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Consulting Group

GEO ENVIRONMENTAL



Land East of Wrotham Road, Meopham
Phase I Geo-Environmental Desk Study
September 2025

Report Ref: 29473-GEO-0401

Land East of Wrotham Road, Meopham

Phase I Geo-Environmental Desk Study

September 2025

REPORT REF: 29473-GEO-0401

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REGISTRATION OF AMENDMENTS

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1.0 INTRODUCTION

- 1.1 MEC Consulting Group Ltd (MEC), has been commissioned by Richborough (hereafter referred to as 'the Client') to undertake a Phase I Geo-Environmental Desk Study in support a proposed residential development on Land east of Wrotham Road, Meopham (hereafter referred to as 'the Site'). A site location plan is provided in **Appendix A**.

Development Proposals

- 1.2 The development proposals comprise:

Outline application for the erection of up to 350 residential dwellings, public open space and associated works. Approval is sought for the principal means of vehicular access from Wrotham Road and all other matters are reserved

- 1.3 A parameter plan is included in **Appendix A**.

Objectives

- 1.4 This desk study has been completed according to the general principles of BS5930:2015 (+A1:2020) 'Code of Practice for Site Investigations', BS10175:2011 (+A2:2017) 'Investigation of Potentially Contaminated Sites, Code of Practice and Environment Agency 'Land Contamination: Risk Management (LC:RM). Soil infiltration rate testing has been undertaken in general accordance with BRE Digest 365.
- 1.5 The objectives of this report are:
- To establish historical activities, both on site and within the surrounding area, which may have impacted the site environment;
 - To characterise the environmental setting of the site, identify migration pathways and receptors vulnerable to contamination;
 - To summarise the risks relating to Unexploded Ordnance (UXO);
 - To develop a preliminary Conceptual Site Model (CSM);
 - To assess potential environmental liabilities associated with the site;
 - To determine the soil infiltration rates for soakaway design; and
 - To determine preliminary geotechnical considerations.
- 1.6 This report has been commissioned to support an outline planning application for the proposed development.

Sources of Information

- 1.7 The following sources of information have been referenced to inform the contents of this report:
- Site walkover observations (Photographs provided in **Appendix B**);
 - Historical Ordnance Survey Mapping (**Appendix C**);

- Environmental database report including but not restricted to the following data: environmental and hydrological, waste, hazardous substances register, geological, industrial, and sensitive land uses and pollution incidents (**Appendix D**);
- British Geological Survey (BGS) online GeoIndex and borehole logs;
- Kent Minerals and Waste Local Plan 2024-2039;
- Environment Agency website (www.environment-agency.gov.uk);
- MAGIC maps (www.magic.defra.gov.uk);
- Lidar Mapping (www.lidarfinder.com);
- UXO Risk Mapping (<https://zeticauxo.com/>);
- Preliminary and detailed UXO risk assessments Ref: PA21690 and DA21698-00, dated 21st March and 9th April 2025 respectively (**Appendix E**); and
- Soil infiltration calculations, Ref: 29473-CALC-0401 (**Appendix F**).

1.8 Reference has also been made to a topographical survey drawing produced by MEC, Ref: 29473_16_170_01.

Limitations

- 1.9 MEC has completed this report for the benefit of the Client and any relevant statutory authority which may require reference in relation to approvals for the proposed development. Other third parties should not use or rely upon the contents of this report unless explicit written approval has been gained from MEC.
- 1.10 MEC cannot accept responsibility or liability for:
- a) The consequence of this documentation being used for any purpose or project other than that for which it was commissioned;
 - b) The issue of this document to any third party with whom approval for use has not been agreed.
- 1.11 This report should be read in its entirety, including all associated drawings and appendices. MEC cannot be held responsible for any misinterpretations arising from the use of extracts of this report that are taken out of context. The findings and opinions conveyed are based on information obtained from a variety of external sources, as detailed in Section 1.6 above, which MEC believes are reliable. All reasonable care and skill have been applied in examining the information obtained, nevertheless, MEC cannot and does not guarantee the authenticity or reliability of the information relied upon from external sources.
- 1.12 Should additional information become available which may affect the opinions expressed in this report, MEC reserves the right to review this information and, if warranted, to modify the opinions presented in the report accordingly.

- 1.13 It should be noted that the risks identified in this report are perceived based on the available information at the time of writing. The actual risks can only be established and quantified following intrusive investigation of the site.

2.0 SITE SETTING AND DESCRIPTION

Site and Setting

The following details are based on observations made at the time of the site walkover which was completed on 10th April 2024. Reference is made to the photographic record in **Appendix B**.

Site Address

Wrotham Road, Meopham, DA13 0JW

National Grid Coordinates

564608, 166605

Site Description

The site comprises open agricultural land formed by two fields located to the north of the village of Meopham in Kent. The site is located to the east of Wrotham Road, and to the south of Green Lane (Photos 1 and 2). Access to the site is off Green Lane (Photo 3) shared with an adjacent residential property. At the time of the walkover, the fields had been planted with oil seed rape (Photos 4, 5 and 6) The two fields are separated by a hedgerow boundary with an opening at the northernmost point (Photo 7).

Topographically, the site slopes down from south to the north-east by 20m across 600m.

The eastern field is part of a larger parcel which extends further east. The northern, north-eastern, western, and southern boundaries are formed by hedgerows and mature and semi-mature trees (Photos 8, 9, and 10). Wooden telegraph poles are in the north-east of the western field, connected by electricity transmission cables, feeding an adjacent property. Available lidar mapping shows a small surface depression in the east of the western field and this is also recorded by the topographical survey. A public footpath crosses the eastern field from south to north-east.

Residential properties are located beyond Green Lane to the north and Wrotham Road to the north-west. A school is located to the west and isolated residential properties are to the south and adjacent to the north-east. Areas to the east and south-east comprise undeveloped open fields.

Historical Review

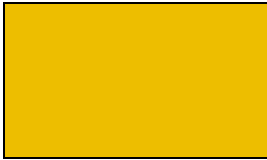
The site history has been assessed by reviewing 1: 2,500 1:10,560, and 1: 10,000 scale historical Ordnance Survey maps included in **Appendix C** and more recent aerial photography. A summary of the salient information relating to the history of the site and surroundings is provided below.

On-site Historical Summary

The earliest available mapping reviewed, dated 1864, indicates that the site comprised the western half of a larger open field at this time and the footpath was recorded crossing the south-eastern corner.

By 1896, a boundary had been established, with a larger western section, similar to present day, and an eastern section forming part of a wider field. Aerial imagery from 1940 records that the eastern section of site was split into two, and an area of potentially 'worked' ground was located in the south.

	<p>By 1990, the eastern section was recorded as a single field, cultivated separately from the western section.</p> <p>Aerial imagery from 2003 records that the site had been cultivated as a single field along with the land adjacent to the east.</p> <p>By 2020, the hedgerow field boundary had been established between the western and eastern sections.</p> <p>Recent aerial imagery since 2000 records a localised anomaly and darker discolouration at the location of the anomaly in the east of the western field. Other similar areas of discolouration are periodically recorded in the north of the western field, particularly in 2017.</p>
Off-site Historical Summary	<p>The earliest available mapping reviewed, dated 1867, indicates that the area surrounding the site predominantly comprised undeveloped open land at this time, with areas of woodland to the south and north-east. A school was mapped 25m west, and a church and graveyard were recorded 165m south. Eight ponds were mapped between 25m and 465m south-west, and an additional pond was recorded 350m south at Foxendown Farm. A brick works, with associated kiln and four clay pits was mapped 350m west, and a smithy was recorded 450m north.</p> <p>By 1895, the brick works, kiln, and clay pits were no longer mapped and this area was recorded as a wood, labelled as 'Brick Fields Shaw'. By this time, three of the ponds to south-west were no longer recorded and had either been infilled or dried up.</p> <p>The smithy to the north was no longer mapped by 1931 and the pond at Foxendown Farm had dried up or been infilled by 1936.</p> <p>By 1938, progressive residential development had occurred to the north-west, further expanding by 1955.</p> <p>Mapping from 1962 indicates that the residential property adjacent to the north-east, a garage 27m north-west, a police station 81m north-west, and the telephone exchange 11m north had been established. By 1965, an additional graveyard was mapped 300m south-west.</p> <p>By 1973, electricity transformers were mapped 45m north and 250m north-west respectively, and mapping from 1974 indicates that an additional transformer had been established 300m north. By this time the telephone exchange had also expanded. The transformers were labelled as electricity substations on later mapping.</p> <p>Between 1974 and 2025, progressive residential development was recorded at Hook Green to the north.</p>



By 2010, the police house and telephone exchange were no longer recorded. Aerial imagery indicates that the police house was converted to a residential dwelling and the telephone exchange building was still evident.



3.0 GEOLOGICAL, GEO-ENVIRONMENTAL AND MINING SETTING

Geo-environmental Setting

The geological, geo-environmental and mining setting of the site described in the following table is summarised based on information derived from various database and on-line information sources.

Geology	<p>British Geological Survey (BGS) mapping indicates that the central and north-eastern areas of the site are underlain by superficial Head deposits. Bedrock strata of the Thanet Formation, comprising sand, is recorded in the east, south, and south-east, and bedrock of the Seaford Chalk Formation is mapped in the north-west and north. The superficial deposits predominantly overly the Chalk bedrock, with slight overlap onto the Thanet Formation in the centre of site.</p> <p>Ground conditions encountered during the soil infiltration rate testing comprised Topsoil overlying Head deposits comprising sandy, gravelly, silty clay, in the centre and north, underlain by Chalk bedrock. Deeper Head deposits were recorded close to the northern boundary, up to 1.80m bgl. In the south, the Topsoil was underlain by clayey, silty, gravelly sand of the Thanet Formation. Exploratory hole logs are included within the soil infiltration test results in Appendix F.</p>
Natural Ground Subsidence Risk	<p>A high risk of subsidence due to potential ground dissolution of soluble rocks is recorded in the centre north of site, at the boundary between the Chalk bedrock and Thanet Formation. The surface depression in the east of the western field is located in this area. The dissolution risk increases where superficial or weak bedrock deposits overlie chalk bedrock. Such materials often bridge a developing solution feature until the support is insufficient and the soils fail by collapse settlement.</p> <p>The risk of subsidence from other geological hazards is negligible to low. The low risk of subsidence is allocated due to the potential for running sands, recorded in the south and east of site associated with the Thanet Formation.</p>
Hydrogeology	<p>The Environment Agency (EA) classifies the superficial Head deposits and bedrock Thanet Formation as Secondary aquifers, and the Chalk Bedrock as a Principal aquifer.</p> <p>The site is located in a groundwater Source Protection Zone (SPZ) 3, total catchment. Groundwater abstractions are not recorded within 500m; however, potable groundwater abstractions are located 1.2km to the east.</p> <p>The site is recorded to be at negligible to low risk from groundwater flooding. The low risk is associated with the superficial Head deposits in the centre and north of site.</p>
Hydrology	<p>Surface water features are not recorded within 250m of the site.</p> <p>Active surface water abstractions are not recorded within 500m.</p>

	The site is not located within an area considered to be at risk of surface water flooding and is located within Flood Zone 1.
Mining and Mineral Extraction	<p>The site is not located within a coal mining reporting area as defined by the Mining Remediation Authority.</p> <p>The site is at low risk from sporadic underground Chalk mining, although potentially difficult ground conditions are not likely to be encountered.</p> <p>By reference to historical mapping and the environmental database report, the Meopham Brick Works which extracted clay was recorded 386m west .</p>
Surface Ground Working	<p>The two graveyards to the south-west of site, identified by historical mapping, are recorded as surface ground workings.</p> <p>The surface depression feature in the east of the western field could represent a potential solution feature/sinkhole. This may also represent historical shallow chalk extraction pit although this is less likely. Similar features may occur sporadically across the north of the site.</p>
Mineral Safeguarding	The site is not located within a Mineral Safeguarding Area as defined within the Kent Minerals and Waste Local Plan 2024-2039.
Radon	The site lies within an area where between 1% and 3% of properties are estimated to be above the Radon Action Level. Radon protection measures will not therefore be required for the proposed development.

4.0 REGULATORY INFORMATION

Regulatory Information	
A summary of pertinent information from the environmental data report relating to permits, consents, authorisations, and landfilling is provided below.	
Current and Historical Industrial Uses	<p>Five records of recent industrial land use are referenced within 250m relating to the garage, telephone exchange, and substations identified by the historical mapping. Four additional records relate to commercial activities registered to either shop or residential properties. The latter are unlikely to represent significant sources of contamination.</p> <p>Four records of historical industrial land use are referenced within 250m, relating to the telephone exchange, police station, and graveyards identified by historical mapping.</p>
Historical Tanks	Historical tanks have not been recorded within 250m.
Fuel Stations and Historical Garages	Fuel stations and historical garages are not recorded within 250m.
Part 2A EPA 1990	Sites determined as Contaminated Land under section 78R of the Environmental Protection Act are not recorded within 250m.
National Grid	National Grid high-pressure gas transmission pipelines or high-voltage underground electricity transmission cables are not recorded within 250m.
Industrial Licenses and Authorisations	<p>The following licenses or authorisations are not recorded within 250m:</p> <ul style="list-style-type: none"> • COMAH, NIHHS and dangerous substance; • Regulated explosive sites; • Hazardous substance storage and usage; • Historical IPC authorisations; • Licensed industrial activities (Part A (1)); • Licensed pollutant release (Part A(2)/B); • Radioactive substation authorisations; • Licensed discharge to controlled waters; • Red list discharge consents; • Pollutant release to public sewer; • List 1 and 2 dangerous substances; and • Pollution inventory substances, waste transfers and radioactive waste.
Pollution Incidents	Three historical pollution incidents have been recorded within 250m and occurred between 2001 and 2002. The incident in 2001 was located 179m south-west and involved inert construction and demolition waste, with a minor impact to land, likely a fly tipping incident. The two incidents from 2002 were located 150m north and

	246m west. Both were related to atmospheric pollutants and had a minor impact to air.
Landfill and Waste	<p>Waste management facilities, and landfill sites are not recorded within 250m.</p> <p>Three waste exemptions are recorded within 250m, relating to storage of sludge waste on farms, 225m and 230m north-east and 244m east respectively.</p>
Unexploded Ordnance	<p>Zetica interactive mapping indicates that the subject site lies within an area at moderate risk of UXO encounter. On this basis UXO Risk Assessments have been commissioned and are included in Appendix E.</p> <p>During the Second World War, Meopham was subjected to an overall low-moderate bombing density, attributed to being situated along the flight path to London. Available records indicate numerous incidents of bombing in the area surrounding site, with the nearest located 150m south. Aerial imagery from the time did not show any noticeable bomb damage or cratering, and the site comprised open agricultural land throughout. It was assessed that the presence of vegetation throughout this period, may slightly obscure imagery, and therefore a residual risk of UXO encounter from German bombing remains for the site.</p> <p>The surface depression in the east of the western field may represent a bomb crater as an alternative to a solution feature as previously implicated.</p> <p>There were no indications that the site had any military occupation during the war, and therefore the risk from Allied ordnance is low.</p> <p>Due to the potential residual risk from German bombing in the Second World War, it was recommended to adopt mitigation measures including a UXO Risk Management Plan, and undertake awareness briefings prior to excavations or intrusive works.</p>

