref:
 516642, 174117

Map Name: National Grid

Map date: 1992

Scale: 1:1,250

Printed at: 1:2,000





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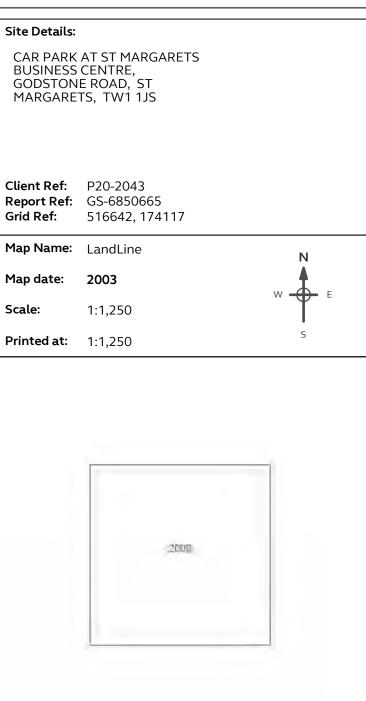
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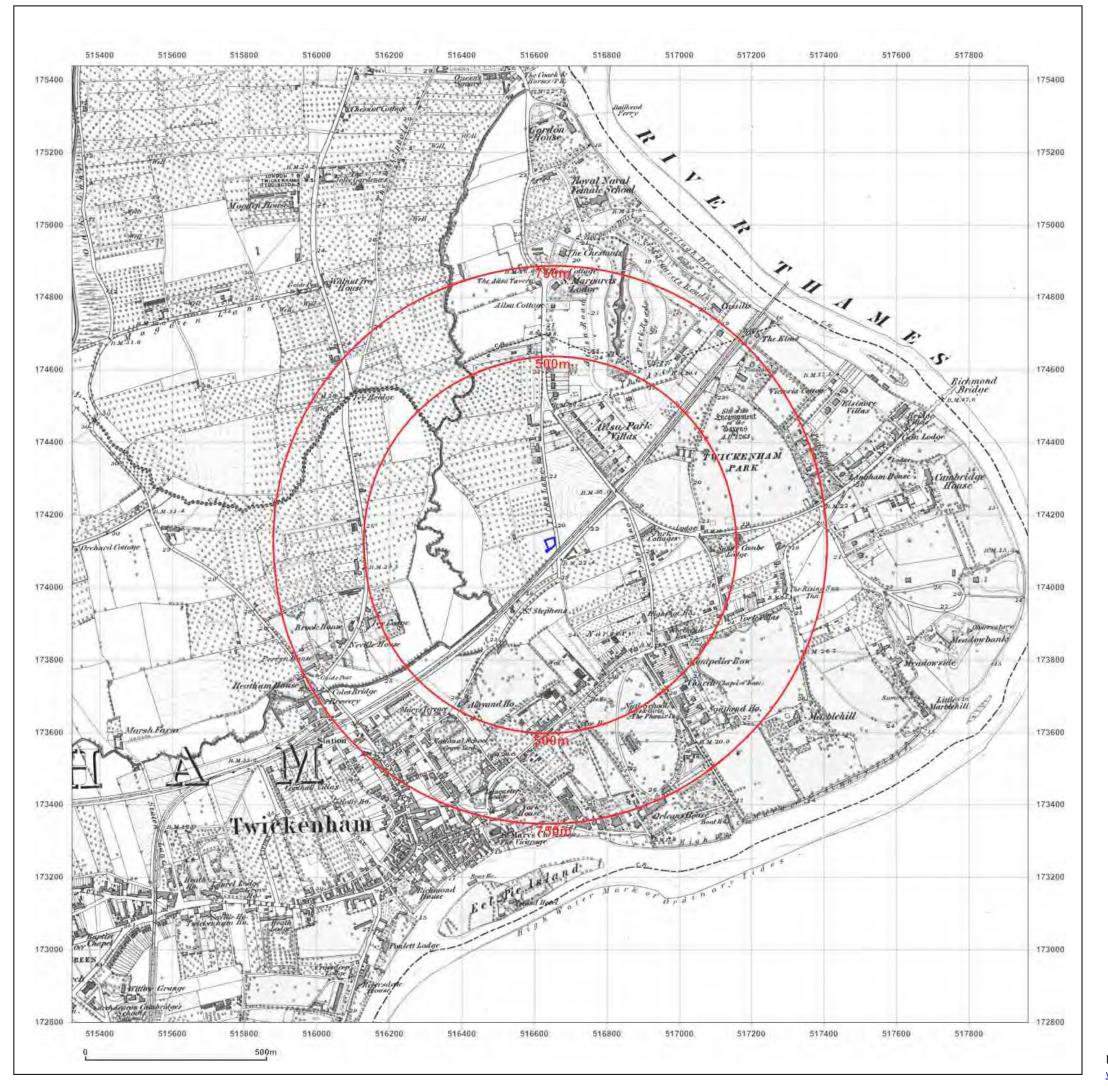


