

Phase 1 Site Investigation & Preliminary Risk Assessment

Client: Lidl Great Britain
Ltd

London Road, Pembroke
Dock

Report No: 1360.01.01

February 2025





Executive Summary

Remada Ltd was commissioned by Lidl Great Britain Ltd ('the client') to undertake a Phase 1 Geoenvironmental Site Investigation for a proposed retail store and associated car park on land to the south of London Road, Pembroke Dock, Pembrokeshire SA72 4RS. The objectives of this assessment were to present a preliminary conceptual site model to identify plausible pollutant linkages as a preliminary risk assessment and to provide recommendations for subsequent investigation work.

Site Setting

The site occupies an irregular plot to the south of A477 London Road. The site boundary to the north is marked by London Road, whilst the boundaries to the east, south and west are predominantly open. Only one structure is indicated to be present on-site; this comprises a blockwork structure on the western boundary of the site with a gable roof. This appears to be an electricity sub-station, complete with three locked doors on the western façade. The remainder of the site appears to be partially overgrown with shrubs, bushes and juvenile / semi-mature vegetation.

Site History

The earliest available mapping of 1866 shows the site to be occupied by two fields, which extend off-site towards the south, west and east, and the site appears to be devoid of structures. A roadway occupying the same footprint as the present-day London Road forms the northern boundary of the site. Although the historical mapping is vague, the site appears to have been developed between 1909 and 1953, with two buildings erected on-site although their purpose is unclear. The mapping of 1968 shows the majority of the site is occupied by the footprint of a Woollen Factory, with associated tank and chimney in the western area. An Electricity Sub Station is first labelled adjacent to the western boundary in 1992, although the building footprint appears to have been present for some time prior to this date. Between the mapping of 2006 and 2024, there appears to have been a clearance of all previous structures on-site.

Geology / Hydrogeology

Published geological maps record that the site is directly underlain by Pembroke Limestone Group bedrock, designated as a Principal Aquifer.

Mining

The site is located within an area which might not be affected by coal mining activity. Consequently, no further action is considered necessary at this stage relating to coal mining at and beneath the site.

Radon

The site is located in a Higher Probability Radon Area as 10% to 30% of properties are estimated to be at or above the Action Level. Consequently, full radon protective measures are considered necessary for the site.

Unexploded Ordnance (UXO)

Zetica UXO risk mapping indicates the site to be located within an area of High hazard from Unexploded Ordnance (UXO) due to WWII bombardment. However, Zetica's Pre-Preliminary Desk Study Assessment for the site has not identified any evidence that the site was bombed during either the First or Second World Wars. Zetica have concluded that a detailed desk study, whilst always prudent, is not considered essential for the site in this instance.

Recommendations

Environmental

The desk study has identified a number of on-site and off-site potential sources of contamination that would require further investigation. The following is recommended:

- Investigation of the lateral and vertical extent of made ground/fill beneath the proposed store footprint;



- Collection of soil and groundwater samples from the areas identified above for contaminants of concern; and
- Ground gas monitoring.

Geotechnical

It is recommended that a ground investigation is undertaken to enable preliminary foundation design.



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


Table 1 Preliminary Conceptual Site Model

FIGURES

Figure 1 Site Location Plan
Figure 2 Existing Site Layout
Figure 3 Proposed Indicative Site Layout

APPENDICES

Appendix A Historical Mapping
Appendix B Envirocheck Mapping
Appendix C Envirocheck Datasheet
Appendix D UXO Risk Assessment (Mapping & PDSA)

| Issue No | Date | Prepared By | Technical Review | Authorised |
|----------|------------|---|---|---|
| 01 | 03.02.2025 | P Dickinson  | G Jones  | G Jones  |



1. INTRODUCTION

Remada Ltd was commissioned by Lidl Great Britain Ltd (hereafter 'the client') to undertake a Phase 1 Preliminary Risk Assessment for a proposed store on land to the south of London Road, Pembroke Dock, Pembrokeshire SA72 4RS, at the location indicated in **Figure 1**.

1.1. Objectives

The objectives of this assessment are as follows:

- to develop a preliminary conceptual model of the site to identify plausible pollutant linkages; and
- to provide recommendations for subsequent investigation work.

1.2. Scope of Work

The scope of work comprised a:

- review of local geological, hydrogeological, ground stability, and environmental data and historical mapping pertaining to the site and surrounding area; and
- identification of potential sources, pathways, and receptors, and development of a preliminary conceptual site model.

The scope of work did not include a site reconnaissance visit.

Due to the study site's positioning within Wales, the scope was also designed in line with the Welsh Land Contamination Working Group's Development of Land Affected by Contamination: A Guide for Developers version 3: May 2017. This guidance represents the culmination of a co-operative effort involving the Welsh Local Government Association (WLGA) and Natural Resources Wales (NRW). For the purpose of this report, any references to the Environment Agency (EA) should be seen as interchangeable with NRW.

1.3. Previous Reports

It is not known if historic reports are available for review.

1.4. Limitations

The comments given in this report and the opinions expressed are based on the information reviewed and observations during site work. However, there may be conditions pertaining to the site that have not been disclosed by this assessment and therefore could not be taken into account.



2. DESK STUDY

2.1. Description of Site

| | |
|-----------------------------------|---|
| Site Description | <p>The site occupies an irregular plot to the south of A477 London Road, as indicated in Figure 2. The site boundary to the north is marked by a hedgerow along London Road, whilst the boundaries to the east, south and west are predominantly open.</p> <p>Only one structure is indicated to be present on-site; this comprises a blockwork structure on the western boundary of the site with a gable roof. This appears to be an electricity sub-station, complete with three locked doors on the western façade. The remainder of the site appears to be partially overgrown with shrubs, bushes and juvenile / semi-mature vegetation.</p> |
| Area of Site | 10848 m ² . |
| Site Elevation | The topographic elevation of the site is approximately 15 – 20m AOD (metres above ordnance datum). |
| National Grid Co-ordinates | 198020, (E), 203300 (N) |

2.2. Site Setting

The site is situated in a predominantly commercial and industrial area.

| | |
|---------------|--|
| North: | The A477 London Road bounds the site to the north, with London Road Industrial Estate and a Cemetery beyond. |
| East: | The site boundary to the east is unmarked, with Isaac Way located circa 30m east, with Genpower Ltd's office and warehouse complex beyond to the south-east and Pembroke Dock Ambulance Station to the east. |
| South: | The site boundary to the south is open, with a railway line and industrial / commercial units off Ferry Lane beyond. |
| West: | Kingswood Industrial Estate and a Trading Estate are located to the west, incorporating several business premises including a tyre dealership and a vehicle repair shop. |

2.3. Site History

A summary of the historical land use of the site and surrounding area follows.

| Map Date | Description of on-site activities |
|-----------------|---|
| 1866 | The earliest available mapping of 1866 shows the site to be occupied by two fields. The more northerly of the two extends off-site towards the west and east, whereas the southerly field extends off-site to the west, south and east. A roadway occupying the same footprint as the present-day London Road forms the northern boundary of the site. No structures are indicated to be present. |



| | |
|------|---|
| 1869 | Similar to above. |
| 1908 | Similar to above. |
| 1909 | Similar to above. |
| 1953 | The 1:10,560 scale mapping indicates that the site has been redeveloped, with the northerly field now occupied by two buildings. The more easterly of the two is large and rectangular; likely a factory or warehouse structure, although both are unlabelled. |
| 1964 | Similar to above. |
| 1968 | The 1:2500 scale mapping provides a lot more detail regarding the structures on-site. The majority of the site is occupied by the footprint of a Woollen Factory, with associated tank and chimney in the western area of the site. Several associated smaller buildings are present adjacent to the western boundary, with access off London Road via the site's north-western corner. |
| 1971 | Similar to above. |
| 1985 | Similar to above. |
| 1987 | Similar to above. |
| 1992 | Similar to above, although an Electricity Sub Station is recorded adjacent to the site's western boundary. |
| 1993 | Similar to above although the wider area appears to be labelled ' <i>Kingswood Industrial Estate</i> '. |
| 1994 | Similar to above. |
| 2000 | Similar to above. |
| 2006 | Similar to above. |
| 2024 | Between the mapping of 2006 and 2024, there appears to have been a clearance of all structures on-site, including the former Woollen Factory building, tank, sub-station and chimney. |

| Map Date | Description of off-site activities |
|----------|--|
| 1866 | The earliest available mapping of 1866 shows the site to be predominantly surrounded by farmland. A roadway occupying the same footprint as the present-day London Road forms the northern boundary of the site. A Quarry is recorded from circa 80m west of the site. |
| 1869 | Similar to above. |
| 1908 | The quarry feature circa 80m west of the site is now labelled as 'Old Quarry', although a new quarry has been established from circa 10m north of the site, on the opposite side of London Road. The Great Western Railway's Pembroke & Tenby Branch has been constructed from circa 60m south-west of the site at its |



| | |
|------|---|
| | nearest point. A large Cemetery has been established from circa 120m north of the site. |
| 1909 | Similar to above. |
| 1953 | The quarry feature to the north of the site is now labelled as 'Old Quarry'. A large rectangular building (likely a factory or works) is recorded from circa 10 – 20m west of the site, albeit unlabelled. The former quarry to the north of the site is no longer shown; likely infilled. |
| 1964 | Similar to above. |
| 1966 | Similar to above. |
| 1968 | The large structure to the west of the site is recorded as a 'Factory, with associated tanks located from circa 50m west. The on-site Woollen Factory extends off-site by circa 30 - 40m to the east, with a square tank indicated circa 50m south-east. An Engineering Works has also been erected from circa 80m south of the site, on the opposite side of the railway line. The cemetery to the north has been expanded and is now located within 100m of the study site. The former quarry located circa 80m to the west is still extant, albeit now shown to be wooded. |
| 1971 | Similar to above. |
| 1974 | The factory recorded immediately to the west of the study site is now labelled as 'Woollen Mill (Weaving)'. |
| 1985 | Similar to above. |
| 1987 | A 'Gas Control Centre' has been erected from 90m east of the study site, whilst a new access road has been constructed heading northwards from A477 London Road immediately to the north of the site. |
| 1989 | Kingswood Industrial Estate has been established from 100m west of the study site, comprising a series of small, rectangular industrial units accessed off London Road. |
| 1992 | The former factory to the west of the site is now partly labelled as a 'Shopping Mall' The area to the east of the site is now also labelled as Kingswood Industrial Estate, albeit devoid of any additional buildings. London Road Industrial Estate has been established around the access road to the north of the site, identified on 1987 mapping. The nearest associated building is located circa 20m north of the site. An associated Electricity Sub-Station is located circa 130m north of the site. |
| 1994 | Similar to above. |
| 2000 | Similar to above. |
| 2006 | Similar to above. |



| | |
|------|--|
| 2024 | A new access road 'Isaac Way' has been constructed to the east of the study site, connecting A477 London Road with Kingswood Industrial Estate. An Ambulance Station has been established from 60m east. |
|------|--|

2.4. Proposed Site Use

It is understood that the proposed site use for the site will be a Lidl retail store with associated car park and soft landscaping. A proposed indicative site layout plan is presented as **Figure 3**, with the site being accessed from London Road in the north-western corner of the site. The proposed store footprint is indicated to be in the western area of the site, with the remaining areas being a combination of car parking, HGV access and soft landscaping.