5.0 PRELIMINARY GEOTECHNICAL ASSESSMENT

- 5.1 The information sources noted in Section 1.0 have been reviewed to provide a summary of potential geotechnical considerations for the proposed development presented in the following table. The comments and recommendations provided are based on the qualitative findings of this Geo-environmental Desk Study and may not be representative of actual engineering properties of on-site soils which can only be confirmed by intrusive investigation

Made Ground	<p>Based on site observations and the recorded history, it is unlikely that significant quantities of Made Ground will be encountered near surface across the site, although may be present locally in limited quantities.</p> <p>The surface depression in the east of the western field, which could represent a solution feature/sink hole, chalk pit or bomb crater, may contain Made Ground.</p> <p>Historical aerial imagery showed an area of worked ground in the south, and this could also potentially contain Made Ground.</p>
Topsoil	<p>Topsoil is likely to be present near surface across most of the site. Subject to appropriate testing, this may be suitable for re-use within proposed garden and landscaped areas.</p>
Chalk Solution/Mining Features	<p>A high risk of subsidence is recorded on site associated with Chalk bedrock along the inferred boundary with the Thanet Formation. Solution features can lead to difficult ground conditions, as they are often bridged by overlying, uncompacted weaker material, which can fail due to loading or settlement. Further investigation is required into the potential dissolution risk generally across the north of the site.</p>
Foundation and Floor Slab Design	<p>An intrusive ground investigation will be required to determine if the underlying geology will provide competent bearing strata for foundation design and to assess the potential impact of dissolution features. This should include probe drilling across northern parts of the site to further investigate the potential for solution features and/or localised shallow chalk extraction.</p> <p>Based on available information, it is considered that a traditional shallow foundation solution will be appropriate across a significant proportion of the site, founding within the Seaford Chalk Formation or Thanet Formation, ensuring full penetration of superficial Head deposits where encountered. An alternative design such as piling or raft foundations may be required in areas of known or suspected dissolution features and localised chalk extraction.</p> <p>Ground bearing floor slabs are likely to be suitable for selected areas of the site; however, suspended ground floor slabs will be required for significant areas where:</p>

	<ul style="list-style-type: none"> • The thickness of sub slab fill is greater than 600mm; • Ground gas protection measures are required; • There is a potential for solution features and Made Ground; and • For the piled foundation option.
Earthworks and Retaining Walls	Given the gently sloping topography of the site, it is anticipated that a limited extent of reprofiling will be required to establish suitable development platforms. A cut and fill analysis will be required, considering the results of an intrusive investigation, and proposed finished floor levels. Retaining structures may be also be required locally.
Buried Obstructions	It is not anticipated that buried obstructions will impact the proposed development.
Trees	Mature trees are present within the site and immediate surrounding area and consideration will need to be given to the adjustment of foundation and floor slab designs in accordance with NHBC Standards Chapter 4.2. Such requirements will depend on the relative distribution of cohesive and granular soils within the Head deposits and Thanet Formation, and matrix bound fractions of the Chalk bedrock, although the existing information suggests that non-shrinkable soils prevail beneath the site.
Pyritic Geology	Pyritic deposits are not anticipated; however, pH and sulphate testing will be required to confirm concrete classification.
Drainage and Soakaways	<p>Based upon the results of the soil infiltration rate testing provided in Appendix F, soakaway drainage will be suitable into the Chalk bedrock, and a calculated rate of 1.02×10^{-5} m/s can be utilised for design purposes. Soakaways will not be feasible in the Thanet Formation in the south of site,.</p> <p>It should be noted that construction of soakaways may exacerbate potential surface stability issues associated with dissolution features within the chalk bedrock and this will need to be considered in the design.</p>
Roads and Pavements	<p>Where natural cohesive soils are encountered at formation, a CBR value of the order of 2-4% is likely to be available, and where granular soils are encountered a higher value of greater than 5% may be achievable. Higher CBR values will also be available within the underlying bedrock.</p> <p>Consideration should be given to the completion of CBR testing at proposed formation level to confirm the available design values.</p>

6.0 PRELIMINARY ENVIRONMENTAL RISK ASSESSMENT

Background

- 6.1 This section assesses the significance of the environmental issues that have been identified on site or in the surrounding area in previous sections of this report by developing a preliminary Conceptual Site Model (CSM). The objective of the CSM is to identify contaminant sources, pathways and receptors relating to the site and surrounding area to evaluate the potential for a pollution event to occur using a risk classification tool. The level of risk is assessed by comparing the likelihood of a pollution event to occur, versus the consequence of a pollution occurrence. The consequence is essentially a measurement of the severity of a hazard (or source) and sensitivity of the receptor (controlled waters and human health).
- 6.2 The risk assessment methodology detailing the classes of significance is detailed after the preliminary CSM below.

Preliminary Contamination Risk Assessment

- 6.3 Based on the reported history of the site and surrounding area, the following potential sources of contamination have been identified:
- Historical agricultural activities;
 - Made Ground associated with the potential area of worked ground in the south, and possible historical chalk pit/solution feature;
 - Contaminant migration from the historical garage to the north-west; and
 - Ground gas generation from made ground sources on-site and the infilled ponds and pits in the surrounding area.
- 6.4 Off-site records relating to the electricity substations/transformers, police station, and historical smithy, are at a sufficient distance such that the subject site would be unlikely to be impacted. The recorded pollution incidents in the surrounding area are sufficiently distant and the time elapsed since they occurred suggests that any impact will likely have been mitigated.
- 6.5 Contamination associated with the telephone exchange is most likely to comprise potential asbestos containing materials utilised in the construction of the building and fireproofing of communications equipment. As the building is intact, contamination from this source is not likely to affect the subject site.
- 6.6 It is therefore considered that the following potential contaminants may impact the site:
- Heavy metals;
 - Polycyclic Aromatic Hydrocarbon (PAH) Compounds;
 - Total Petroleum Hydrocarbon (TPH) Compounds;
 - VOC's/SVOC's: and
 - Ground gases and volatile vapours;

Preliminary Conceptual Site Model

6.7 The pollutant linkages pertaining to the site and the assessed significance are summarised in the CSM table overleaf:

Source	Pathway	Receptor	Pollutant Linkage Risk
Potential contamination in shallow soils on site	Direct contact and accidental ingestion/inhalation of contaminated soils and dust.	Future Site Users.	Low, locally Low to Moderate: Made Ground is not anticipated to be present across most of the site; however, may be locally encountered in the areas of the historical worked ground and potential chalk pit/solution feature. Intrusive investigation will confirm if contaminant concentrations within the shallow soils pose a risk to human health receptors.
		Construction workers	
	Vertical and lateral migration through shallow soils or via surface and groundwater.	Underlying Secondary and Principal Aquifers.	Low: Groundwater is anticipated to sit deeper within the Chalk bedrock, and significant sources of contamination are not anticipated on site.
		Third-party property.	
	Direct contact/soil leaching.	Buried utilities	Low locally Low to Moderate: Hydrocarbons may be encountered locally within near surface soils associated with historical agricultural activity. The risk should be confirmed through intrusive investigation to confirm the required specification for buried water supply pipes.
	Direct contact/soil leaching.	Buried concrete	Low: The underlying Chalk bedrock and Thanet Formation are not anticipated to be pyritic. Design requirements for buried concrete should be confirmed through chemical testing.
Off-site contamination sources	Lateral migration onto site via shallow soils and groundwater	Construction workers.	Low, locally Low to Moderate: Potentially contaminative land uses, including the garage to the north-west, have been identified in the surrounding area. The Chalk bedrock has high
		Future Site Users.	

Source	Pathway	Receptor	Pollutant Linkage Risk
		Buried utilities and concrete structures	permeability which would enable migration of contaminants from off-site.
Ground gas and vapour generation on-site	Migration through porous soils and accumulation in confined spaces	Future Site Users	Low, locally Low to Moderate: Limited ground gas sources, have been identified on site, including the possible pit/chalk solution feature and historical pit and ponds in the surrounding area. These are not likely to represent significant sources of ground gas generation, however, localised protection measures may be required. The risk should be confirmed through a programme of ground gas monitoring. The site lies in an area where 1-3% of properties exceed the Radon action level. Radon protection measures will not be required.
		Construction Workers	

Preliminary CSM and Environmental Risk Assessment

6.8 The significance of the potential source-pathway-receptor linkages identified in the conceptual site model should be assessed using the following criteria:

- **Very High** – 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. Investigation and remedial measures are required.
- **High** – Harm is likely to arise to a designated receptor from an identified hazard. Investigation and remedial measures are required.
- **Moderate** – It is possible that harm could arise to a designated receptor from an identified hazard. Investigation and remedial measures may be required.
- **Low** – 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. Remedial measures are not normally required.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Summary

- 7.1 Based on the findings of this desk study and the initial conceptual site model, it is considered that the environmental risk at the site is low locally low to moderate with the principal risk drivers relating to agricultural activities, localised areas of Made Ground, migration of contamination from an off-site site garage, and ground gas generated from infilled ponds in the surrounding area and the potential pit/solution feature on site.
- 7.2 It is not anticipated at this stage, subject to confirmation, that extensive remediation will be required for the proposed development although there may be a requirement for the localised removal and/or capping of contaminated Made Ground.
- 7.3 It is not considered that the site will be significantly impacted by ground gases and extensive protection measures are unlikely to be required for the proposed development.
- 7.4 It is anticipated that a shallow foundation design solution will be appropriate for most of the proposed development, bearing on the anticipated Seaford Chalk Formation in the north-west and north, and Thanet Formation in the rest of site, assuming full penetration of any localised Head deposits, and Made Ground.
- 7.5 The site is in a high-risk area of subsidence due to potential ground dissolution associated with the Chalk bedrock, and difficult ground conditions may be encountered, particularly in the north of site, potentially requiring ground treatment or raft/piled foundations.

Recommendations

- 7.6 Given the findings of this Desk Study, it is recommended that a Phase II Intrusive Investigation is undertaken to confirm; the underlying geology and the extent of any contamination, the completion of a ground gas risk assessment, the potential risk associated with chalk solution features and clarification of civil engineering design requirements. The investigation should be designed considering detailed development proposals and required performance criteria, and targeting identified areas of potential contamination and ground instability.
- 7.7 Further research is also recommended into the potential for dissolution features, such as provision of Chalk dissolution maps or specialist analysis. Probing will be required across the north of the site to assess the potential impact of chalk solution features.
- 7.8 It is recommended that a copy of this report is submitted to the Local Planning Authority to support the planning application for the site. Review of this report will enable the contaminated land or environmental health officer to comment as consultee to the Local Planning Officer. Future ground investigation will likely be conditioned as part of a planning permission.