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Client Ref: P20-2043
Report Ref: GS-6850665
Grid Ref: 516642, 174117

Map Name: County Series

Map date: 1865

Scale:

1:10,560

Printed at: 1:10,560

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

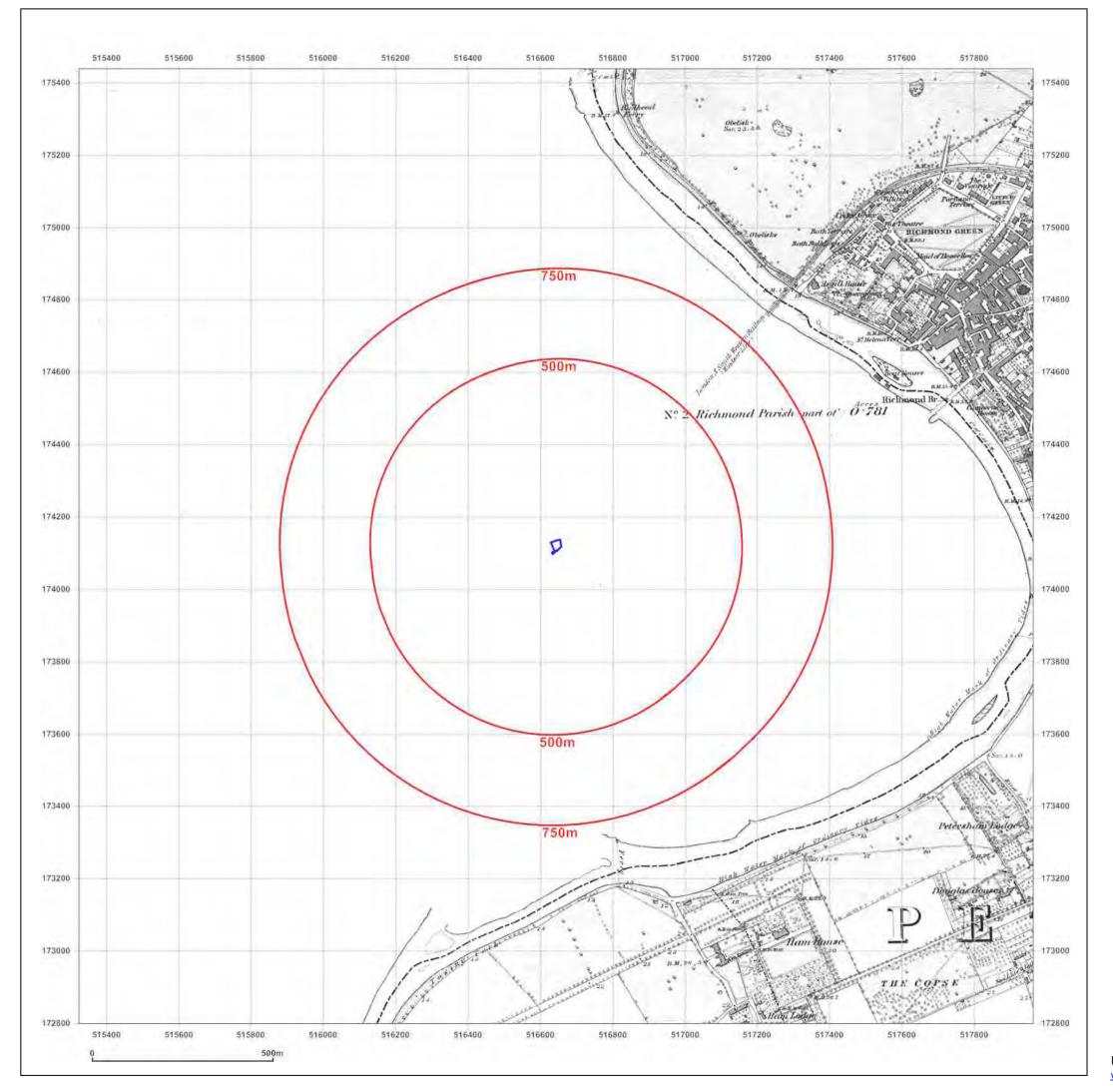


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Production date: 07 July 2020