2.5. Environmental Setting

2.5.1. Made Ground and Superficial Geology

Information from the environmental report and the British Geological Survey (BGS) 1:50,000 scale map Sheets 228 (Haverfordwest) and 245 (Pembroke and Linney Head) does not indicate any artificial ground either on, or in the immediate vicinity of, the study site. Artificial Ground is a term used by the BGS for those areas where the ground surface has been significantly modified by human activity, and includes made ground, worked ground, infilled ground, landscaped ground and disturbed ground. It is not expected to be encountered according to the mapping; however, taking consideration of the site's historic use and satellite imagery it is likely that made ground will be encountered underlying the site.

No superficial deposits are indicated to be present underlying the site (ref Envirocheck **Appendix B**).

2.5.2. Bedrock Geology

The bedrock directly underlying the site is formed of the Pembroke Limestone Group. The BGS describes this lithology as typically comprising *'skeletal and ooidal limestones with some calcite- and dolomite-mudstones, sandstones and mudstones, and a few coals and cherts. Waulsortian reef limestones occur in the south'*.

The bedrock is designated as a Principal Aquifer. Natural Resources Wales (NRW) define Principal Aquifers as *'geology that exhibit high irregular and/or fracture permeability. They usually provide a high level of water storage. They may support water supply and/or river base flow on a strategic scale'* (ref Envirocheck **Appendix B**).

2.5.3. Historic BGS Borehole Records

There are no pertinent historic BGS borehole records within a relevant distance of the site.

2.5.4. Groundwater Abstractions

There are no groundwater abstraction points recorded within 1.5km of the study site. The nearest groundwater abstraction is located 1649m to the south-east, although the purpose is not stated (ref Envirocheck **Appendix C**).

2.5.5. Source Protection Zones

The site is not located within a groundwater Source Protection Zone (ref Envirocheck **Appendix B**).

2.5.6. Surface Water Features and Abstractions

The nearest surface water feature is recorded 153m to the east and appears to be surface watercourse associated with Kingswood Pill (ref Envirocheck **Appendix B**).



There are no surface water abstraction points within 1km of the search area. The nearest record pertains to abstraction by Pembroke Borough Council 1424m to the south (ref Envirocheck **Appendix B**).

2.5.7. Flooding Vulnerability

The site is located in an area with limited potential for groundwater flooding to occur and there are no recorded surface water flood zones within the immediate search area (ref Envirocheck **Appendix B**).

2.5.8. Ground Stability

The Envirocheck Report (**Appendix C**) provides the following information regarding ground stability.

| | |
|-------------------------------|--|
| Collapsible Deposits | There is a 'very low' hazard rating from collapsible rocks. |
| Compressible Ground | There is a 'no' hazard rating from compressible ground. |
| Rock Solubility / Dissolution | There is a 'low' hazard rating from rock solubility at the site. |
| Landslides | There is a 'very low' hazard rating from landslides. |
| Running Sand | There is a 'no' hazard rating for running sands. |
| Shrinking / Swelling of Clay | There is a 'no' hazard rating for shrinkage / swelling of clay. |

2.5.9. Radon

The site is located in a Higher Probability Radon Area as 10% to 30% of properties are estimated to be at or above the Action Level. Consequently, full radon protective measures are considered necessary for the site (ref Envirocheck **Appendix C**).

2.5.10. Environmentally Sensitive Site Designations

The nearest environmentally sensitive land use is an area of 'restored ancient woodland' located 127m to the east (ref Envirocheck **Appendix C**).

2.6. Industrial Land Use

There are forty (40 No.) contemporary trade directory entries locations within 250m of the site. The nearest active entries of these include lawnmower & garden machinery sales & services (43m SE), fireplace & mantelpiece supplier (44m NW), garage services (51m NW), generator sales & services (102m SE), distribution services (121m SW), packaging suppliers (160m NW) and tyre dealers located 175m north-west (ref Envirocheck **Appendix B**).

There is one fuel station entry within 500m of the study site. This is located 299m to the north-west on London Road, although it is recorded as being obsolete (ref Envirocheck **Appendix B**).

2.7. Environmental Permits, Incidents & Registers

There are two (2 No.) permitted process entries within 250m of the study site. The nearest is a Local Authority Pollution Prevention & Controls (LAPPC) permit located 107m south-west of the site and pertains to the mobile screening and crushing processes. The other is also a LAPPC permit, located 109m north and pertains to respraying of road vehicles.

There are two (2 No.) recorded pollution incident entries within 250m of the site. The nearest is located 140m to the north-west and pertains to a spillage of Diesel into a drain at Kingswood Industrial Estate in October 1987. The incident was recorded as being a Category 3 - Minor Incident (ref Envirocheck **Appendix C**).



2.8. Landfill & Waste Sites

The Envirocheck search has included a check on the Local Authority's landfill coverage at the site. Pembrokeshire County Council has supplied landfill data.

There is one historical landfill site located within 500m of the study site. This is located 261m north-east at Pembroke Dock and accepted Inert, Industrial, Commercial, Household and Special Waste types between 1980 and 1989. This site also appears to be the nearest Local Authority Recorded Landfill Site.

There is one registered landfill site located within 250m of the study site. This is located 166m west on Ferry Lane, with the landfill accepting soil, subsoil, stone, brick and hardcore, although the site is no longer operational (ref Envirocheck **Appendix B**).

There are six (6 No.) registered Waste Transfer Sites, and one (1 No.) Waste Treatment / Disposal Site located within 500m of the study site. The nearest is a scrapyard located 320m north of the site. (ref Envirocheck **Appendix C**).

2.9. Mining

The site is located within an area which might not be affected by coal mining activity (ref Envirocheck **Appendix B**).

2.10. Unexploded Ordnance (UXO) Risk

A non-specialist UXO screening exercise has been carried out for the site by considering (a) any evidence of UK defence activities on or near the site evident from the gathered desk study information and (b) the unexploded aerial delivered ordnance (UXO) regional risk maps produced by Zetica.

There is no indication of former military use from the desk study. However, the Zetica risk map indicates the site to be in an area where the UXO risk is high. A copy of the map is presented in **Appendix D**.

A Pre-Preliminary Desk Study Assessment (PDSA) has been commissioned for the site, and this is also presented in **Appendix D**, with a summary being provided below:

- No significant military activity affecting the site has been identified.
- No readily available records have been found indicating that the site was bombed during the First World War.
- During the Second World War, the Site was located in Pembroke Municipal Borough (MB), which officially recorded 283 No. High Explosive (HE) bombs, with a density of 60.5 bombs per 405 hectares (ha).
- No readily available records have been found indicating that the Site was bombed during the Second World War.

Zetica have concluded that a detailed desk study, whilst always prudent, is not considered essential for the site in this instance.



3. PRELIMINARY RISK ASSESSMENT

3.1. Introduction

A Preliminary Risk Assessment (PRA) has been completed for the site. This PRA identifies the potential sources, pathways, and receptors for the site, in order to assess the potential risks posed by identified potential sources to human health and / or controlled waters receptors. When required, the viability of the Source-Pathway-Receptor pollutant linkage must be evaluated further to determine whether an actual risk is present.

3.2. Potential Sources

On-site Historical

- Woollen Factory
- Tank of unspecified contents
- Chimney
- Electricity Sub-Station
- Kingswood Industrial Estate
- General Made Ground associated with historic development and site-clearance

On-site Current

- None

Off-site Historical

- Old Quarries
- Factories / Woollen Mill and associated tanks.
- Gas Control Centre

Off-site Current

- Electricity Sub-station
- Railway
- Industrial Estates
- Cemetery

3.3. Potential Contaminants of Concern (PCOCs)

- Metals
- Asbestos (associated with demolition and redevelopment of the existing site).
- Total petroleum hydrocarbons (TPH)
- Polycyclic aromatic hydrocarbons (PAH).
- Ground gases (carbon dioxide and methane)
- Polychlorinated Biphenyls (PCBs)
- Radon gas

3.4. Potential Receptors

Human Health

- On-site Lidl store staff.
- Construction workers.



- On-site general public and visiting staff (such as contractors, including those conducting excavation works).
- Neighbouring residents

Controlled Waters

- Principal Aquifer in bedrock;
- Kingswood Pill and associated tributaries.

3.5. Preliminary Conceptual Model

The Preliminary Conceptual Site Model of the site has been prepared and illustrates the potentially active pollutant linkages. A pollutant linkage is present only when a source, pathway and receptor exist together.

- A **source** is a substance that has potential to cause harm or adversely affect human health, water resources or the wider environment.
- A **pathway** is the route or means by which a source of contamination can migrate resulting in exposure to a receptor.
- A **receptor** is something that could be adversely affected by a contaminant such as human health, an ecological system, animals or crops, buildings or controlled waters.