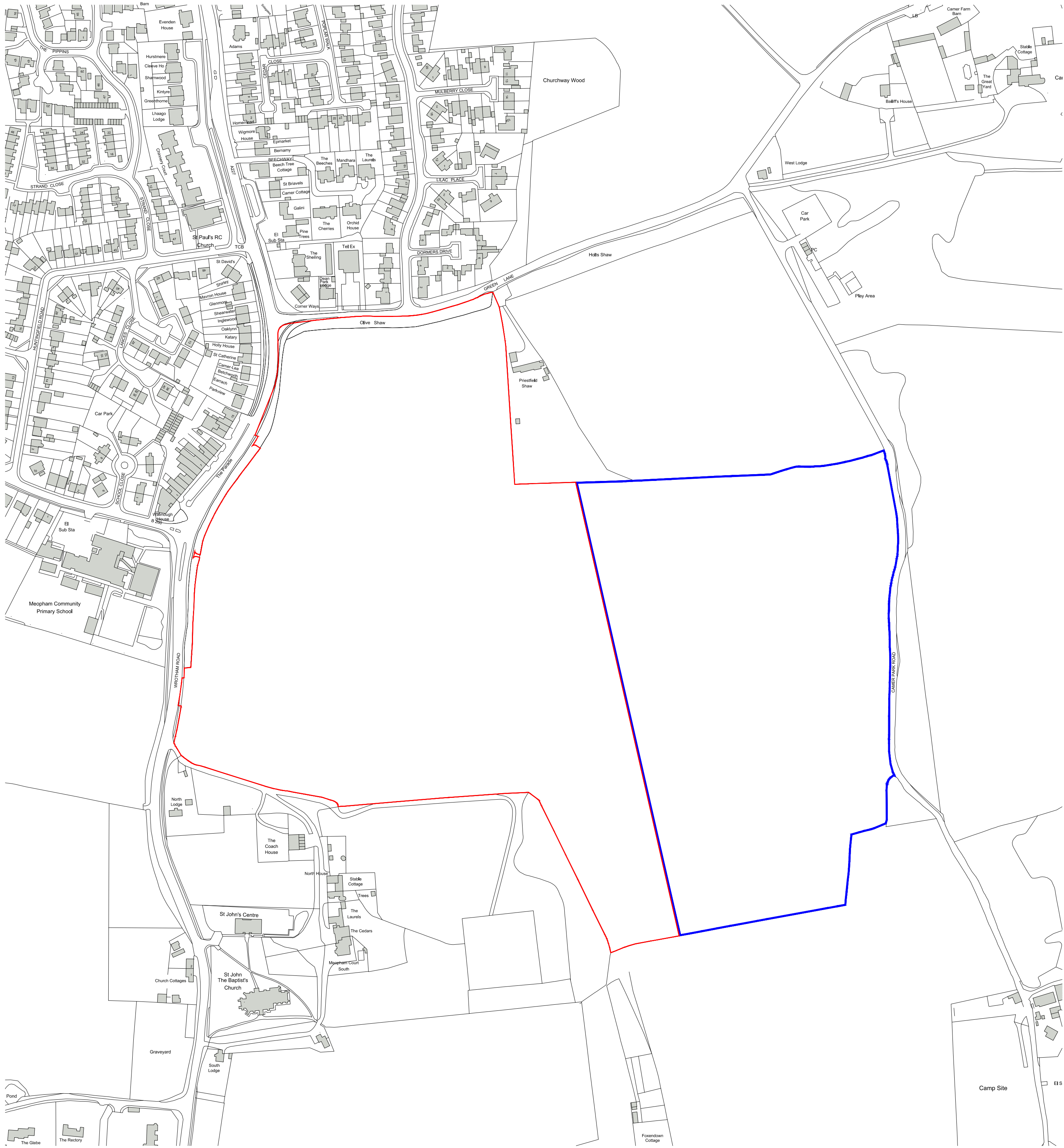


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APPENDICES



APPENDIX A



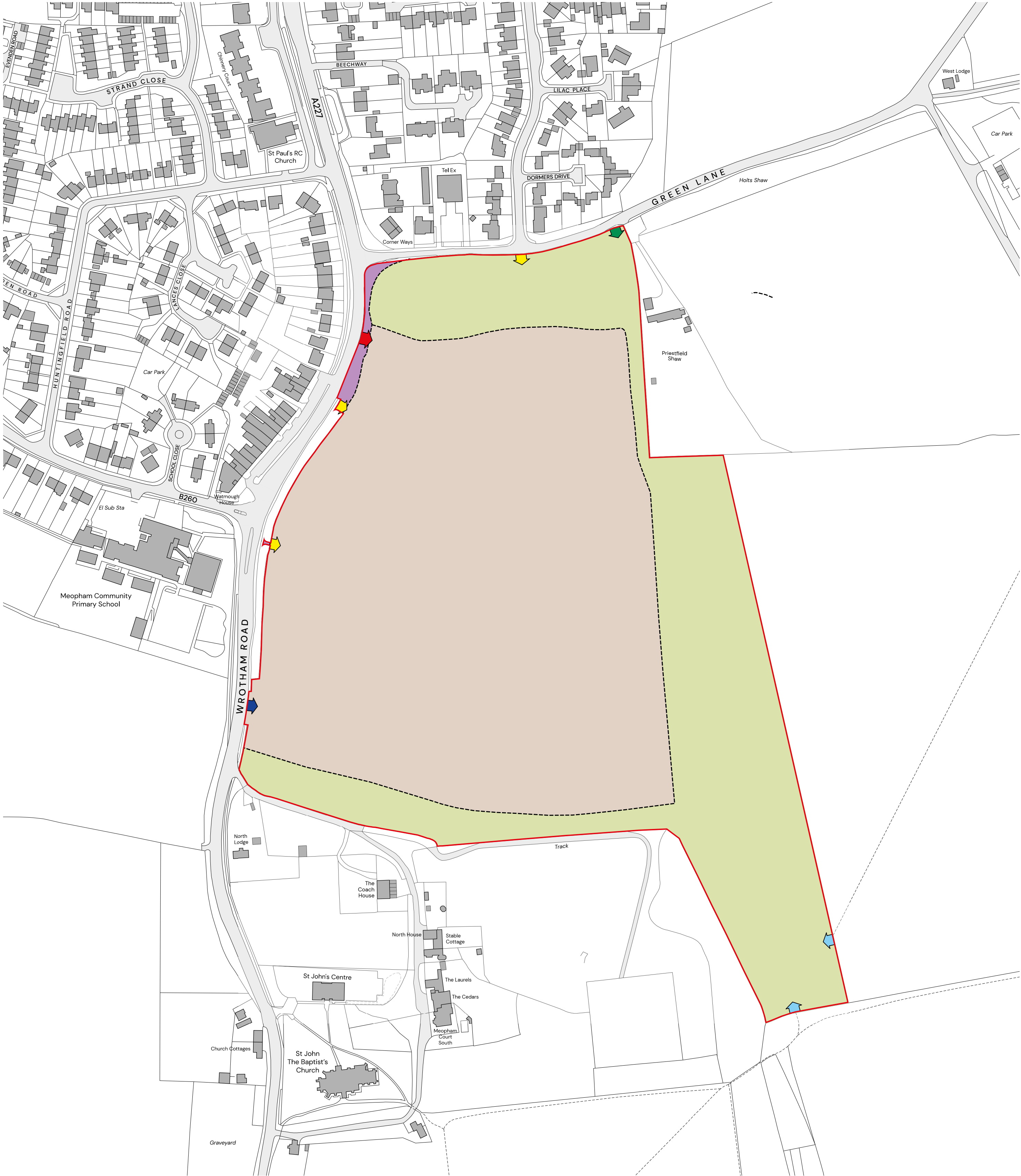
KEY

- SITE LOCATION
15.84 HECTARES / 39.14 ACRES
- OTHER LAND IN OWNERSHIP
9.93 HECTARES / 24.54 ACRES

N
0 50 100 m
REV A : RLB UPDATED. 01.09.25 (SB)
REV B : RLB UPDATED. 17.09.25 (RL)

WROTHAM ROAD, MEOPHAM – SITE BOUNDARY





LEGEND

Site boundary

LAND USE PARAMETERS

Indicative area of land required for the proposed access, not within the residential land use (subject to detailed design)

Proposed residential development (Use Class C3) (including roads, footpaths, private drives, amenity and incidental open space and other associated infrastructure, subject to detailed design)

Proposed open space (including amenity green space, children's play provision, allotments, orchard, landscaping, footpaths, drainage and other associated infrastructure, subject to detailed design)

ACCESS PARAMETERS

Proposed access/egress for all modes (subject to detailed design)

Potential access/egress for cyclists and pedestrians only (subject to detailed design)

Potential access/egress for pedestrians only (subject to detailed design)

Existing public right of way access retained

Potential emergency access for emergency vehicles and access/egress for cyclists and pedestrians (subject to detailed design)

Note: All features and areas are subject to detailed design and to a tolerance of 10m.

0

100m

REV C: Amended access and red line boundary

REV B: Amended land use areas

REV A: Amended access and land use areas

FIRST ISSUE: For client comment

19.09.2025 CM

04.09.2025 CM

03.09.2025 CM

27.08.2025 CM



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APPENDICES



APPENDIX B

Appendix B – Photographic Record

		<p><u>Site Name</u> Land East of Wrotham Road, Meopham</p> <p><u>Project No.:</u> 29473</p> <p><u>Client:</u> Richborough</p> <p><u>Site Walkover Date:</u> 10.04.2025</p>
<p>Photo1: View west along Green Lane, from site entrance.</p>	<p>Photo 2: View east along Green Lane, from site entrance.</p>	
		
<p>Photo 3: Site entrance off Green Lane.</p>	<p>Photo 4: View south-west across the western field.</p>	

Appendix B – Photographic Record

		<p><u>Site Name</u> Land East of Wrotham Road, Meopham</p> <p><u>Project No.:</u> 29473</p> <p><u>Client:</u> Richborough</p> <p><u>Site Walkover Date:</u> 10.04.2025</p>
<p>Photo 5: View north-east across the western field.</p>	<p>Photo 6: View south-east across the eastern field.</p>	
		
<p>Photo 7: View south at the boundary between the western and eastern fields</p>	<p>Photo 8: View south along the north-eastern boundary of western field</p>	

Appendix B – Photographic Record

		<p><u>Site Name</u> Land East of Wrotham Road, Meopham</p> <p><u>Project No.:</u> 29473</p> <p><u>Client:</u> Richborough</p> <p><u>Site Walkover Date:</u> 10.04.2025</p>
<p>Photo 9: View west along the southern boundary.</p>	<p>Photo 10: View west along the northern boundary.</p>	

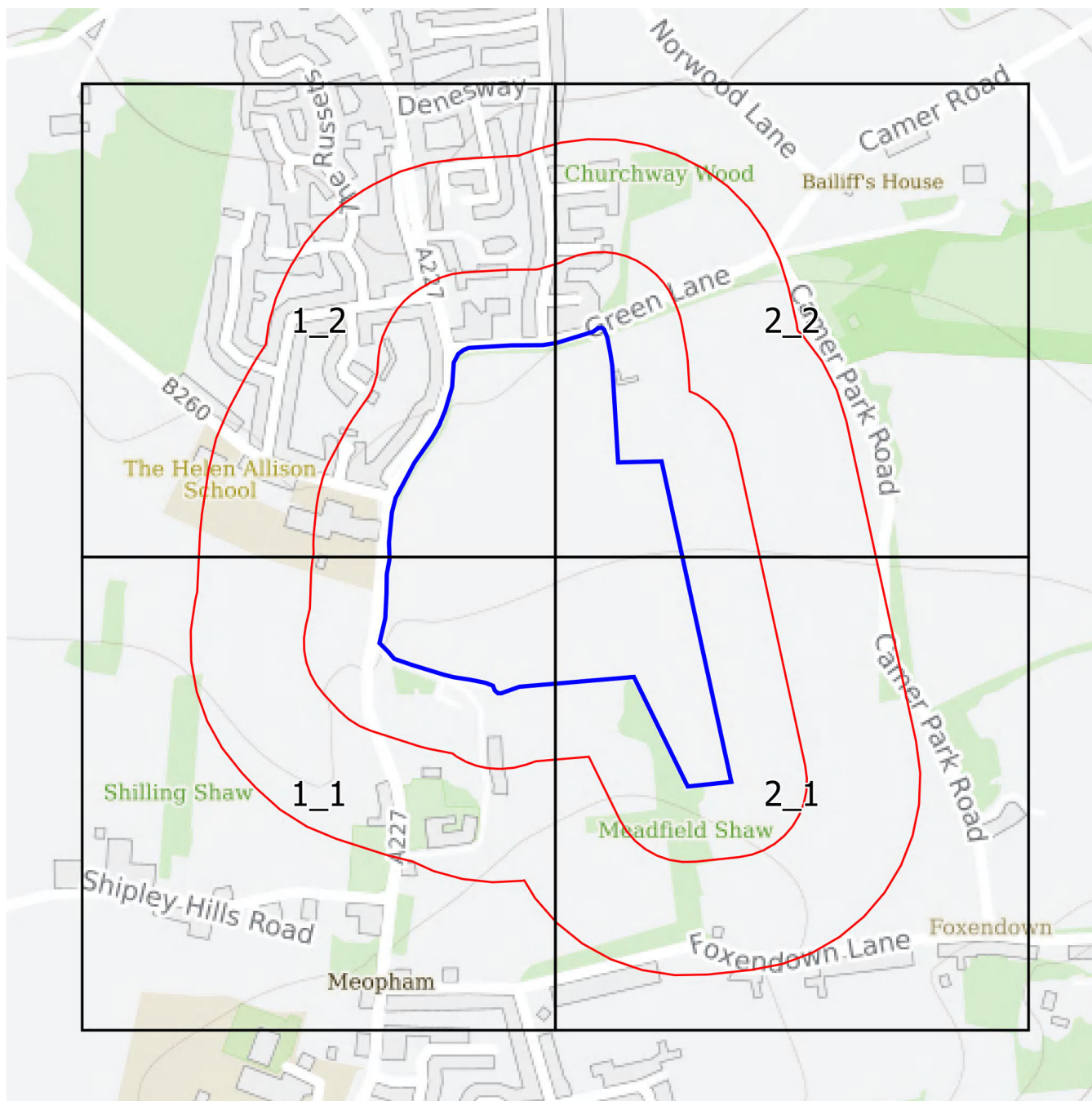


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Consulting Group

APPENDICES

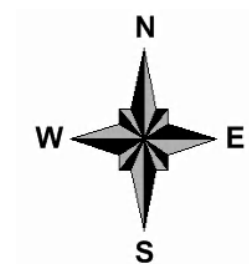


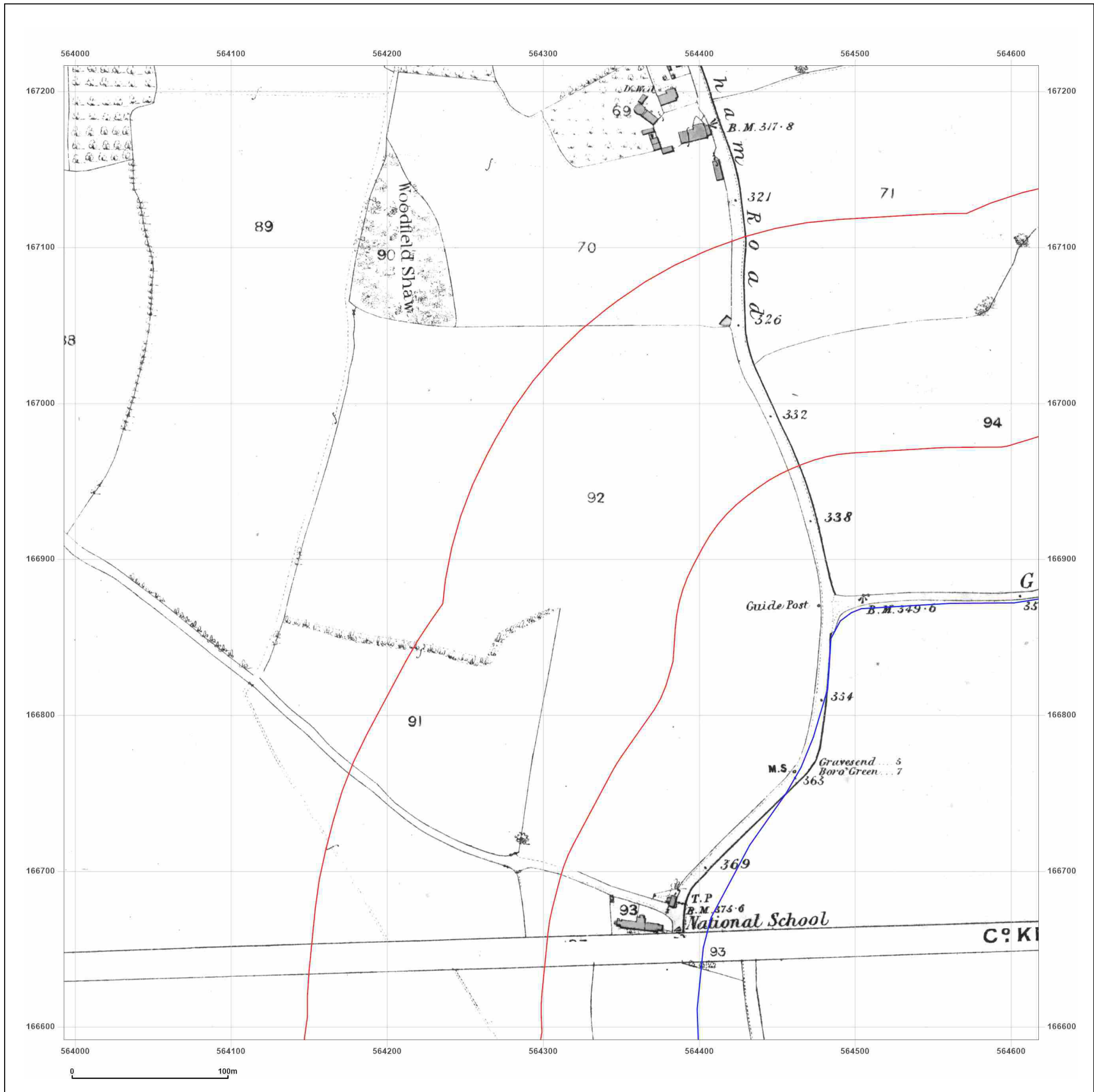
APPENDIX C



Groundsure
INSIGHTS

1:2,500 Scale Grid Index





Site Details:

Wrotham Road, Meopham (east)

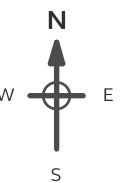
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Grid Ref: 564305, 166904