Map legend available at:





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Client Ref: P20-2043
Report Ref: GS-6850665
Grid Ref: 516642, 174117

Map Name: County Series

Map date: 1867-1868

1:10,560

Printed at: 1:10,560

Scale:

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

Surveyed 1868
Revised 1868
Edition N/A
Copyright N/A
Levelled N/A

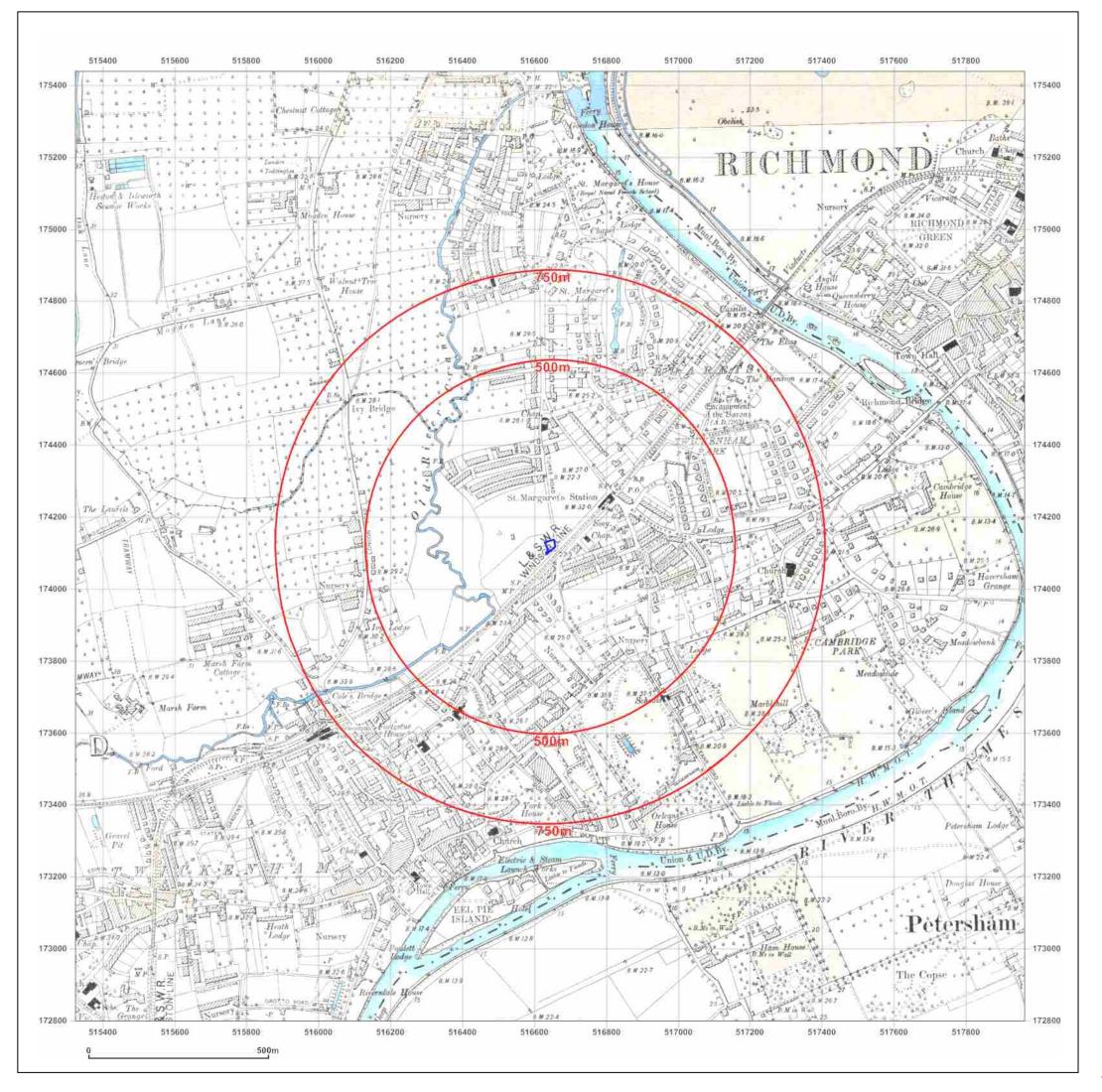


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Client Ref: P20-2043
Report Ref: GS-6850665
Grid Ref: 516642, 174117

Map Name: County Series

Map date: 1894

Scale:

1:10,560

Printed at: 1:10,560

Surveyed 1865
Revised 1894
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1868
Revised 1894
Edition N/A
Copyright N/A
Levelled N/A