The Preliminary Conceptual Site Model is presented in **Table 1**.



| Potential Source Areas | Potential Contaminant of Concern | Pathways | Potential Receptor | Exposure Route (Human unless otherwise stated) | Potential Identified Linkage (unmitigated) | Findings of Ground investigation | Risk (Unmitigated) | Proposed Remediation (Mitigation) Measures | Residual Risk Estimation |
|---|---|---|--|---|--|--|--------------------|--|--------------------------|
| On-site Sources <ul style="list-style-type: none"> General Made Ground Woollen Factory and associated chimney & tank Kingswood Industrial Estate Electricity Sub-Station Off-site Sources <ul style="list-style-type: none"> Old Quarries Factories / Mills Gas Control Centre Electricity Sub-Station Railway Industrial Estates Cemetery | Asbestos / Metals As, Be, Cd, Cu, Cr (VI), Cr (III) Hg, Ni, Se, Va, Zn, Boron, TPH /PAH, PCBs | Disturbance due to construction plant causing direct contact, dusts, vapours. | Occupants of the development / building fabric | • Direct Soil Ingestion | • No | N/A | N/A | N/A | N/A |
| | | | | • Indoor Dust ingestion | • Yes | To be assessed (TBA) | Potential risk | (To be assessed (TBA) | (To be assessed (TBA) |
| | | | | • Skin Contact with Soils | • Yes | As above | Potential risk | TBA | TBA |
| | | | | • Skin Contact with Dust | • Yes | As above | Potential risk | TBA | TBA |
| | | Direct Contact with occupants of the proposed development | | • Inhalation of Outdoor Dust | • Yes | As above | Potential risk | TBA | TBA |
| | | | | • Ingestion of home grown produce | • No | N/A | N/A | N/A | N/A |
| | | | | • Inhalation of Outdoor Vapours | • Yes | As above | Potential risk | TBA | TBA |
| | | | | • Inhalation of Indoor Vapours | • Yes | As above | Potential risk | TBA | TBA |
| | | Inhalation of fibres / vapours / gases by occupants of proposed development | Adjacent residents during construction | • Inhalation of ground gas | • Yes | As above | Potential risk | TBA | TBA |
| | | | | • Inhalation of radon gas | • No | Higher Probability Area | Moderate | Full Radon Protection Measures | Low |
| | | | | • Ingestion via permeated water supply pipework | • Yes | As above | Potential risk | TBA | TBA |
| | | | | • Direct contact with Aquifer in Superficial Deposits | • No | No superficial deposits indicated on BGS mapping | N/A | N/A | N/A |
| | | Leachate | Principal Aquifer Kingswood Pill | • In-direct contact with Principal Aquifer in bedrock | • Yes | TBA | Potential risk | TBA | TBA |

Table 1: Preliminary Conceptual Site Model

Direct contact with subsurface soil and/or groundwater during redevelopment works are not assessed as part of the CSM. It is considered that risks to workers will be managed as part of any the redevelopment works at the site through the application of health and safety procedures, where required.



4. CONCLUSIONS & RECOMMENDATIONS

4.1. Conclusions

The site occupies an irregular plot to the south of A477 London Road. The site boundary to the north is marked by London Road, whilst the boundaries to the east, south and west are predominantly open. Only one structure is indicated to be present on-site; this comprises a blockwork structure on the western boundary of the site with a gable roof. This appears to be an electricity sub-station, complete with three locked doors on the western façade. The remainder of the site appears to be partially overgrown with shrubs, bushes and juvenile / semi-mature vegetation.

The earliest available mapping of 1866 shows the site to be occupied by two fields, which extend off-site towards the south, west and east, and the site appears to be devoid of structures. A roadway occupying the same footprint as the present-day London Road forms the northern boundary of the site. Although the historical mapping is vague, the site appears to have been developed between 1909 and 1953, with two buildings erected on-site although their purpose is unclear. The mapping of 1968 shows the majority of the site is occupied by the footprint of a Woollen Factory, with associated tank and chimney in the western area. An Electricity Sub Station is first labelled adjacent to the western boundary in 1992, although the building footprint appears to have been present for some time prior to this date. Between the mapping of 2006 and 2024, there appears to have been a clearance of all previous structures on-site.

Published geological maps record that the site is directly underlain by Pembroke Limestone Group bedrock, designated as a Principal Aquifer.

The site is located within an area which might not be affected by coal mining activity. Consequently, no further action is considered necessary at this stage relating to coal mining at and beneath the site.

The site is located in a Higher Probability Radon Area as 10% to 30% of properties are estimated to be at or above the Action Level. Consequently, full radon protective measures are considered necessary for the site.

Zetica UXO risk mapping indicates the site to be located within an area of High hazard from Unexploded Ordnance (UXO) due to WWII bombardment. However, Zetica's Pre-Preliminary Desk Study Assessment for the site has not identified any evidence that the site was bombed during either the First or Second World Wars. Zetica have concluded that a detailed desk study, whilst always prudent, is not considered essential for the site in this instance.

4.2. Recommendations

Environmental

The desk study has identified a number of on-site and off-site potential sources of contamination that would require further investigation. The following is recommended:

- Investigation of the lateral and vertical extent of made ground/fill beneath the proposed store footprint.
- Collection of soil and groundwater samples from the areas identified above for contaminants of concern; and
- Ground gas monitoring.



In accordance with CIRIA C665 the monitoring period should comprise not less than four visits for a proposed commercial development and should cover the "worst case" scenario which would occur during falling atmospheric pressure and, in particular, weather conditions such as rainfall and frost.

Geotechnical

It is recommended that a ground investigation is undertaken to enable preliminary foundation design.



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STUDY LIMITATIONS

IMPORTANT. This section should be read before reliance is placed on any of the information, opinions, advice, recommendations or conclusions contained in this report.

1. This report has been prepared by Remada, Ltd with all reasonable skill, care and diligence within the terms of the Appointment and with the resources and manpower agreed with (the 'Client'). Remada does not accept responsibility for any matters outside the agreed scope.

2. This report has been prepared for the sole benefit of the Client unless agreed otherwise in writing.

3. Unless stated otherwise, no consultations with authorities or funders or other interested third parties have been carried out. Remada is unable to give categorical assurance that the findings will be accepted by these third parties as such bodies may have published, more stringent objectives. Further work may be required by these parties.

4. All work carried out in preparing this report has used, and is based on, Remada's professional knowledge and understanding of current relevant legislation. Changes in legislation or regulatory guidance may cause the opinion or advice contained in this report to become inappropriate or incorrect. In giving opinions and advice pending changes in legislation, of which Remada is aware, have been considered. Following delivery of the report Remada has no obligation to advise the Client or any other party of such changes or their repercussions.

5. This report is only valid when used in its entirety. Any information or advice included in the report should not be relied upon until considered in the context of the whole report.

6. Whilst this report and the opinions made are to the best of Remada's belief, Remada cannot guarantee the accuracy or completeness of any information provided by third parties.

7. This report has been prepared based on the information reasonably available during the project programme. All information relevant to the scope may not have received.

8. This report refers, within the limitations stated, to the condition of the site at the time of the inspections. No warranty is given as to the possibility of changes in the condition of the site since the time of the investigation.

9. The content of this report represents the professional opinion of experienced environmental consultants. Remada does not provide specialist legal or other professional advice. The advice of other professionals may be required.

10. Where intrusive investigation techniques have been employed they have been designed to provide a reasonable level of assurance on the conditions. Given the discrete nature of sampling, no investigation technique is capable of identifying all conditions present in all areas. In some cases the investigation is further limited by site operations, underground obstructions and above ground structures. Unless otherwise stated, areas beyond the boundary of the site have not been investigated.

11. If below ground intrusive investigations have been conducted as part of the scope, service tracing for safe location of exploratory holes has been carried out. The location of underground services shown on any drawing in this report has been determined by visual observations and electromagnetic techniques. No guarantee can be given that all services have been identified. Additional services, structures or other below ground obstructions, not indicated on the drawing, may be present on site.

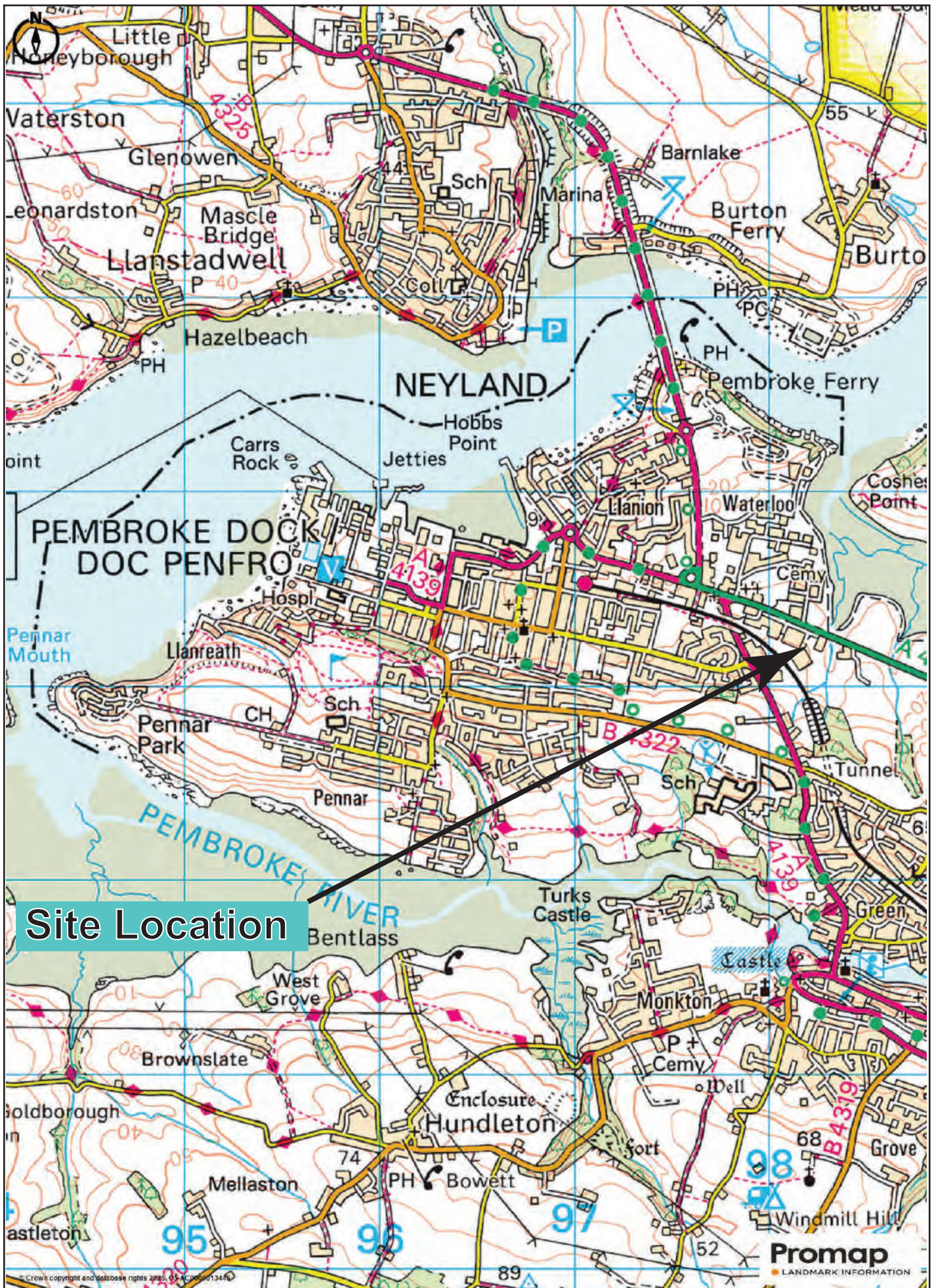
12. Unless otherwise stated the report provides no comment on the nature of building materials, operational integrity of the facility or on any regulatory compliance issues.