Map Name: County Series

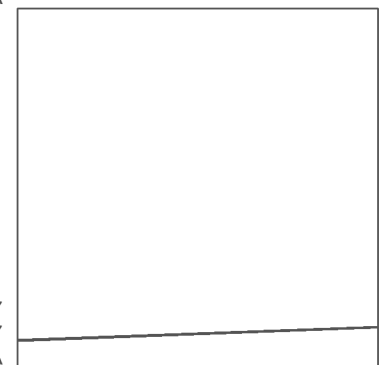
Map date: 1864-1867

Scale: 1:2,500

Printed at: 1:2,500



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Revised 1864
Edition N/A
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Surveyed 1867
Revised 1867
Edition N/A
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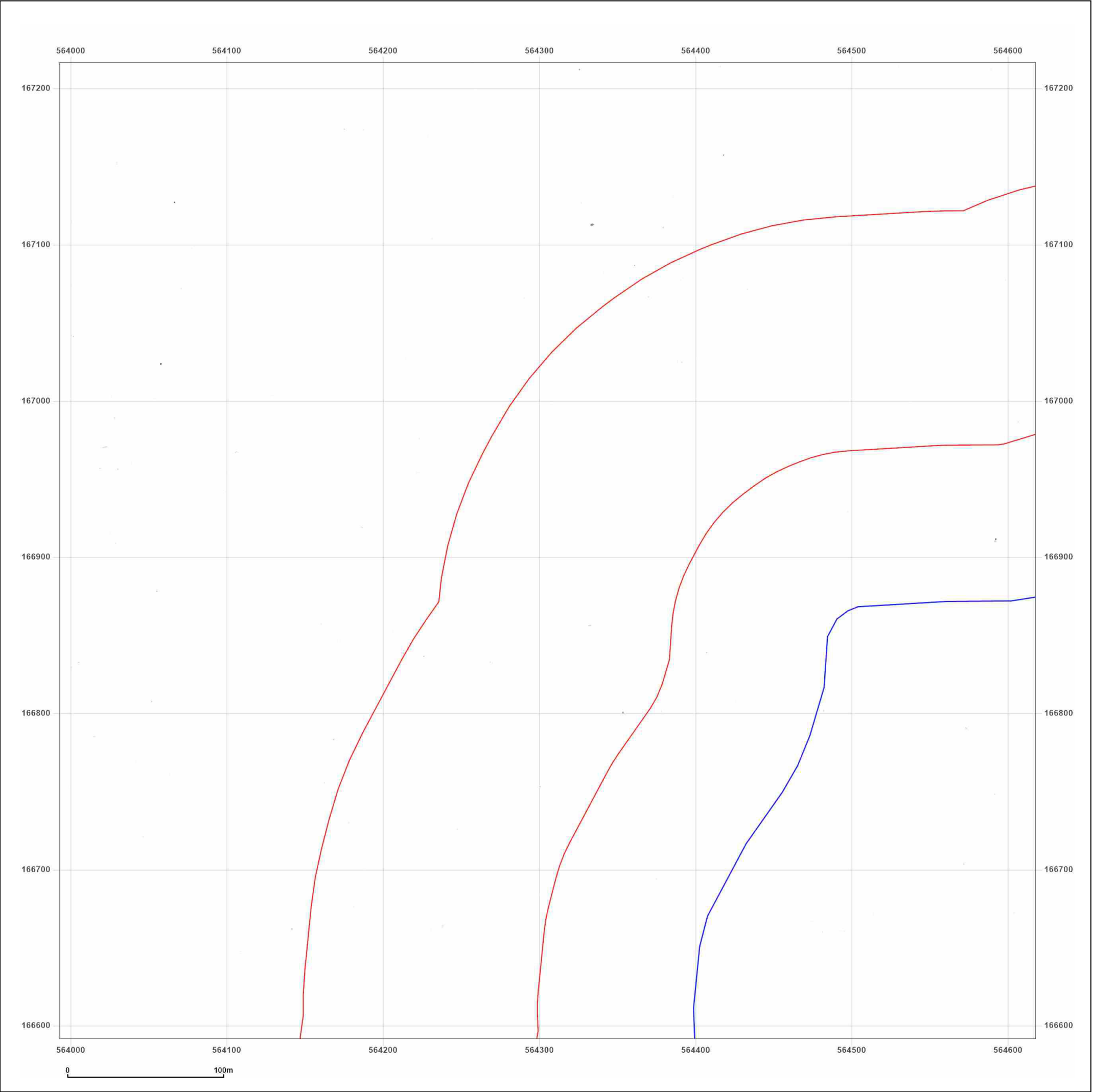


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Site Details:

Wrotham Road, Meopham (east)

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Report Ref: GS-2NS-ZR7-S4A-T5V_LS_1_2
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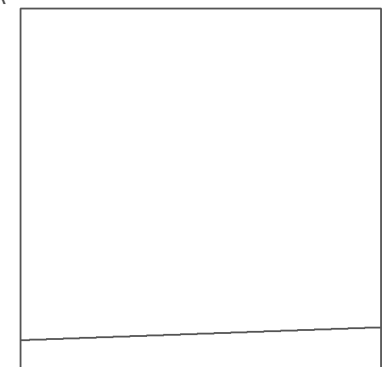
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Scale: 1:2,500

Printed at: 1:2,500



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

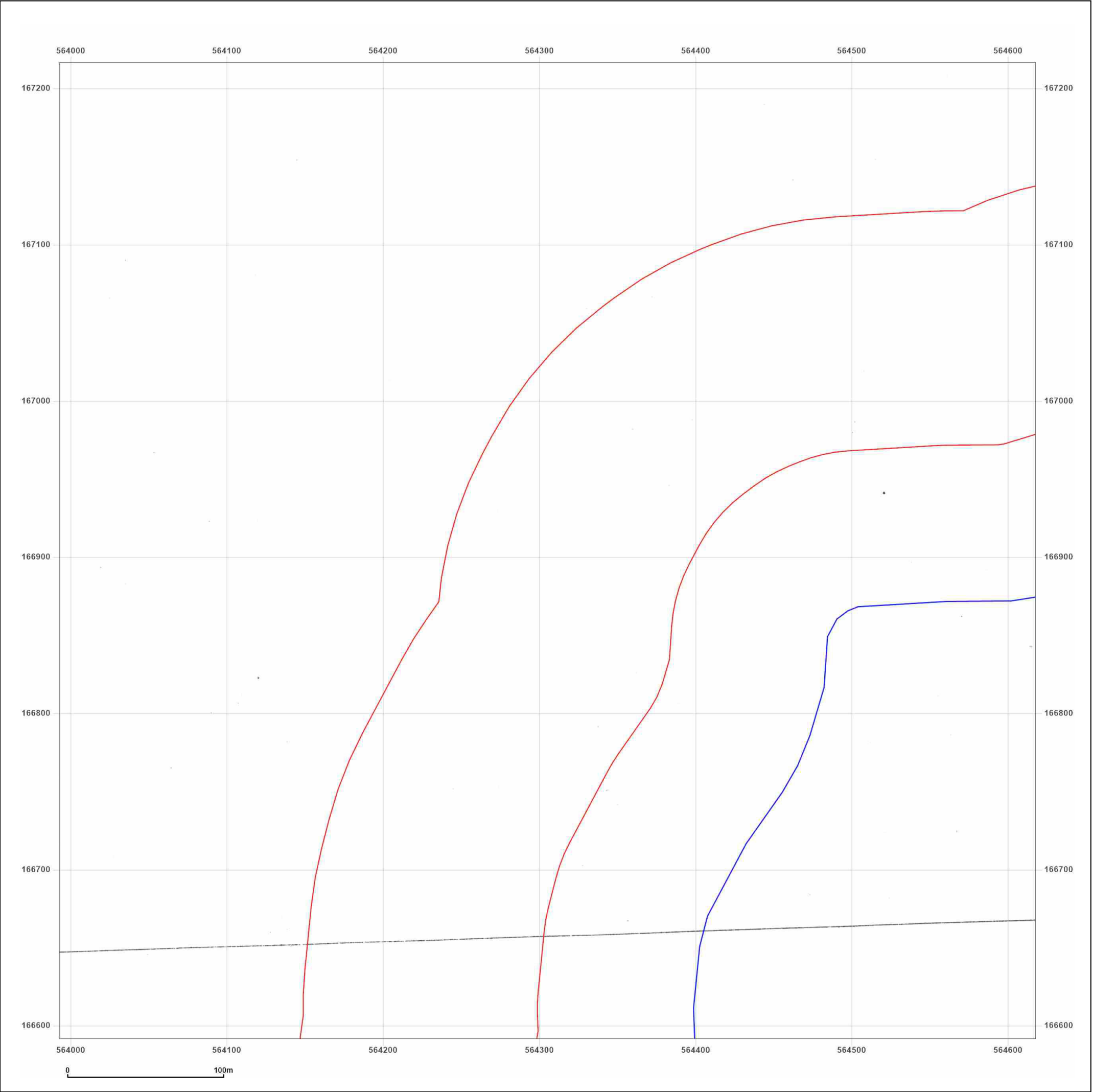


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Site Details:

Wrotham Road, Meopham (east)

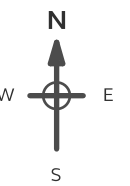
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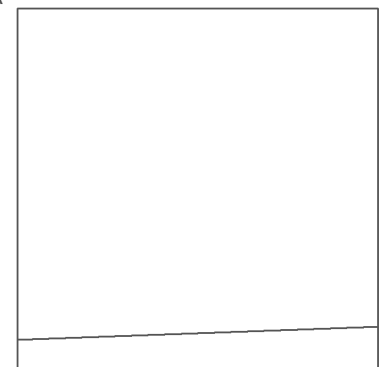
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Scale: 1:2,500

Printed at: 1:2,500



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Site Details:

Wrotham Road, Meopham (east)

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Report Ref: GS-2NS-ZR7-S4A-T5V_LS_1_2
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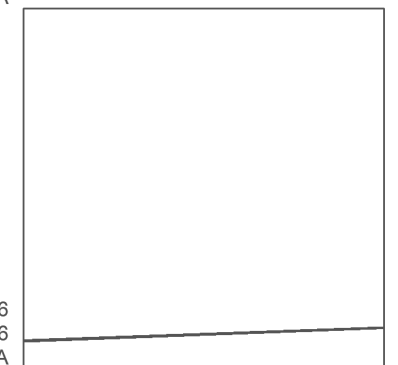
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Printed at: 1:2,500



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

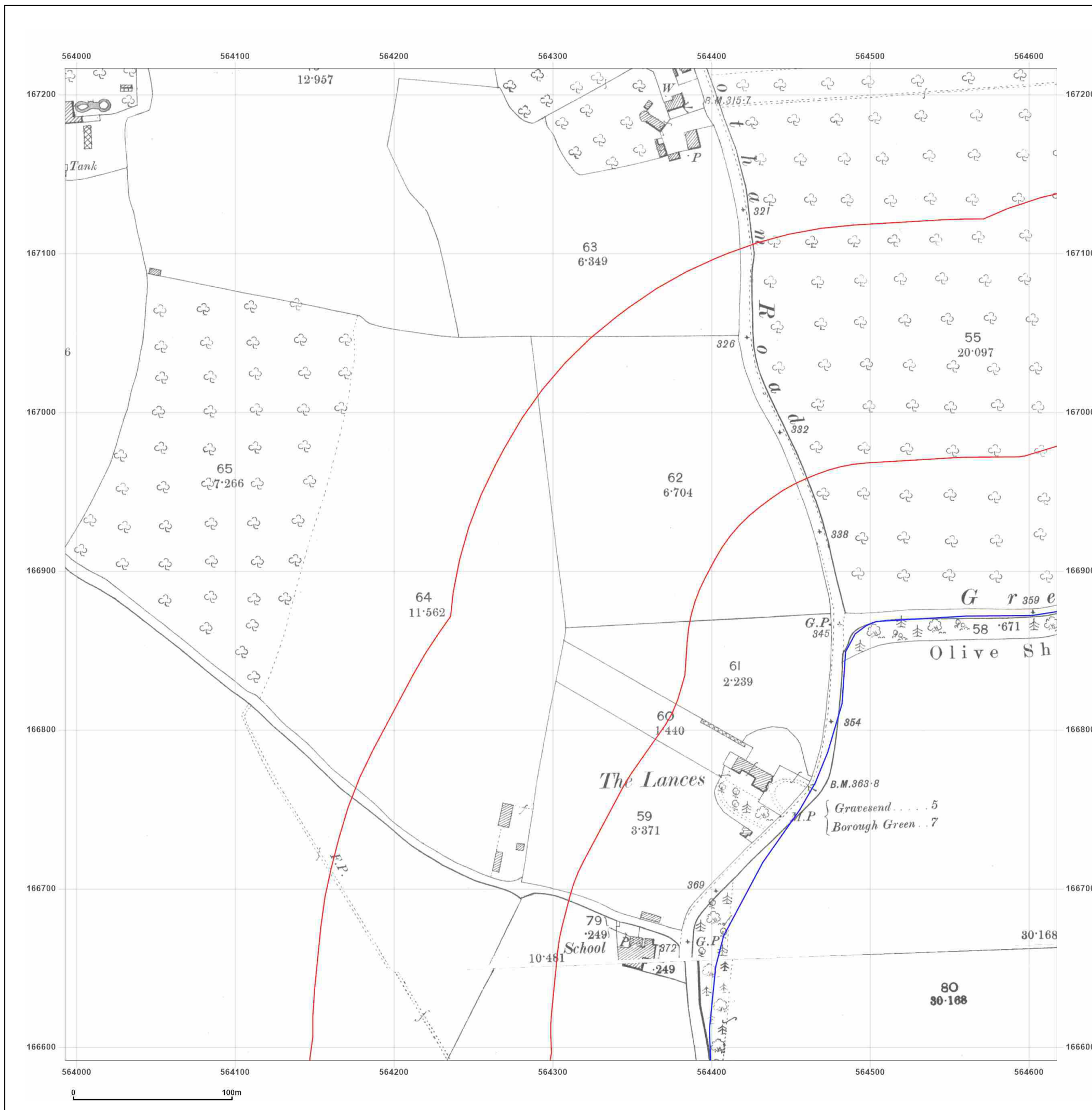


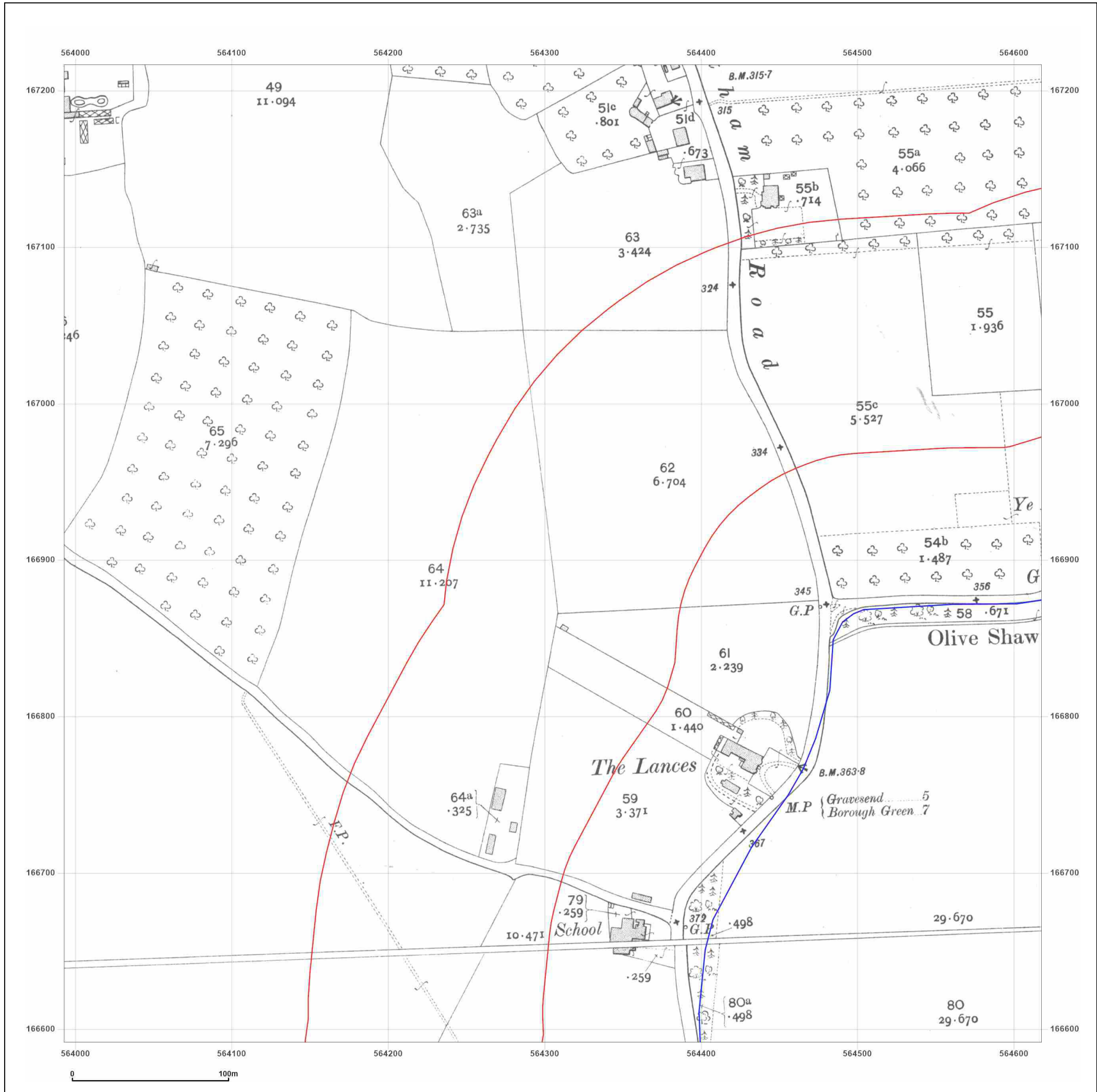
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Site Details:

Wrotham Road, Meopham (east)

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Report Ref: GS-2NS-ZR7-S4A-T5V_LS_1_2
Grid Ref: 564305, 166904

Map Name: County Series
Map date: 1908
Scale: 1:2,500
Printed at: 1:2,500

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Wrotham Road, Meopham (east)

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Report Ref: GS-2NS-ZR7-S4A-T5V_LS_1_2
Grid Ref: 564305, 166904

Map Name: County Series

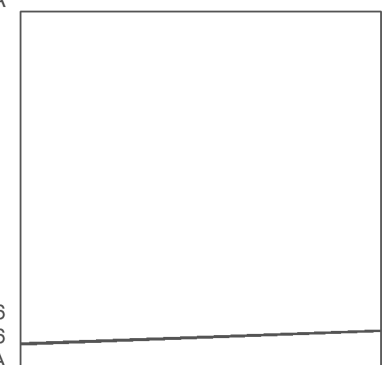
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Scale: 1:2,500

Printed at: 1:2,500



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 Edition N/A
 Copyright N/A
 Levelled N/A



Surveyed 1936
 Revised 1936
 Edition N/A
 Copyright N/A
 Levelled N/A

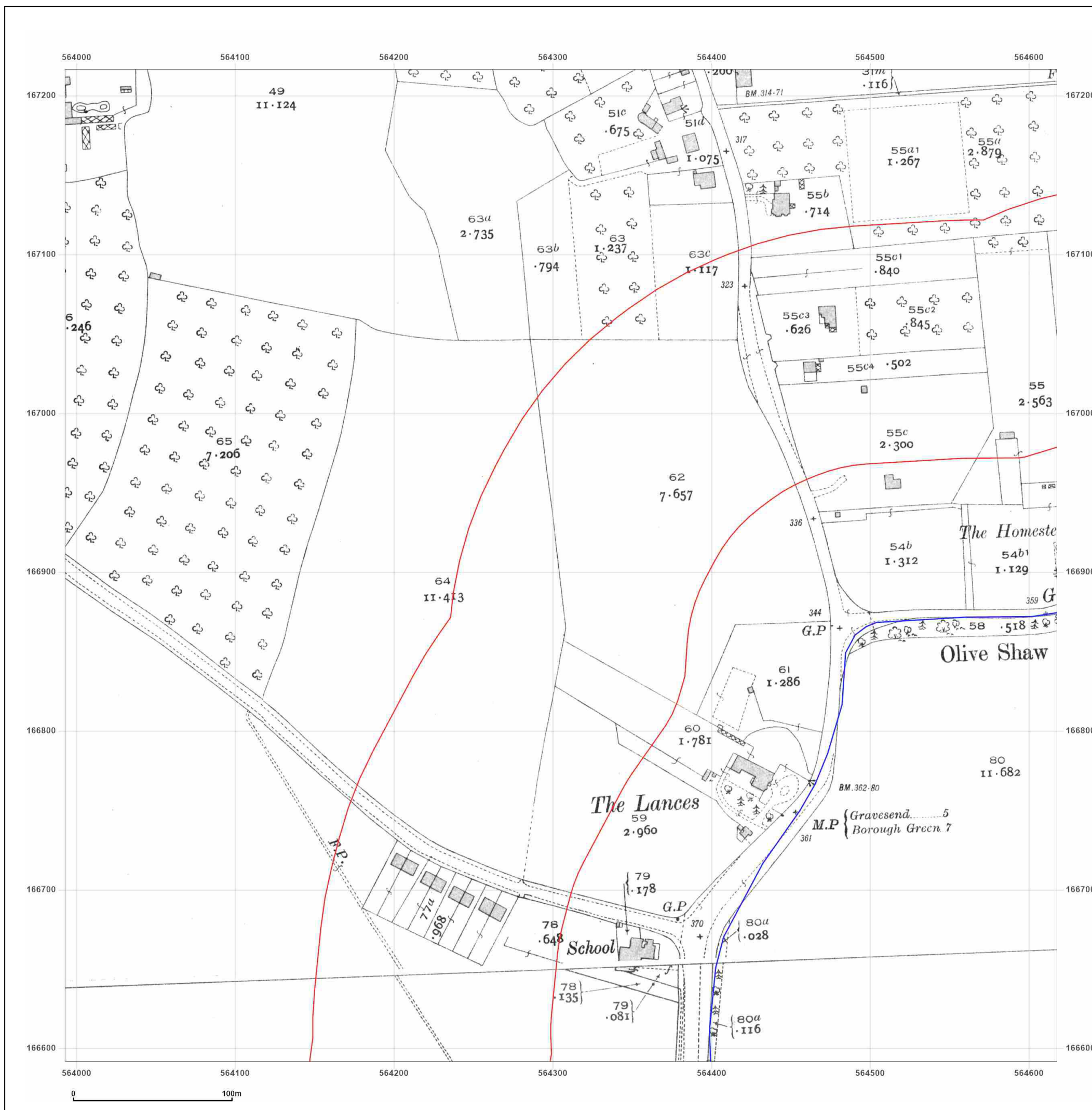


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Site Details:

Wrotham Road, Meopham (east)

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Report Ref: GS-2NS-ZR7-S4A-T5V_LS_1_2
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Map Name: County Series

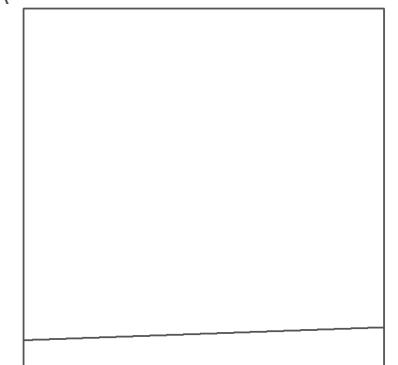
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Surveyed 1939
 Revised 1939
 Edition N/A
 Copyright N/A
 Levelled N/A

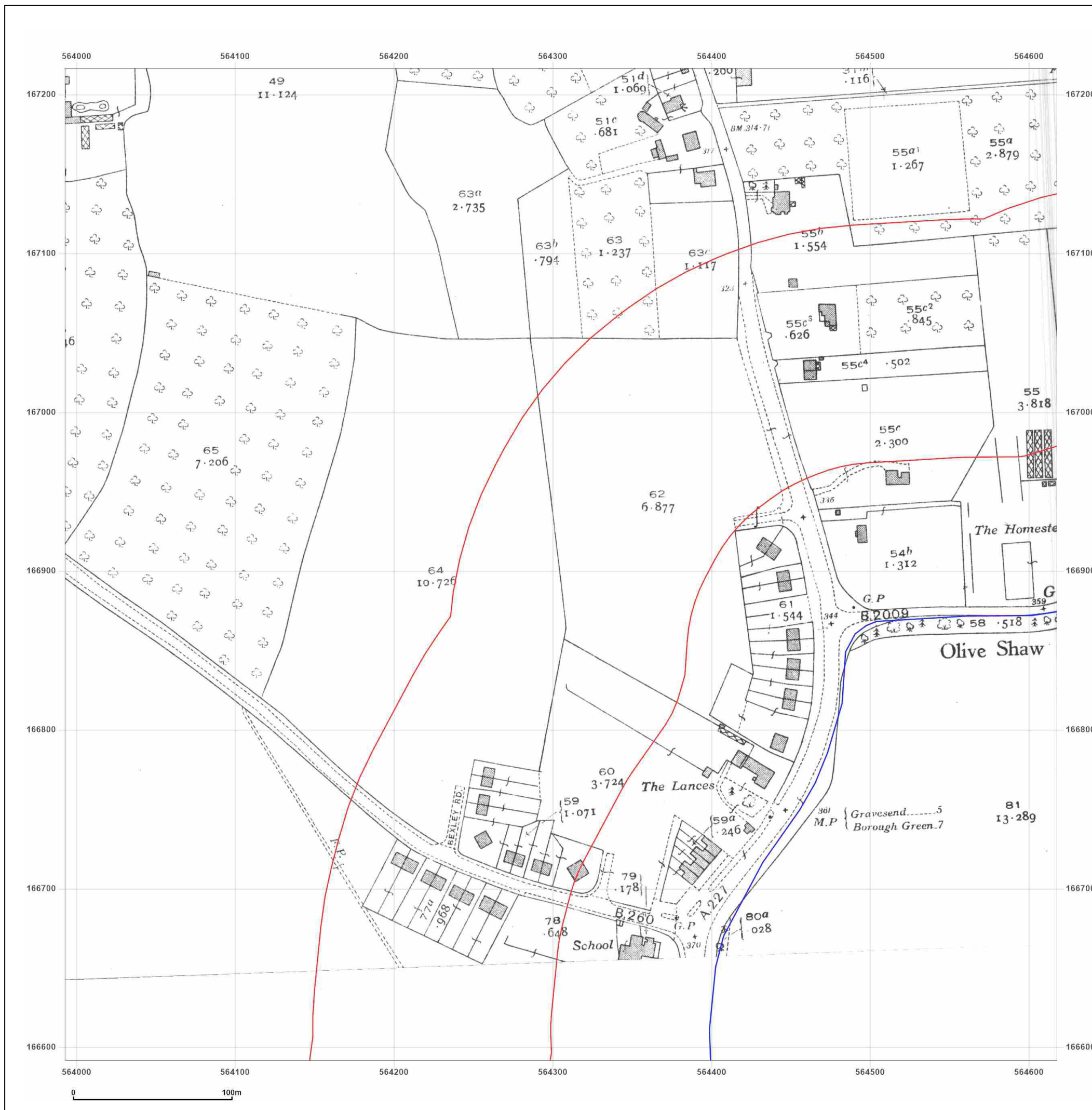


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Client Ref: 29473 east
Report Ref: GS-2NS-ZR7-S4A-T5V_LS_1_2
Grid Ref: 564305, 166904

Map Name: National Grid

Map date: 1960-1964

Scale: 1:2,500

Printed at: 1:2,500



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Surveyed 1960
Revised 1960
Edition N/A
Copyright 1960
Levelled 1952

Surveyed 1962
Revised 1962
Edition N/A
Copyright 1964
Levelled 1952

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



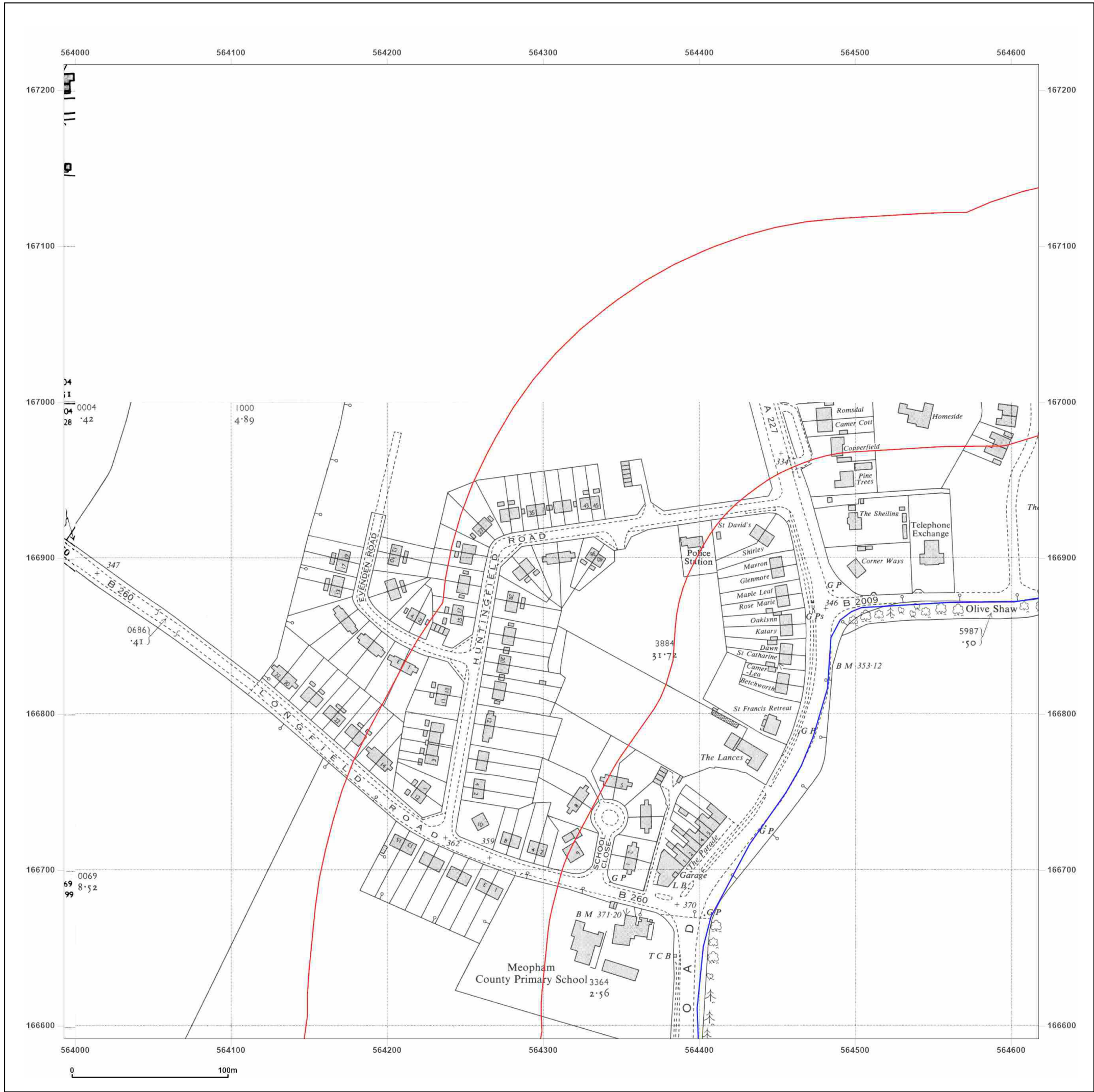
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Client Ref: 29473 east
Report Ref: GS-2NS-ZR7-S4A-T5V_LS_1_2
Grid Ref: 564305, 166904