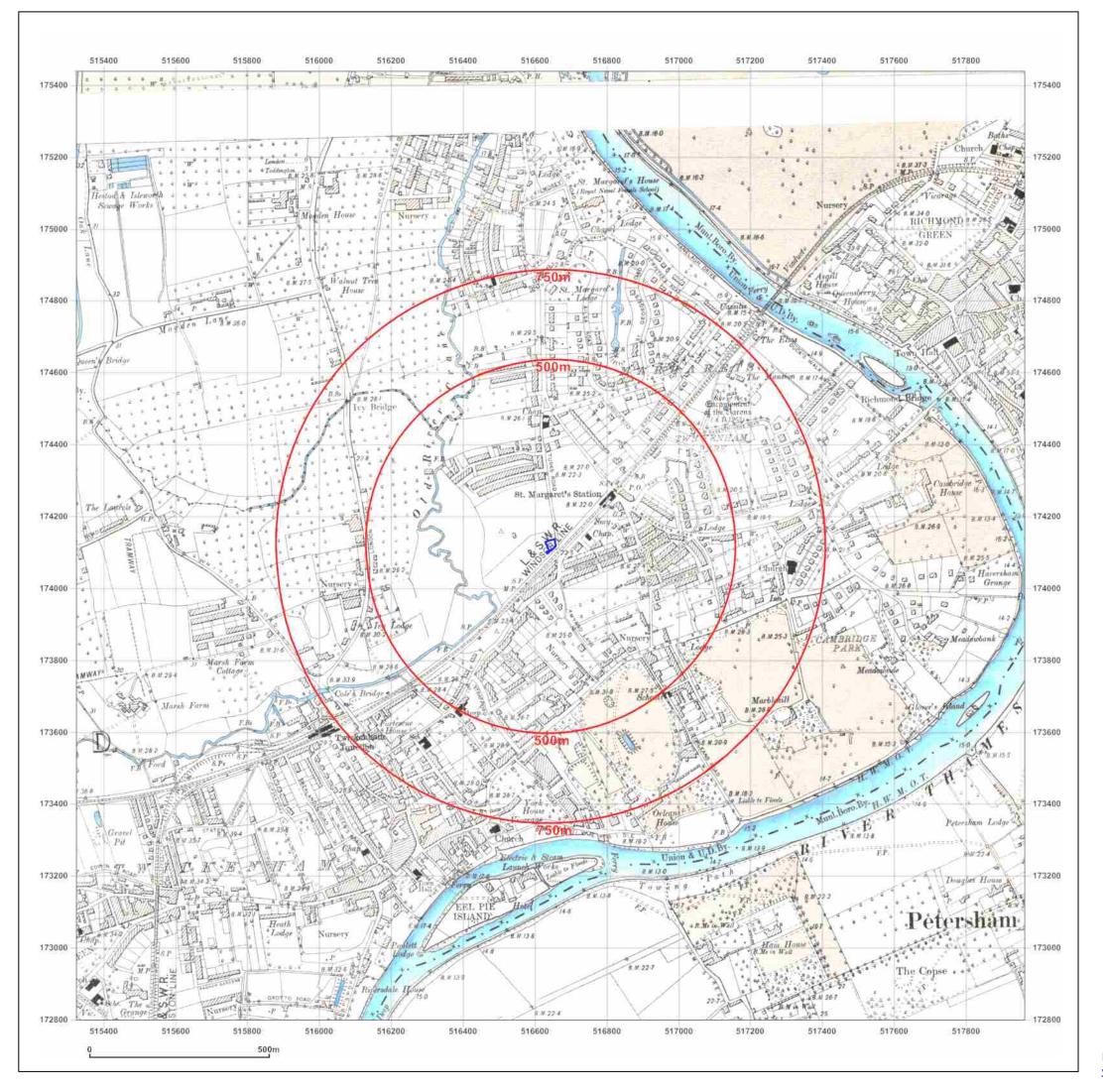


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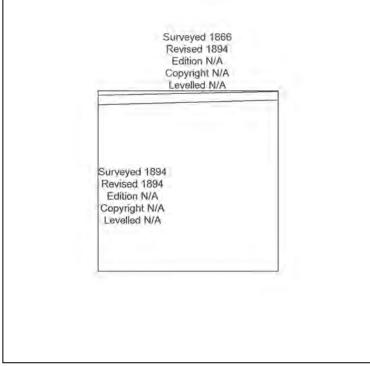
Map Name: County Series

Map date: 1894

Scale:

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Printed at: 1:10,560





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