13. Unless otherwise stated, samples from the site (soil, groundwater, building fabric or other samples) have NOT been analysed or assessed for waste classification purposes.





FIGURES

- | | |
|----------|---------------------------------|
| Figure 1 | Site Location Plan |
| Figure 2 | Existing Site Layout |
| Figure 3 | Proposed Indicative Site Layout |



Site Location

Notes


| Revision | Approved | Date | Project Title | Scale | Drawn | Size |
|----------|----------|------|----------------------------|---|---------|------------|
| | | | London Road, Pembroke Dock | as shown | PD | A4 |
| | | | Drawing Title | Date | Job No. | Figure No. |
| | | | Site Location Plan | 10.01.25 | 1360 | 01 |
| | | | Client |   | | |
| | | | Lidl Great Britain Ltd | | | |



Getmapping plc 2017.

Promap
LANDMARK INFORMATION

Legend

 Approximate extent of site boundary

Notes

The site boundary indicated here is indicative only.

| Revision | Approved | Date |
|----------|----------|------|
| | | |
| | | |
| | | |

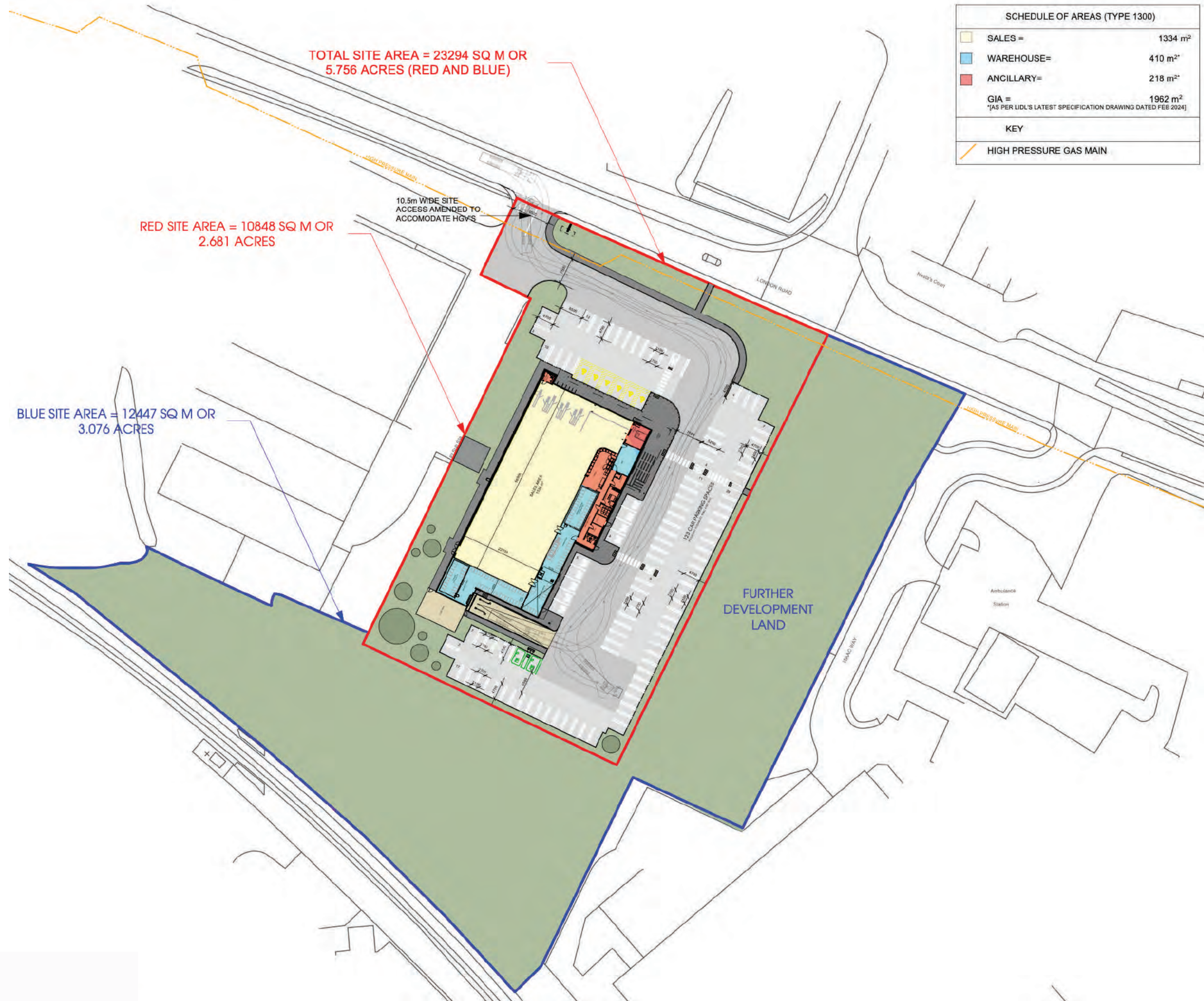
Project Title
London Road,
Pembroke Dock

Drawing Title
Existing Site Layout Plan

Client
Lidl Great Britain Ltd 

| | | |
|-------------------|-----------------|------------------|
| Scale as shown | Drawn PD | Size A4 |
| Date 03/02/25 | Job No. 1360 | Figure No. 02 |

REMADA
GEO CONSULTANTS



| SCHEDULE OF AREAS (TYPE 1300) | | |
|---|--|----------------------|
| SALES = | | 1334 m ² |
| WAREHOUSE= | | 410 m ² * |
| ANCILLARY= | | 218 m ² * |
| GIA = | | 1962 m ² |
| *AS PER LIDL'S LATEST SPECIFICATION DRAWING DATED FEB 2024] | | |
| KEY | | |
| HIGH PRESSURE GAS MAIN | | |

Legend

Notes

Proposed site layout reproduced from client's supplied HTC Architects' Proposed Site Plan Option 8 (T13 & Further Development Land) drawing ref: 3305_F411 Rev D, dated April 2024.

The proposed site layout plan presented here is indicative only and may be subject to change following publication of Remada's Phase 1 report.

| Revision | Approved | Date |
|----------|----------|------|
| | | |
| | | |
| | | |

Project Title

Lidl Pembroke Dock

Drawing Title

Proposed Indicative Site Layout Plan

Client

Lidl Great Britain Ltd

| Scale | Drawn | Size |
|----------|---------|------------|
| as shown | PD | A4 |
| Date | Job No. | Figure No. |
| 10/01/25 | 1360 | 03 |



APPENDIX A

1:2500 & 1:10000 Scale Historical Mapping

Historical Mapping Legends

Ordnance Survey County Series 1:10,560

| | | | | | |
|--|---|--|-----------------------------|--|---------------|
| | Gravel Pit | | Sand Pit | | Other Pits |
| | Quarry | | Shingle | | Orchard |
| | Osiers | | Reeds | | Marsh |
| | Mixed Wood | | Deciduous | | Brushwood |
| | Fir | | Furze | | Rough Pasture |
| | Arrow denotes flow of water | | Trigonometrical Station | | |
| | Site of Antiquities | | Bench Mark | | |
| | Pump, Guide Post, Signal Post | | Well, Spring, Boundary Post | | |
| | •285 Surface Level | | | | |
| | Sketched Contour | | Instrumental Contour | | |
| | Main Roads | | Minor Roads | | |
| | Sunken Road | | Raised Road | | |
| | Road over Railway | | Railway over River | | |
| | Railway over Road | | Level Crossing | | |
| | Road over River or Canal | | Road over Stream | | |
| | Road over Stream | | | | |
| | County Boundary (Geographical) | | | | |
| | County & Civil Parish Boundary | | | | |
| | Administrative County & Civil Parish Boundary | | | | |
| | County Borough Boundary (England) | | | | |
| | County Burgh Boundary (Scotland) | | | | |
| | Rural District Boundary | | | | |
| | Civil Parish Boundary | | | | |

Ordnance Survey Plan 1:10,000

| | | | |
|--|---|--|---|
| | Chalk Pit, Clay Pit or Quarry | | Gravel Pit |
| | Sand Pit | | Disused Pit or Quarry |
| | Refuse or Slag Heap | | Lake, Loch or Pond |
| | Dunes | | Boulders |
| | Coniferous Trees | | Non-Coniferous Trees |
| | Orchard | | Scrub |
| | Bracken | | Heath |
| | Marsh | | Reeds |
| | Building | | Glasshouse |
| | Sloping Masonry | | Pylon |
| | Cutting | | Embankment |
| | Road Under | | Road Over |
| | Level Crossing | | Foot Bridge |
| | Standard Gauge Multiple Track | | Standard Gauge Single Track |
| | Siding, Tramway or Mineral Line | | Narrow Gauge |
| | Geographical County | | Administrative County, County Borough or County of City |
| | Municipal Borough, Urban or Rural District, Burgh or District Council | | Borough, Burgh or County Constituency |
| | Civil Parish | | |
| | BP, BS Boundary Post or Stone | | Police Station |
| | Church | | Post Office |
| | Club House | | Public Convenience |
| | Fire Engine Station | | Public House |
| | Foot Bridge | | Signal Box |
| | Fountain | | Spring |
| | Guide Post | | Telephone Call Box |
| | Mile Post | | Telephone Call Post |
| | Mile Stone | | Well |