Map Name: National Grid
Map date: 1961-1964
Scale: 1:2,500
Printed at: 1:2,500



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Client Ref: 29473 east
Report Ref: GS-2NS-ZR7-S4A-T5V_LS_1_2
Grid Ref: 564305, 166904

Map Name: National Grid

Map date: 1968-1973

Scale: 1:2,500

Printed at: 1:2,500



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Edition N/A
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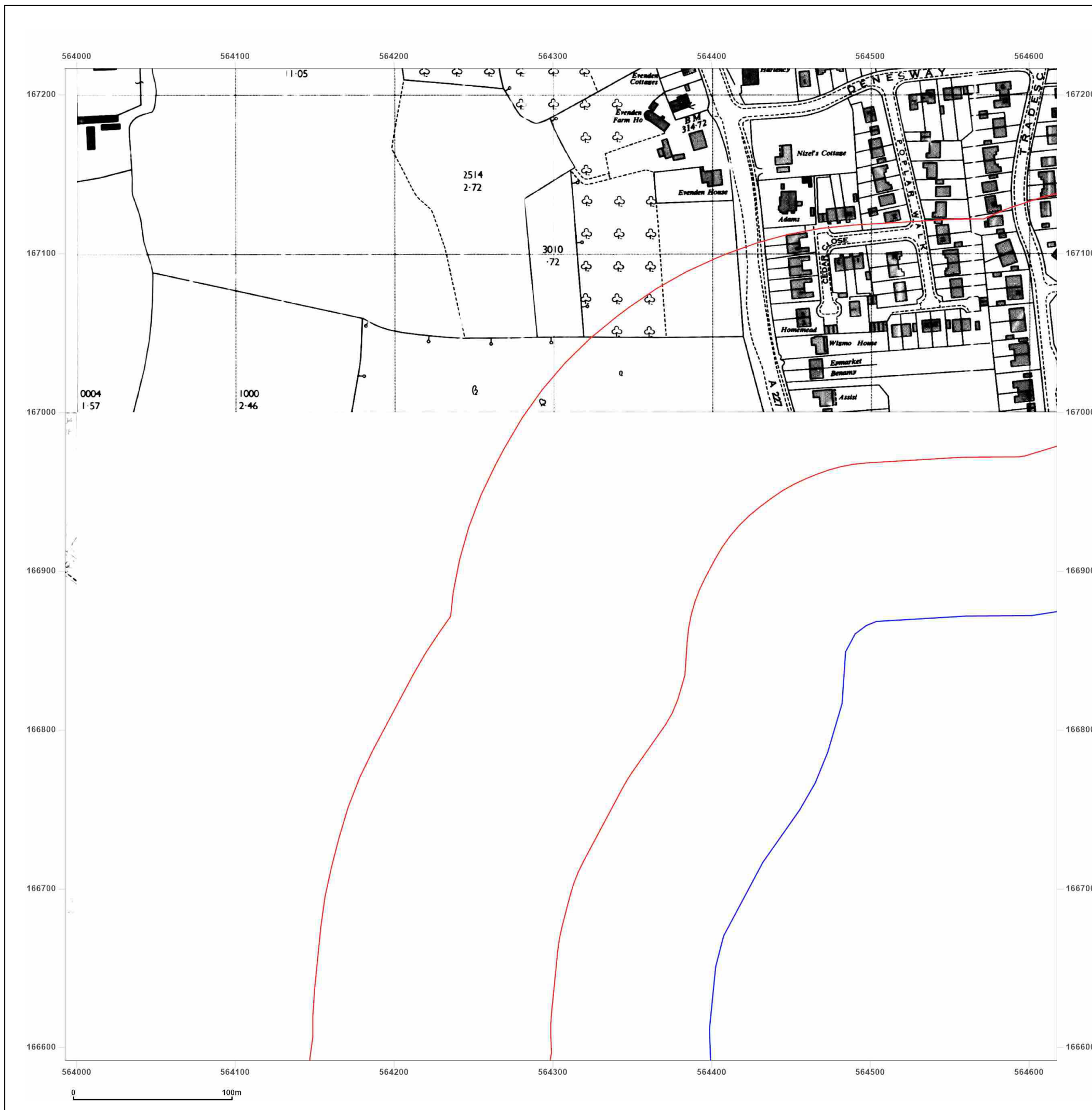


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Client Ref: 29473 east
Report Ref: GS-2NS-ZR7-S4A-T5V_LS_1_2
Grid Ref: 564305, 166904

Map Name: National Grid

Map date: 1974-1979

Scale: 1:2,500

Printed at: 1:2,500



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Surveyed N/A
Revised N/A
Edition N/A
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Client Ref: 29473 east
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Grid Ref: 564305, 166904

Map Name: National Grid

Map date: 1975-1979

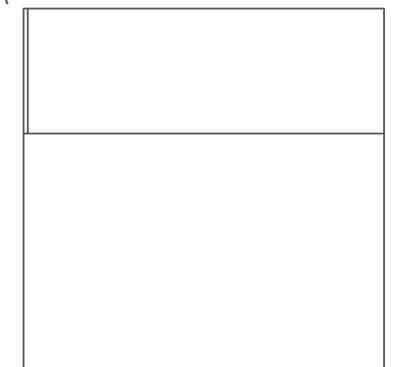
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Printed at: 1:2,500



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Edition N/A
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Surveyed 1974
Revised 1974
Edition N/A
Copyright 1975
Levelled 1952

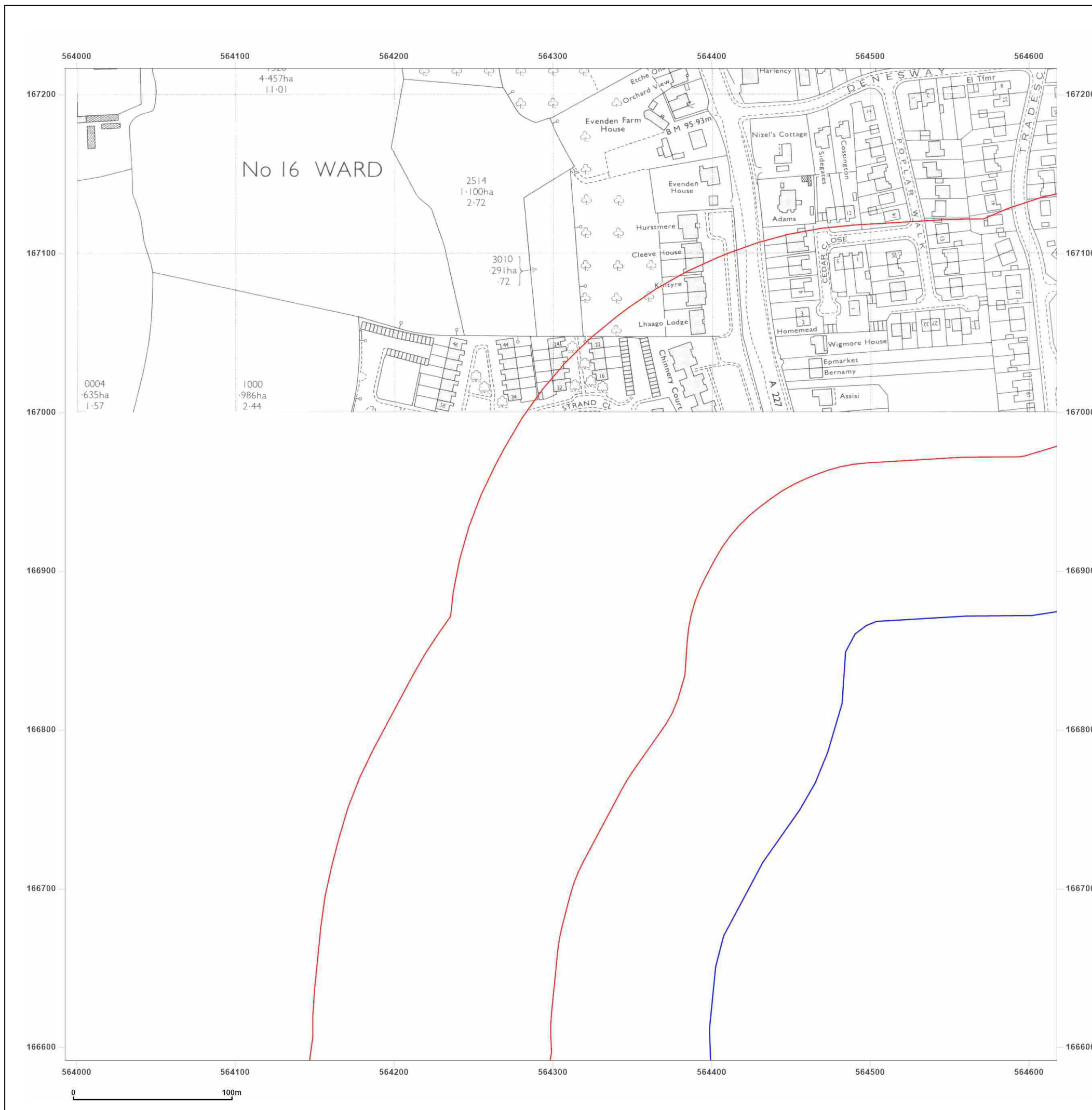


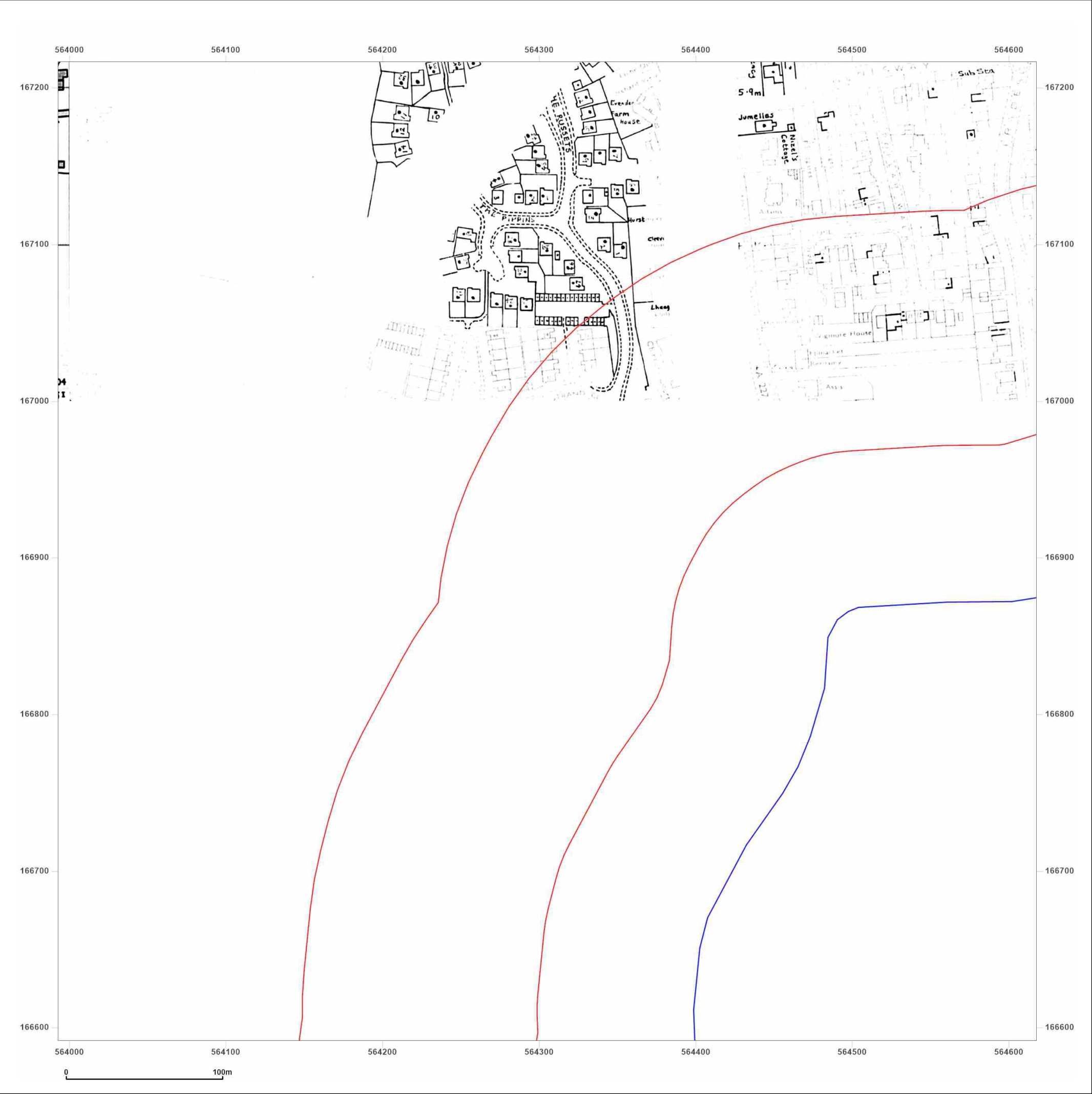
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Site Details:

Wrotham Road, Meopham (east)

Client Ref: 29473 east
Report Ref: GS-2NS-ZR7-S4A-T5V_LS_1_2
Grid Ref: 564305, 166904

Map Name: National Grid

Map date: 1984-1987

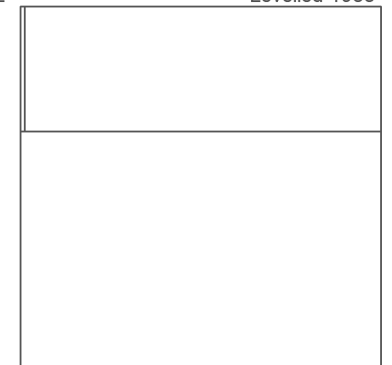
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Edition N/A
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Site Details:

Wrotham Road, Meopham (east)

Client Ref: 29473 east
Report Ref: GS-2NS-ZR7-S4A-T5V_LS_2_2
Grid Ref: 564931, 166904

Map Name: County Series

Map date: 1864-1867

Scale: 1:2,500

Printed at: 1:2,500



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 Copyright N/A
 Levelled N/A