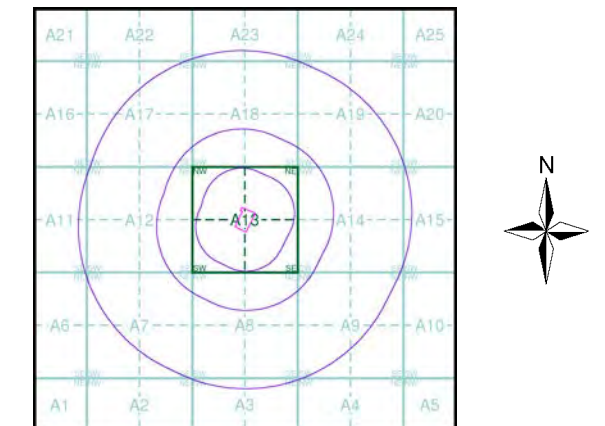
1:10,000 Raster Mapping

| | | | |
|--|--|--|--|
| | Gravel Pit | | Refuse tip or slag heap |
| | Rock | | Rock (scattered) |
| | Boulders | | Boulders (scattered) |
| | Shingle | | Mud |
| | Sand | | Sand Pit |
| | Slopes | | Top of cliff |
| | General detail | | Underground detail |
| | Overhead detail | | Narrow gauge railway |
| | Multi-track railway | | Single track railway |
| | County boundary (England only) | | Civil, parish or community boundary |
| | District, Unitary, Metropolitan, London Borough boundary | | Constituency boundary |
| | Area of wooded vegetation | | Non-coniferous trees |
| | Non-coniferous trees (scattered) | | Coniferous trees |
| | Coniferous trees (scattered) | | Positioned tree |
| | Orchard | | Coppice or Osiers |
| | Rough Grassland | | Heath |
| | Scrub | | Marsh, Salt Marsh or Reeds |
| | Water feature | | Flow arrows |
| | Mean high water (springs) | | Mean low water (springs) |
| | Telephone line (where shown) | | Electricity transmission line (with poles) |
| | Bench mark (where shown) | | Triangulation station |
| | Point feature (e.g. Guide Post or Mile Stone) | | Pylon, flare stack or lighting tower |
| | Site of (antiquity) | | Glasshouse |
| | General Building | | Important Building |

Historical Mapping & Photography included:

| Mapping Type | Scale | Date | Pg |
|----------------------|----------|-------------|----|
| Pembrokeshire | 1:10,560 | 1869 | 3 |
| Pembrokeshire | 1:10,560 | 1908 - 1909 | 4 |
| Pembrokeshire | 1:10,560 | 1938 - 1953 | 5 |
| Pembroke | 1:10,000 | 1950 | 6 |
| Pembrokeshire | 1:10,560 | 1953 | 7 |
| Ordnance Survey Plan | 1:10,000 | 1964 | 8 |
| Ordnance Survey Plan | 1:10,000 | 1966 | 9 |
| Ordnance Survey Plan | 1:10,000 | 1971 | 10 |
| Ordnance Survey Plan | 1:10,000 | 1985 | 11 |
| Ordnance Survey Plan | 1:10,000 | 1993 | 12 |
| 10K Raster Mapping | 1:10,000 | 2000 | 13 |
| 10K Raster Mapping | 1:10,000 | 2006 | 14 |
| VectorMap Local | 1:10,000 | 2024 | 15 |

Historical Map - Slice A



Order Details

Order Number: 366896627_1_1
Customer Ref: 1360.01
National Grid Reference: 198090, 203300
Slice: A
Site Area (Ha): 1.09
Search Buffer (m): 1000

Site Details

Land south of London Road, PEMBROKE DOCK, SA72 4RS

Russian Military Mapping Legends

1:5,000 and 1:10,000 mapping

a. Not drawn to scale b. Drawn to scale

Government and Administrative Buildings

Military and Industrial Buildings

Military and Communication Areas

Subway Entrance

Fireproof Building

Prominent Fireproof Building

Non-fireproof Building

Non-fireproof Building (non-dwelling)

Factory, mill, and flour mill, with chimneys

Factory, mill, and flour mill, without chimneys

Power Station, drawn to scale

Hydroelectric Power Station

Radio Station, drawn to scale

Telephone Station, drawn to scale

Abandoned Open-pit Mine or Quarry

Open-pit Salt Mine

Pit

Oil Deposit or Well

Oil Seepage

Tailings Pile

Fuel Storage Tanks

Natural Gas Tank

Bench Mark

Drill Hole

Burial Mound

Triangulation Point on Burial Mound

Single-track Railroad

Double-track Railroad

Railroad and Station Building

Coniferous Forest

Deciduous Forest

Mixed Forest

Lawns

Citrus Orchard

Wet Ground

Scattered Vegetation

243.8 Values for prominent elevations
186.0 Numbers for spot elevations, depth soundings, contour lines, etc.
0.2 Velocity of the current, width of river bed, depth of river
180/12 Fractional terms: length and capacity of bridges; depth of fords and condition of the river bottom; height of forest and the diameter of trees

Russian Alphabet (For reference and phonetic interpretation of map text)

| | | | |
|-----------------|----------------|-----------------|-----------------------|
| А а (A) | З з (Z) | П п (P) | Ч ч (CH) |
| Б б (B) | И и (I) | Р р (R) | Ш ш (SH) |
| В в (V) | Й й (Y) | С с (S) | Щ щ (SHCH) |
| Г г (G) | К к (K) | Т т (T) | Ъ (-) |
| Д д (D) | Л л (L) | У у (U) | Ы (Y) |
| Е е (E) | М м (M) | Ф ф (F) | Ь (') |
| Ё ё (YO) | Н н (N) | Х х (KH) | Э э (E) |
| Ж ж (ZH) | О о (O) | Ц ц (TS) | Ю ю (YU or IU) |
| | | | Я я (YA or IA) |

1:25,000 mapping

a. Not drawn to scale b. Drawn to scale

Government and Administrative Buildings

Military and Industrial Buildings

Military and Communication Areas

Subway Entrance

Partly Demolished Buildings

Demolished Buildings

Built-Up Area with Fireproof Buildings Predominant

Built-Up Area with Non-Fireproof Buildings Predominant

Individual Fireproof Building

Prominent Industrial Building

Individual Dwelling, Fireproof

Ruins of an Individual Dwelling

Factory or Mill Chimney

Factory or Mill with Chimney

Factory or Mill without Chimney

Mine or Open Pit Mine

Operating Shaft or Mine

Non-Operating Shaft or Mine

Salt Mine

Tailings Pile

Pit

Stone Quarry

Gas Pump or Service Station

Fuel Storage or Natural Gas Tank

Oil or Natural Gas Derrick

Small Hydroelectric Power Station

Power Station

Transformer Station

Cemetery

Burial Mound (height in metres)

Triangulation Point on Burial Mound

Triangulation Point

Bench Mark

Bench Mark (monumented)

Telegraph Office

Telephone Station

Radio Station

Radio Tower

Airfield or Seaplane Base

Landing Strip

Telegraph/Telephone Lines

Main Highway

Highway under Construction

Improved Dirt Road (former truck road)

Double-track Railroad with First Class Station

Railroad Under Construction

Shore Embankment

River or Ditch with Embankment

Water Gauge

Water Level Mark

Well

Water Reservoir or Rain Water Pit

Spring

Isobath with value

Heavy (Index) Contour Line

Contour Line and Value

Half Contour Line

Spot Elevation Value

Coniferous

Deciduous

Mixed

Scrub

Key to Numbers on Mapping

SM90SE_Pembroke

| No. | Description |
|-----|----------------|
| 16 | Storage (Fuel) |

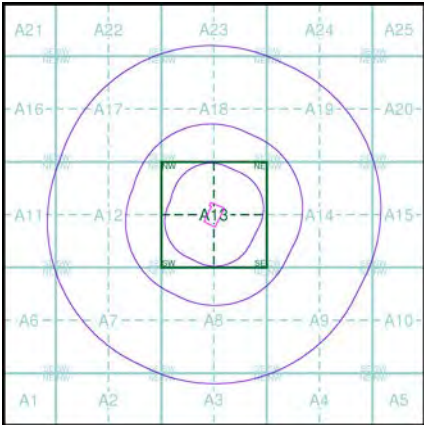
Envirocheck®

LANDMARK INFORMATION GROUP®

Historical Mapping & Photography included:

| Mapping Type | Scale | Date | Pg |
|----------------------|----------|-------------|----|
| Pembrokeshire | 1:10,560 | 1869 | 3 |
| Pembrokeshire | 1:10,560 | 1908 - 1909 | 4 |
| Pembrokeshire | 1:10,560 | 1938 - 1953 | 5 |
| Pembroke | 1:10,000 | 1950 | 6 |
| Pembrokeshire | 1:10,560 | 1953 | 7 |
| Ordnance Survey Plan | 1:10,000 | 1964 | 8 |
| Ordnance Survey Plan | 1:10,000 | 1966 | 9 |
| Ordnance Survey Plan | 1:10,000 | 1971 | 10 |
| Ordnance Survey Plan | 1:10,000 | 1985 | 11 |
| Ordnance Survey Plan | 1:10,000 | 1993 | 12 |
| 10K Raster Mapping | 1:10,000 | 2000 | 13 |
| 10K Raster Mapping | 1:10,000 | 2006 | 14 |
| VectorMap Local | 1:10,000 | 2024 | 15 |

Russian Map - Slice A



Order Details

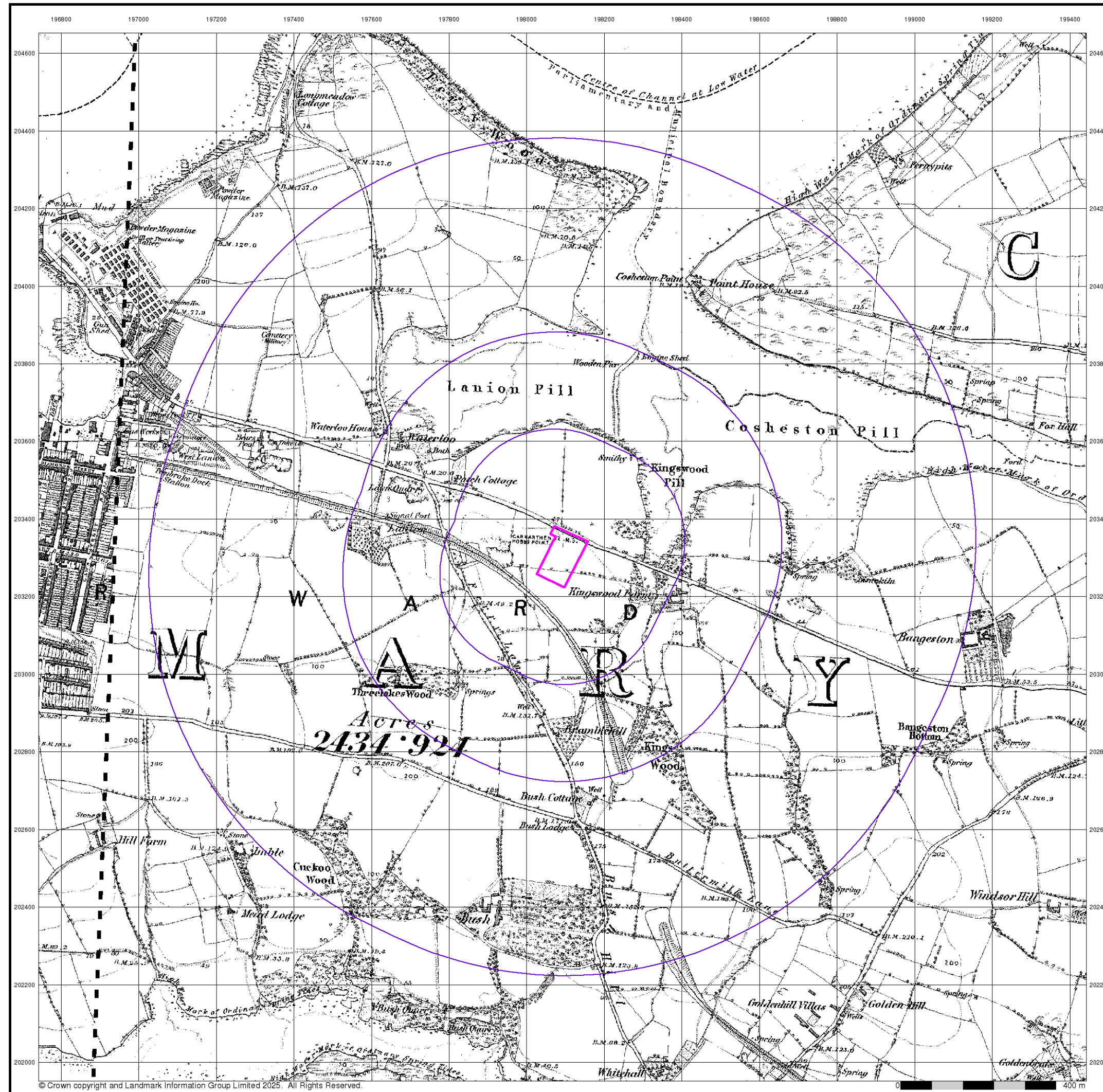
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Customer Ref: 1360.01
National Grid Reference: 198090, 203300
Slice: A
Site Area (Ha): 1.09
Search Buffer (m): 1000

Site Details

Land south of London Road, PEMBROKE DOCK, SA72 4RS

Landmark
INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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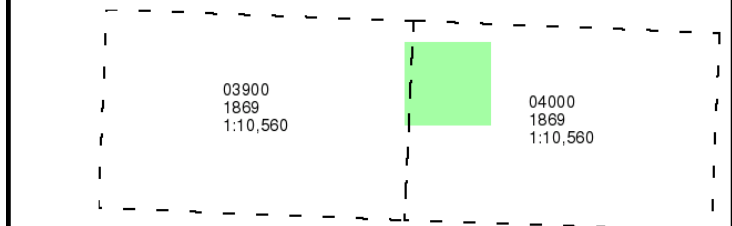
Pembrokeshire

Published 1869

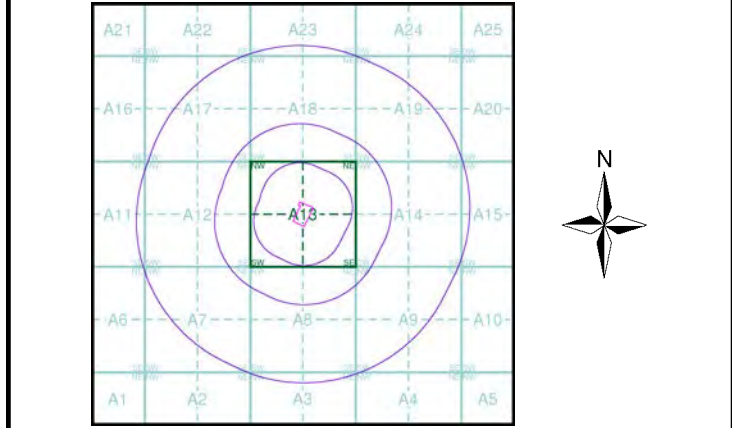
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



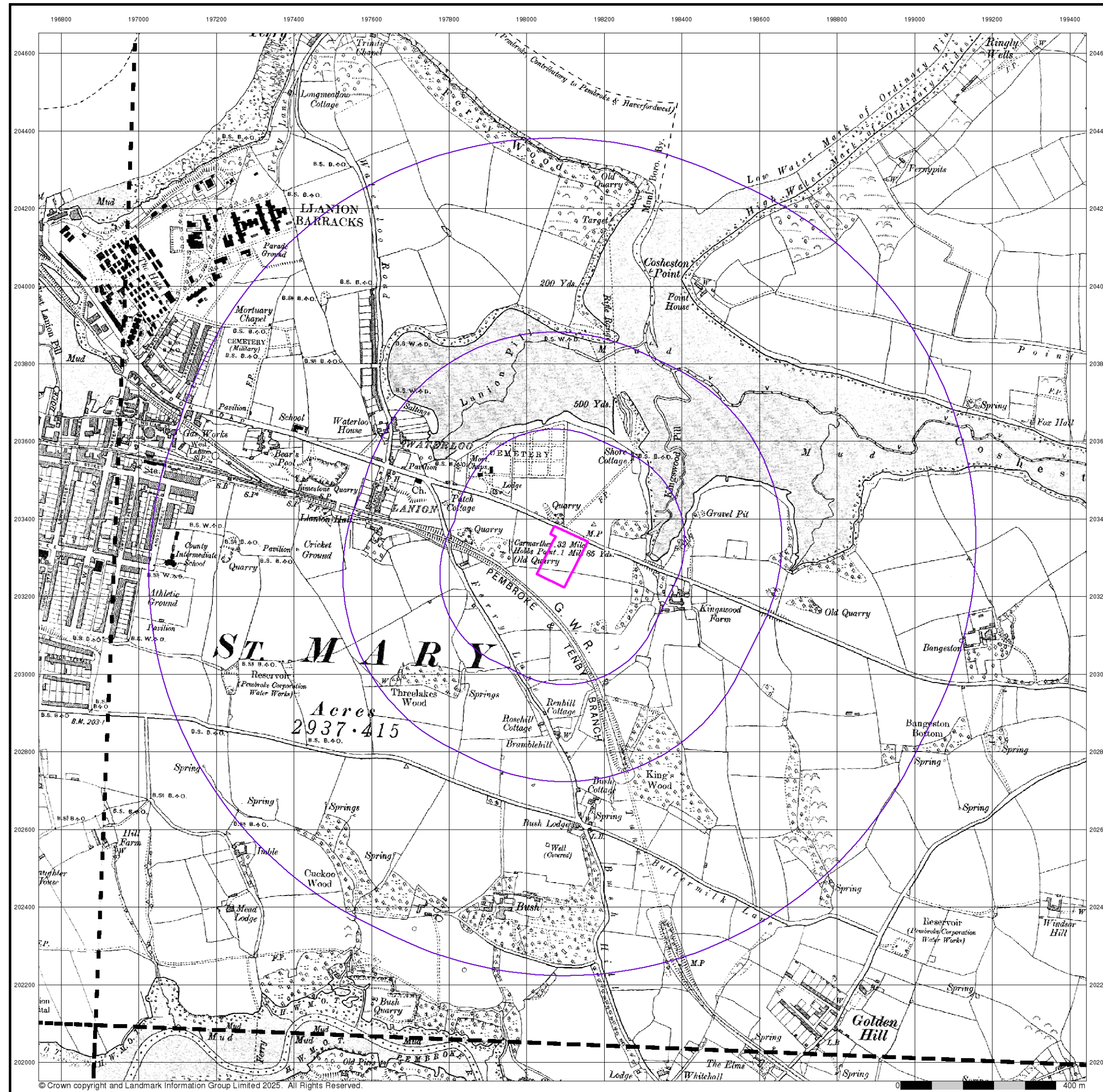
Historical Map - Slice A



| Order Details | |
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| National Grid Reference: | 198090, 203300 |
| Slice: | A |
| Site Area (Ha): | 1.09 |
| Search Buffer (m): | 1000 |

Site Details

Land south of London Road, PEMBROKE DOCK, SA72 4RS



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Pembrokeshire

Published 1908 - 1909

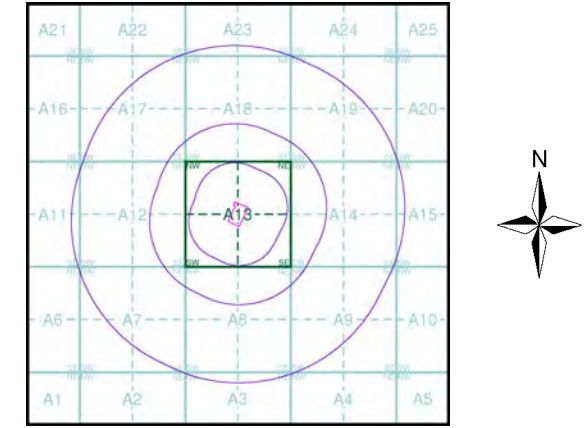
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

| | |
|---------------------------|---------------------------|
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| 039SE 1908 1:10,560 | 040SW 1908 1:10,560 |