Surveyed 1864
 Revised 1864
 Edition N/A
 Copyright N/A
 Levelled N/A

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

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

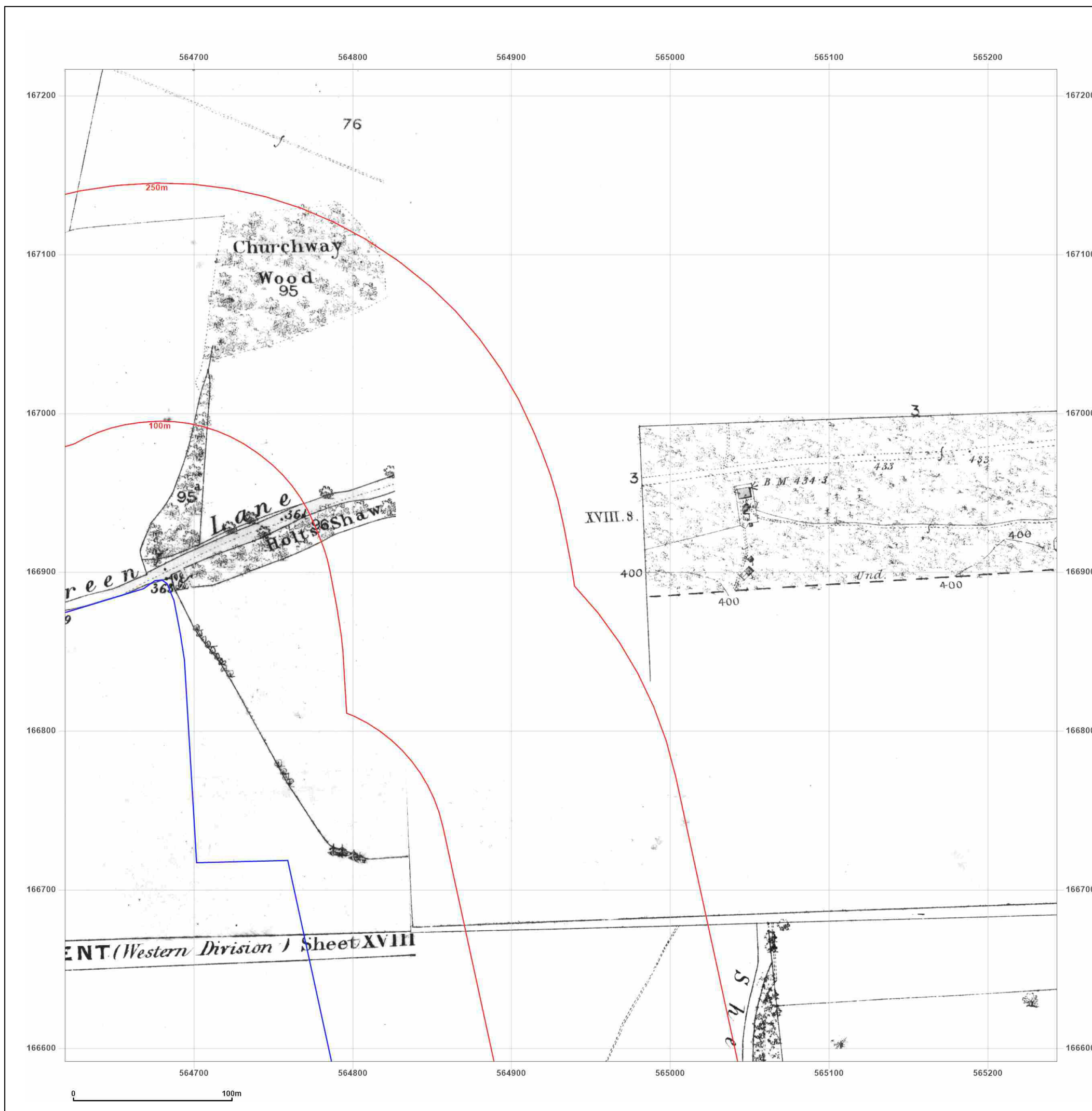


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Site Details:

Wrotham Road, Meopham (east)

Client Ref: 29473 east

Report Ref: GS-2NS-ZR7-S4A-T5V_LS_2_2

Grid Ref: 564931, 166904

Map Name: County Series

Map date: 1864-1868

Scale: 1:2,500

Printed at: 1:2,500

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Copyright N/A
Levelled N/A

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Revised 1864
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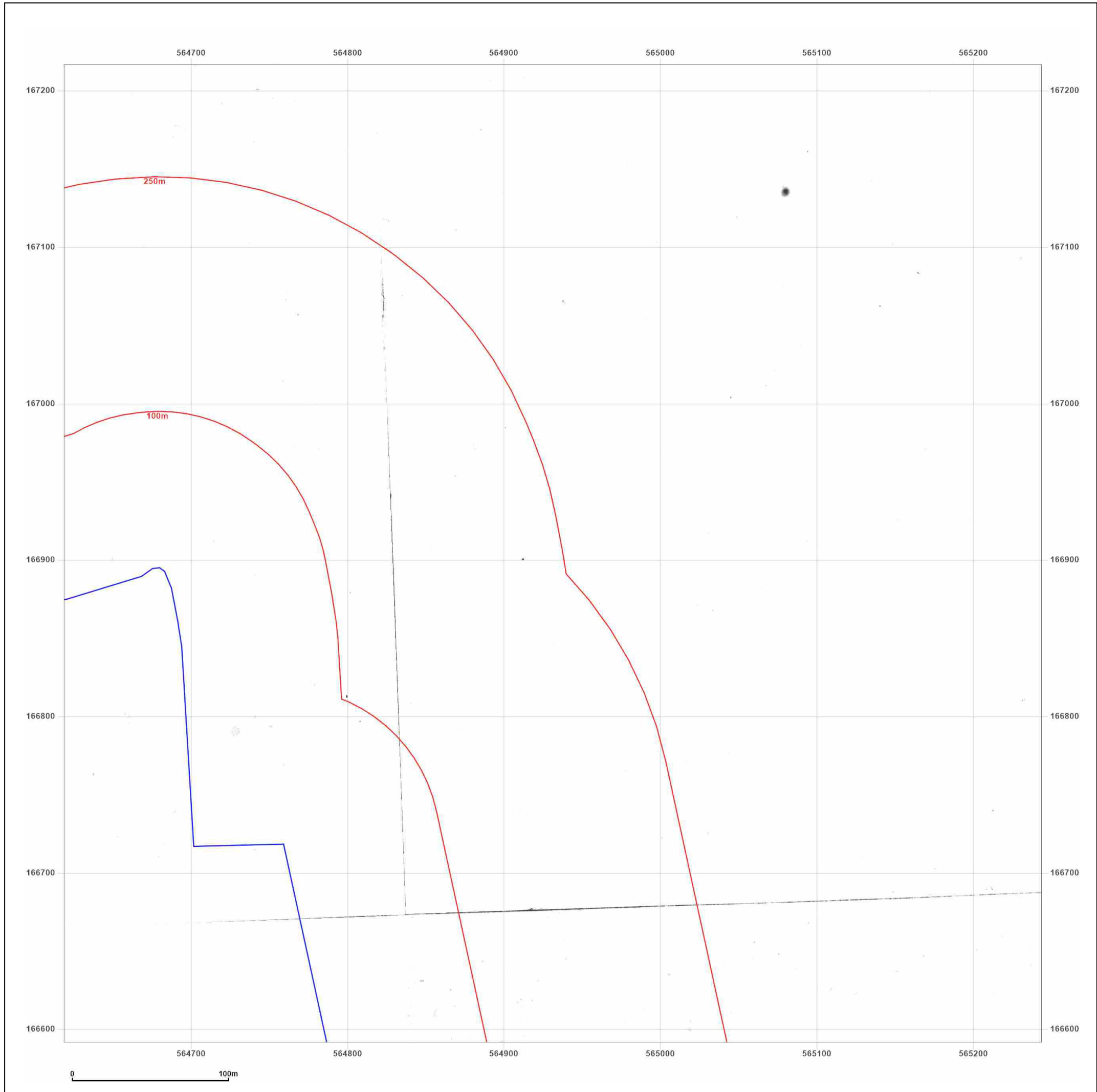
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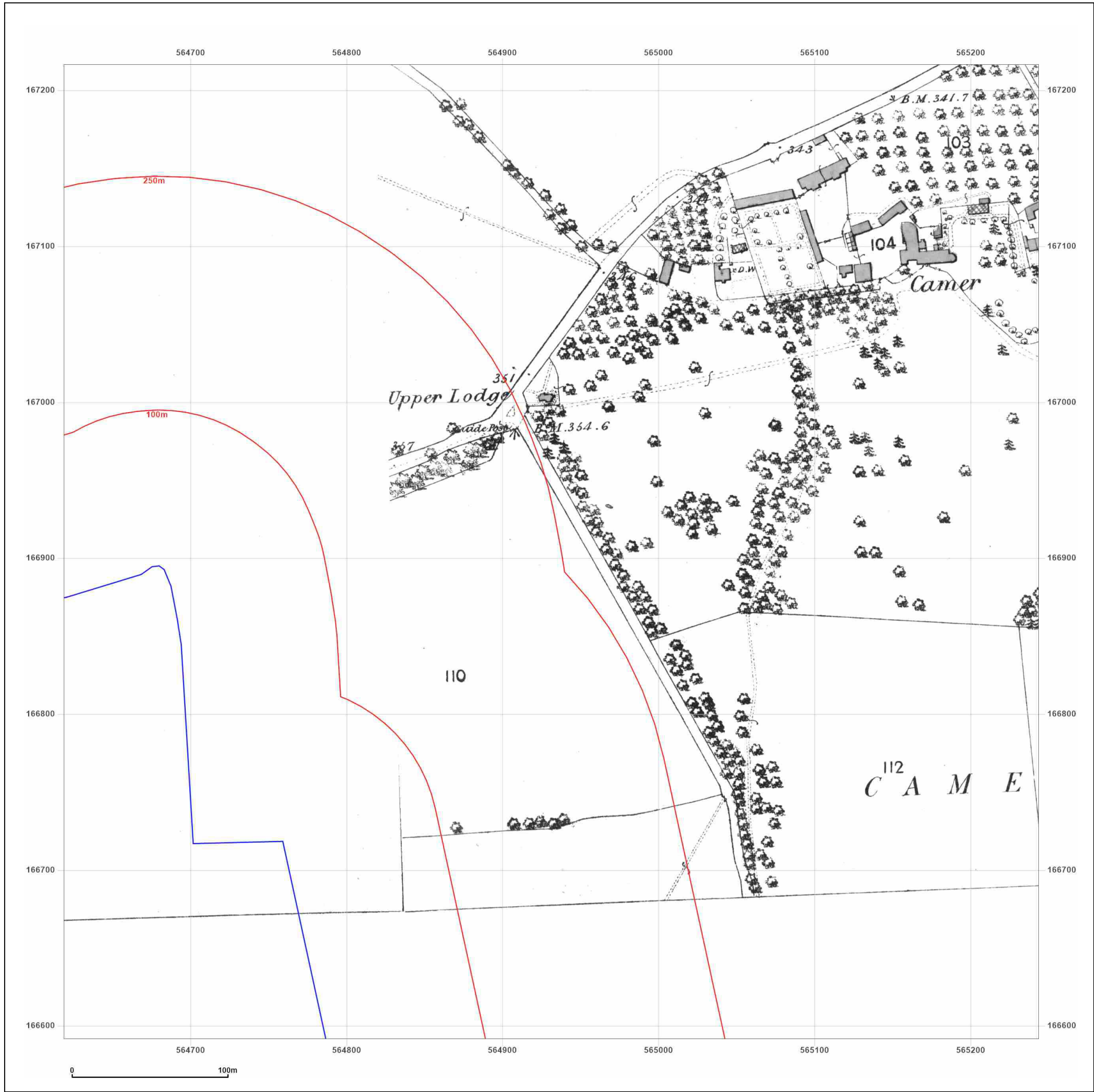
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Production date: 18 March 2025

Map legend available at:
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The figure is a topographic map of a rural area. It features a grid with easting coordinates (564700 to 565200) and northing coordinates (166600 to 167200). Two red contour lines are shown, labeled '250m' and '100m'. A blue line, likely representing a boundary or a path, starts at the bottom left, rises to a peak, and then descends. A scale bar at the bottom left indicates a distance of 100 meters. The map is overlaid on a background of aerial imagery.



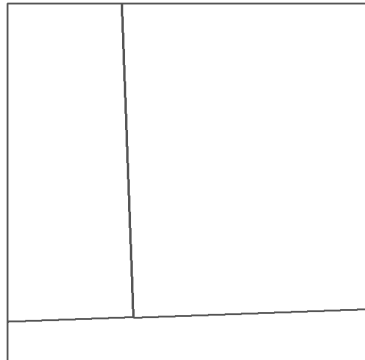
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Wrotham Road, Meopham (east)

Client Ref: 29473 east
Report Ref: GS-2NS-ZR7-S4A-T5V_LS_2_2
Grid Ref: 564931, 166904

Map Name: County Series
Map date: 1865-1868
Scale: 1:2,500
Printed at: 1:2,500



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Edition N/A
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Revised 1865
Edition N/A
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Wrotham Road, Meopham (east)

Client Ref: 29473 east
Report Ref: GS-2NS-ZR7-S4A-T5V_LS_2_2
Grid Ref: 564931, 166904

Map Name: County Series

Map date: 1896

Scale: 1:2,500

Printed at: 1:2,500



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Edition N/A
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Levelled N/A

Surveyed 1896
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Edition N/A
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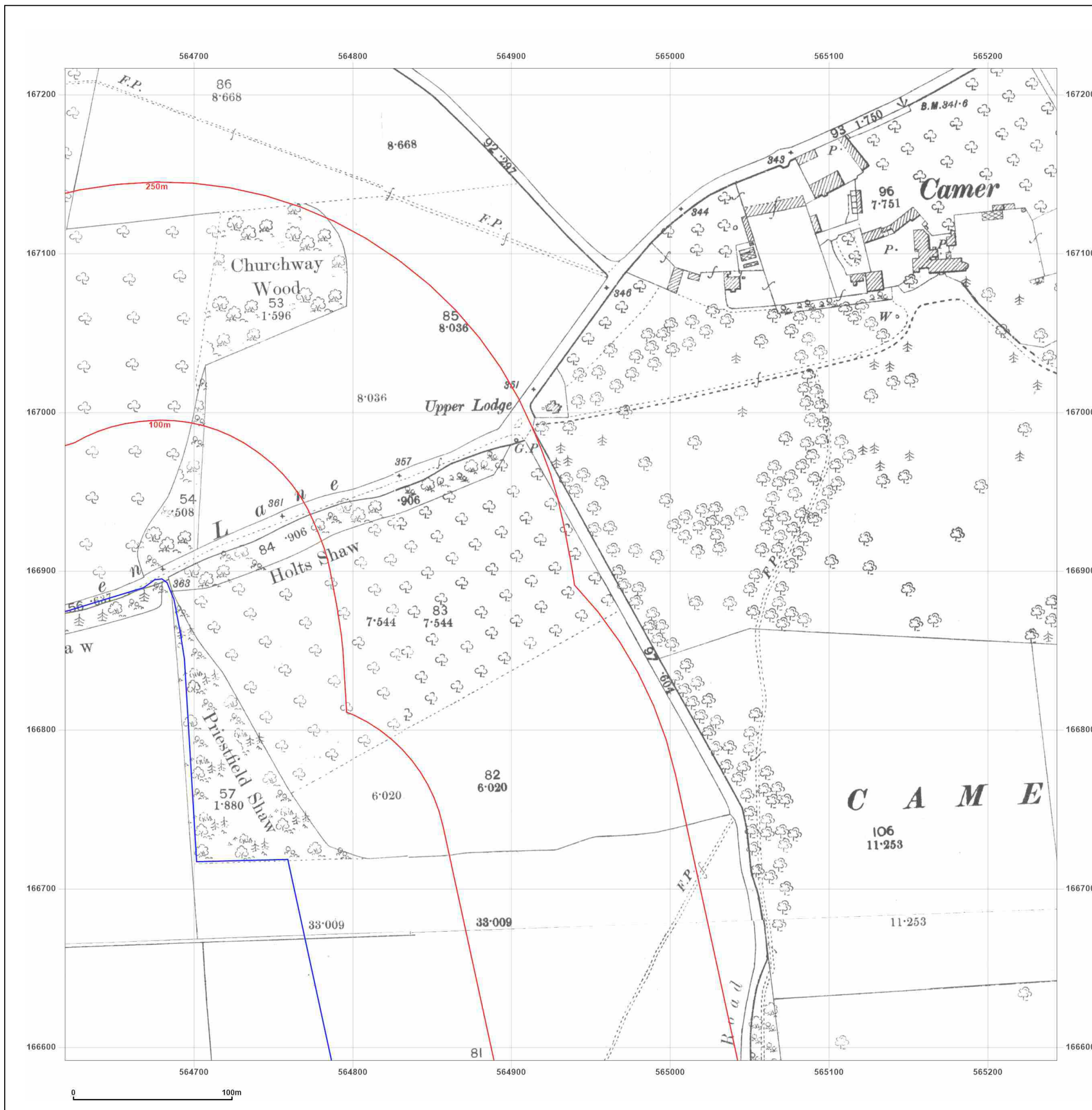