Historical Map - Slice A

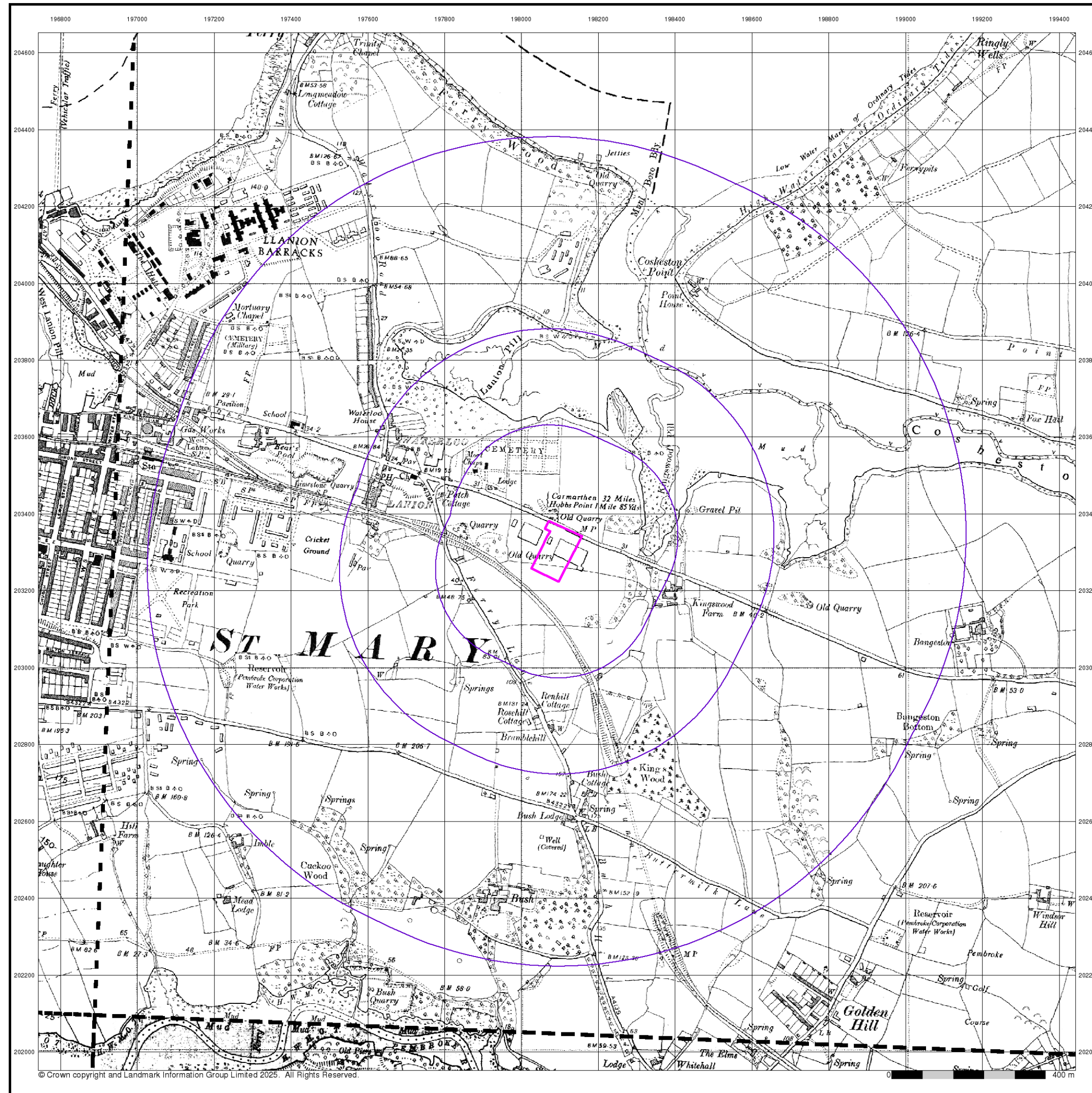


Order Details

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Customer Ref: 1360.01
National Grid Reference: 198090, 203300
Slice: A
Site Area (Ha): 1.09
Search Buffer (m): 1000

Site Details

Land south of London Road, PEMBROKE DOCK, SA72 4RS



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Pembrokeshire

Published 1938 - 1953

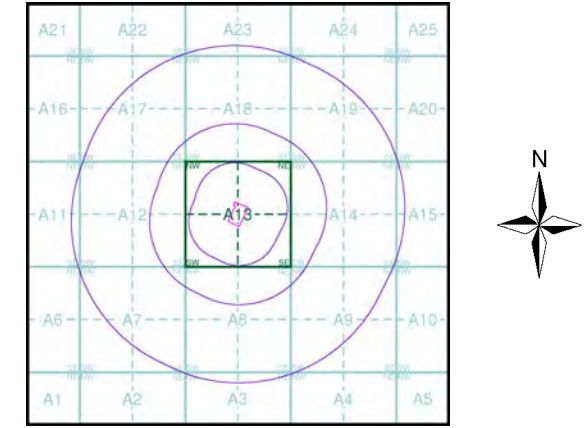
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The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

| | |
|---------------------------|---------------------------|
| 039NE 1953 1:10,560 | 040NW 1953 1:10,560 |
| 039SE 1953 1:10,560 | 040SW 1938 1:10,560 |

Historical Map - Slice A



Order Details

Order Number: 366896627_1_1
Customer Ref: 1360.01
National Grid Reference: 198090, 203300
Slice: A
Site Area (Ha): 1.09
Search Buffer (m): 1000

Site Details

Land south of London Road, PEMBROKE DOCK, SA72 4RS



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Pembroke

Published 1950

Source map scale - 1:10,000

These maps were produced by the Russian military during the Cold War between 1950 and 1997, and cover 103 towns and cities throughout the U.K. The maps are produced at 1:25,000, 1:10,000 and 1:5,000 scale, and show detailed land use, with colour-coded areas for development, green areas, and non-developed areas. Buildings are coloured black and important building uses (such as hospitals, post offices, factories etc.) are numbered, with a numbered key describing their use.

They were produced by the Russians for the benefit of navigation, as well as strategic military sites and transport hubs, for use if they were to have invaded the U.K. The detailed information provided indicates that the areas were surveyed using land-based personnel, on the ground, in the cities that are mapped.

Map Name(s) and Date(s)

SM90SE

1950

1:10,000

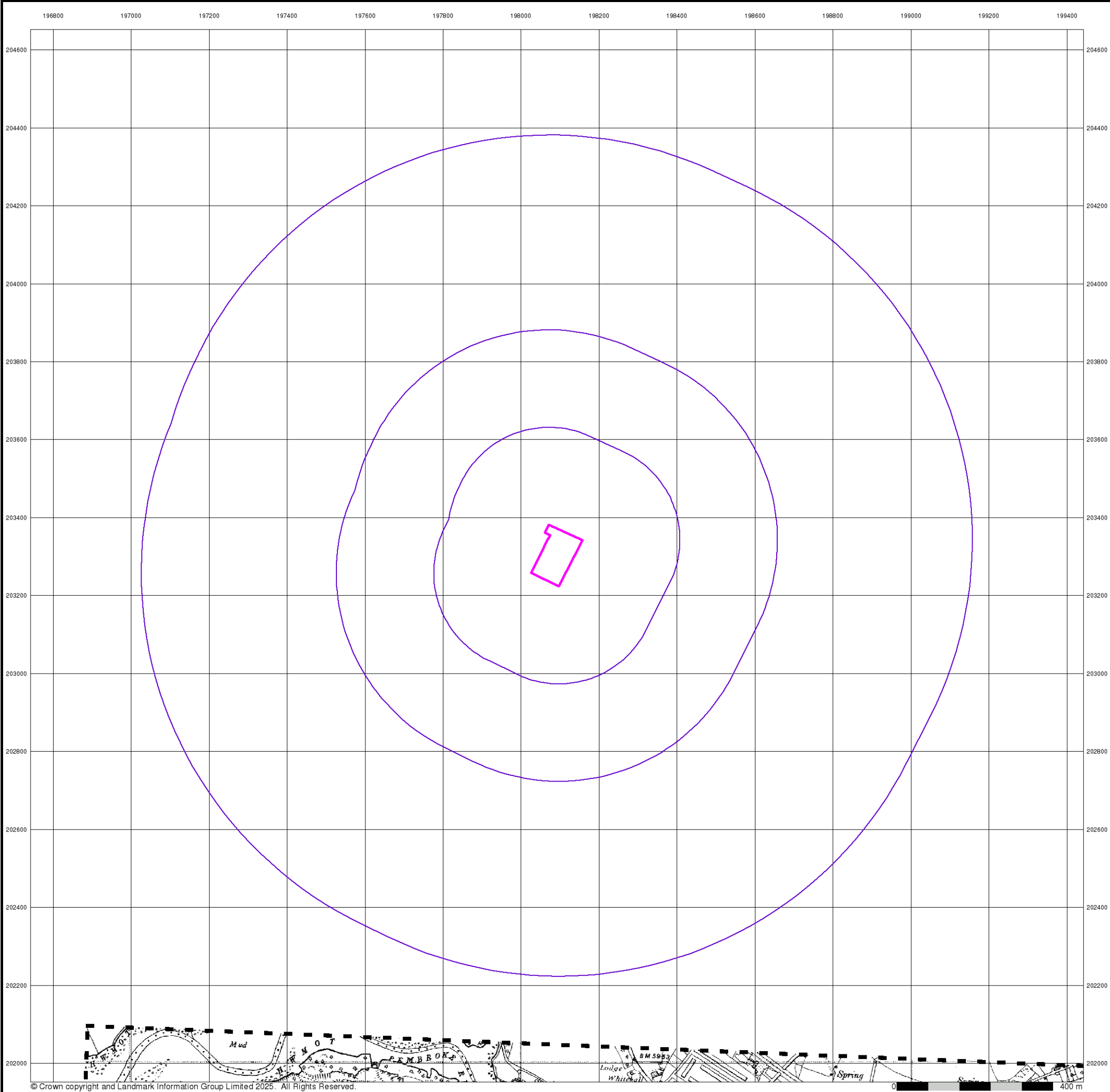
Russian Map - Slice A

Order Details

| | |
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| National Grid Reference: | 198090, 203300 |
| Slice: | A |
| Site Area (Ha): | 1.09 |
| Search Buffer (m): | 1000 |

Site Details

Land south of London Road, PEMBROKE DOCK, SA72 4RS



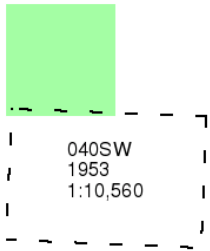
Pembrokeshire

Published 1953

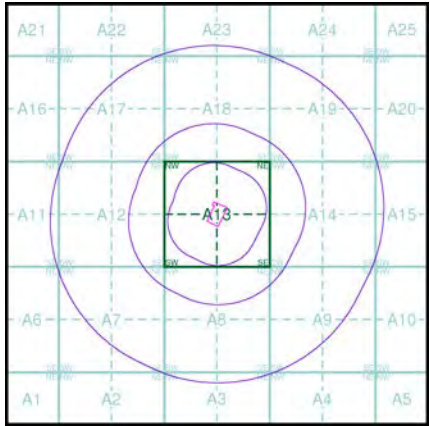
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:366896627_1_1