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Site Details:

Wrotham Road, Meopham (east)

Client Ref: 29473 east
Report Ref: GS-2NS-ZR7-S4A-T5V_LS_2_2
Grid Ref: 564931, 166904

Map Name: County Series

Map date: 1908

Scale: 1:2,500

Printed at: 1:2,500



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 Revised 1908
 Edition N/A
 Copyright N/A
 Levelled N/A

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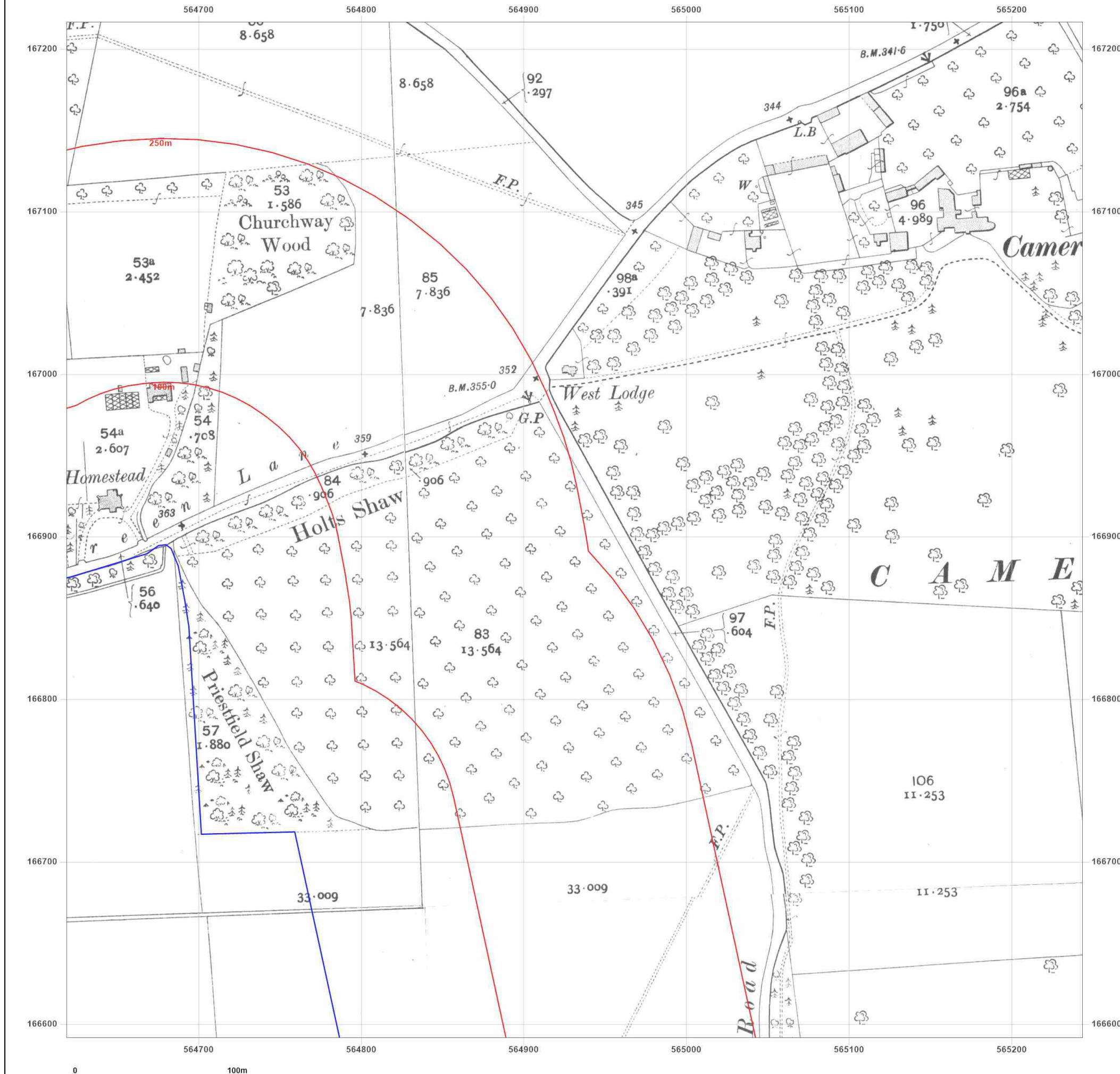


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Site Details:

Wrotham Road, Meopham (east)

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Map Name: County Series

Map date: 1933-1936

Scale: 1:2,500

Printed at: 1:2,500



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 Edition N/A
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 Levelled N/A

Surveyed 1936
 Revised 1936
 Edition N/A
 Copyright N/A
 Levelled N/A

Surveyed 1936
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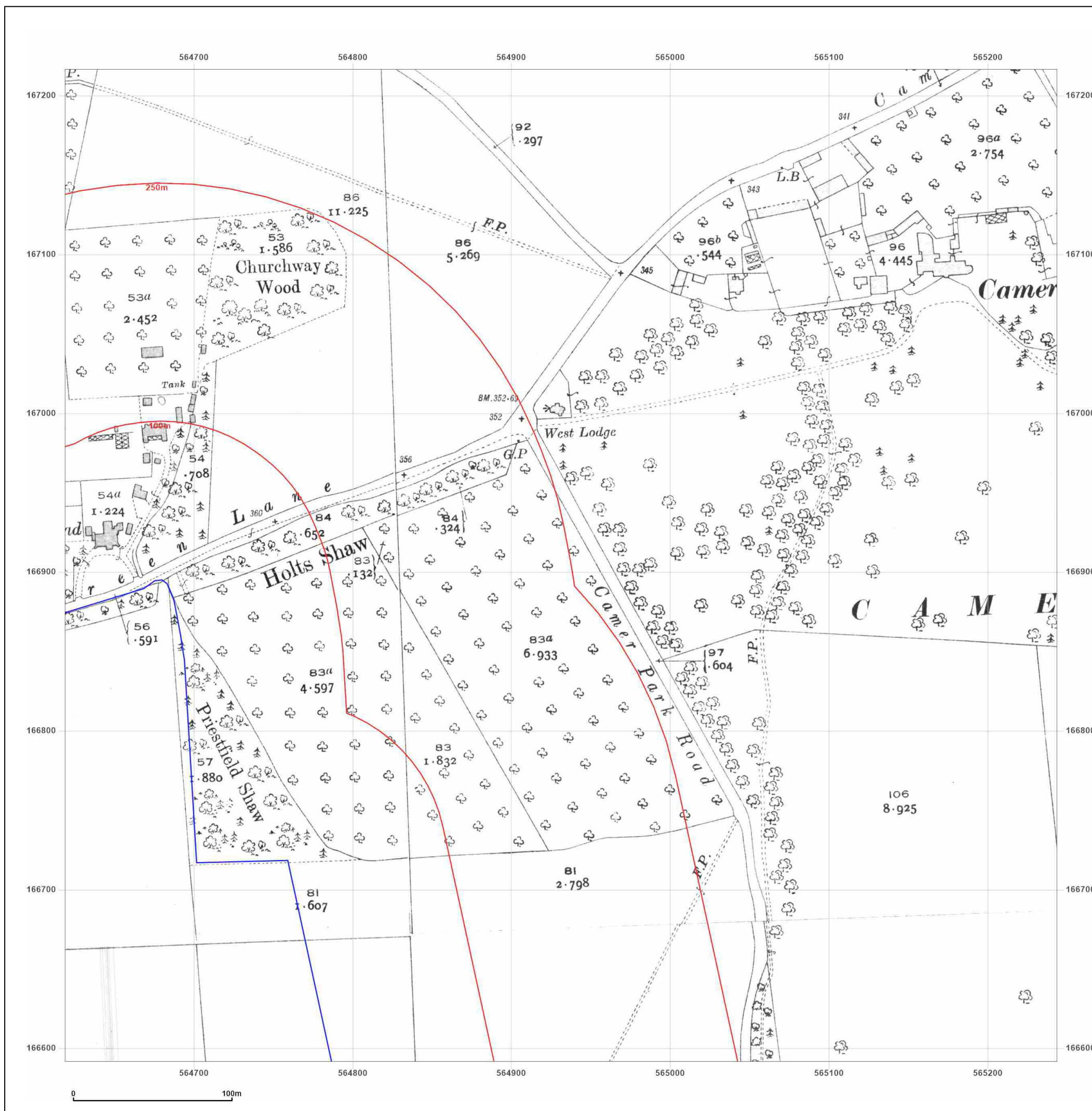


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Site Details:

Wrotham Road, Meopham (east)

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Report Ref: GS-2NS-ZR7-S4A-T5V_LS_2_2
Grid Ref: 564931, 166904

Map Name: County Series

Map date: 1939

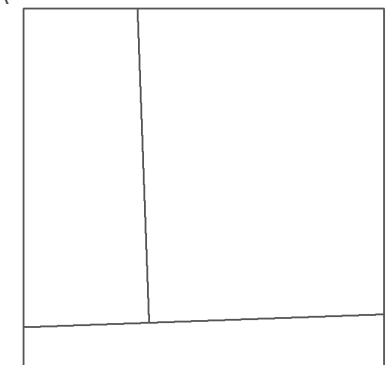
Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1939
 Revised 1939
 Edition N/A
 Copyright N/A
 Levelled N/A

Surveyed 1939
 Revised 1939
 Edition N/A
 Copyright N/A
 Levelled N/A

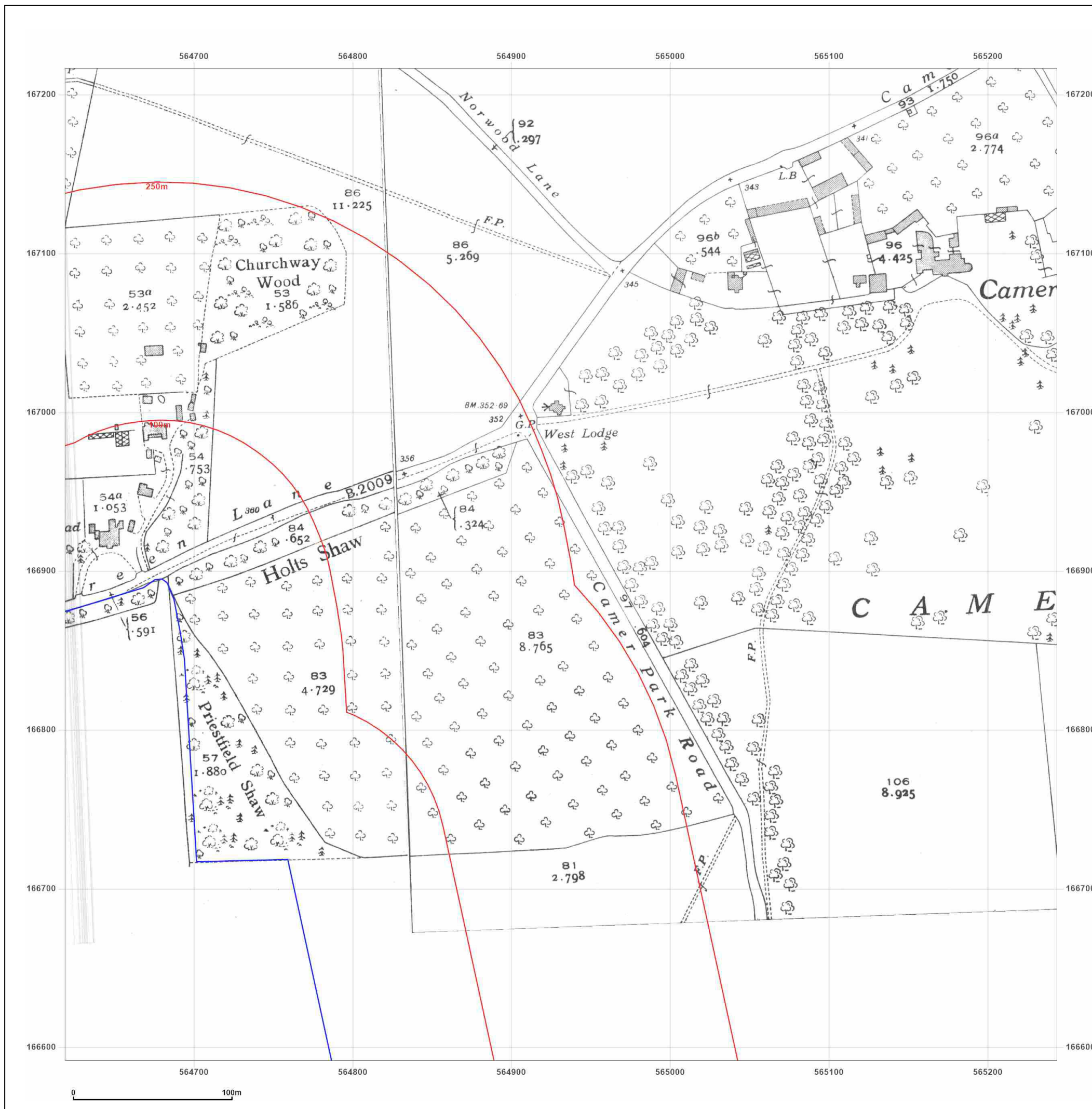


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Site Details:

Wrotham Road, Meopham (east)

Client Ref: 29473 east
Report Ref: GS-2NS-ZR7-S4A-T5V_LS_2_2
Grid Ref: 564931, 166904

Map Name: National Grid

Map date: 1960-1962

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1960
 Revised 1960
 Edition N/A
 Copyright 1960
 Levelled 1952

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

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