Customer Ref:1360.01

National Grid Reference:198090, 203300

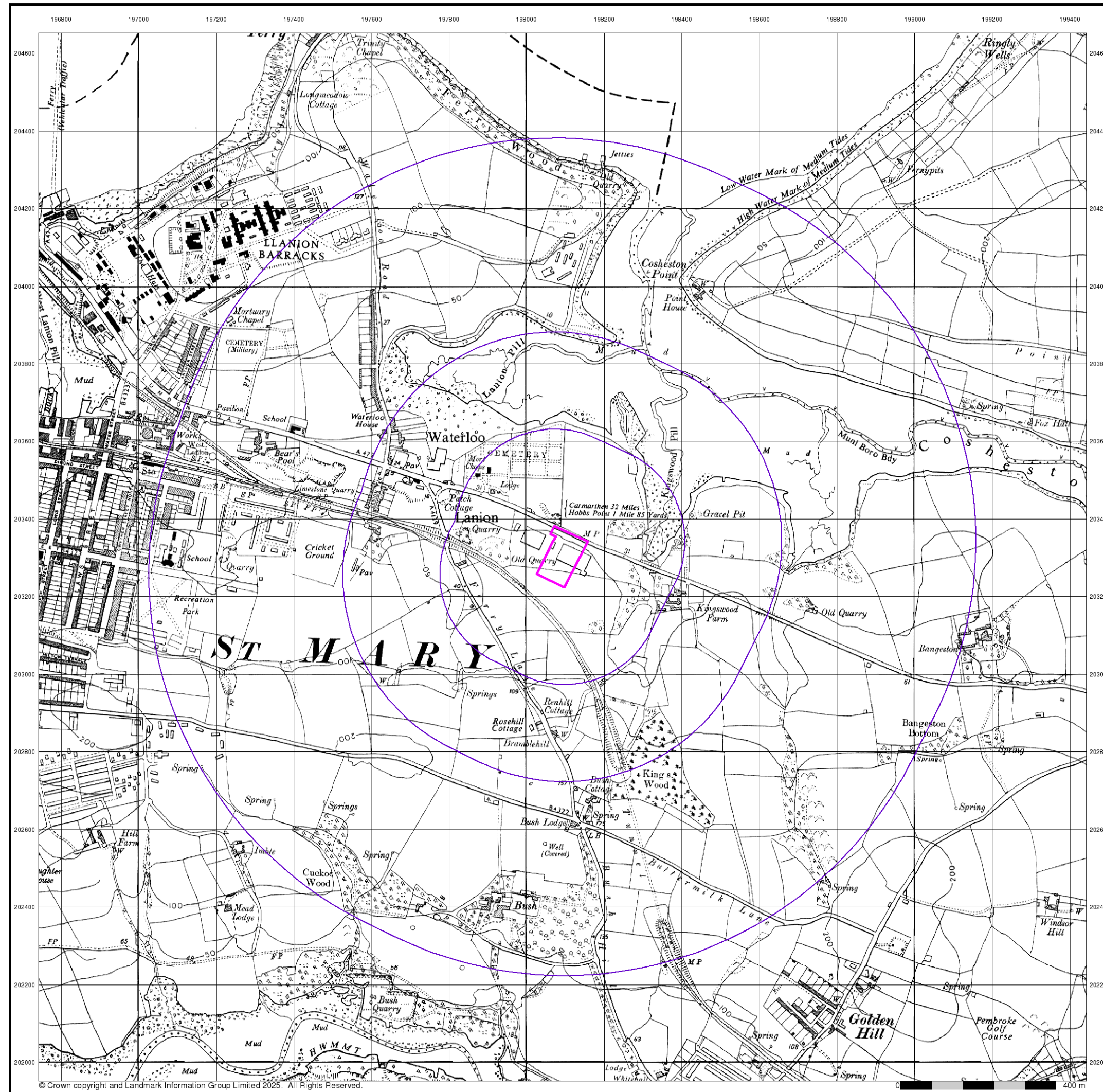
Slice:A

Site Area (Ha):1.09

Search Buffer (m):1000

Site Details

Land south of London Road, PEMBROKE DOCK, SA72 4RS



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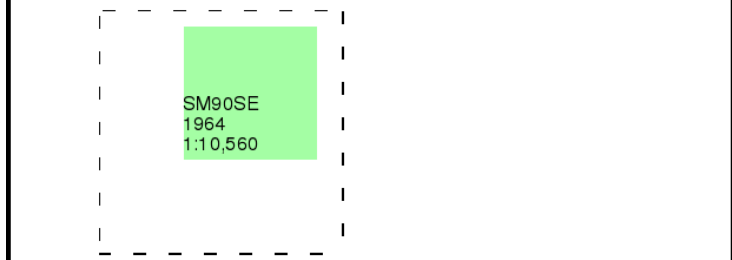
Ordnance Survey Plan

Published 1964

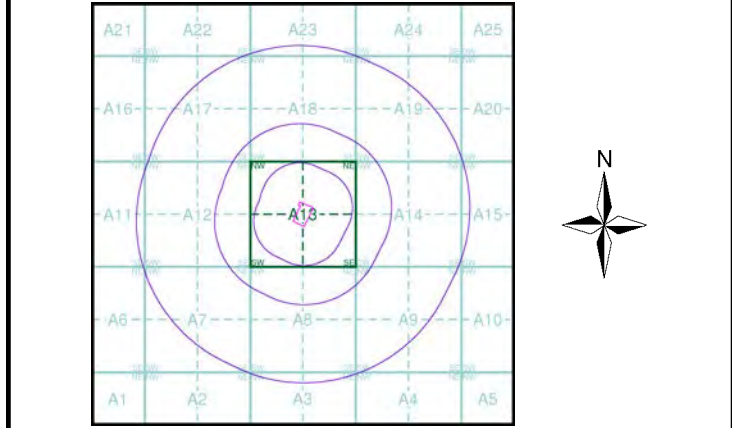
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



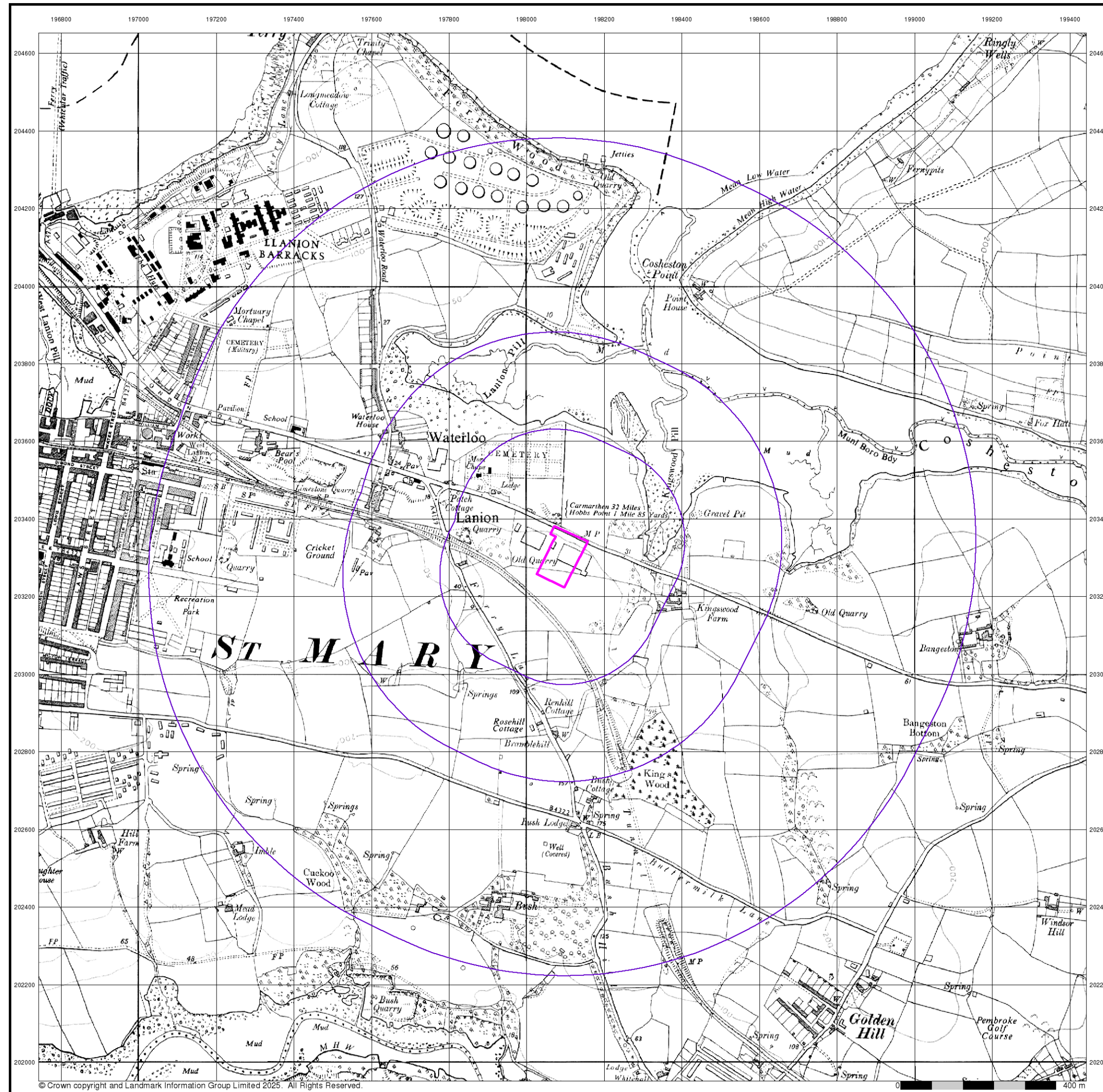
Historical Map - Slice A



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| Order Details | |
| Order Number: | 366896627_1_1 |
| Customer Ref: | 1360.01 |
| National Grid Reference: | 198090, 203300 |
| Slice: | A |
| Site Area (Ha): | 1.09 |
| Search Buffer (m): | 1000 |

Site Details

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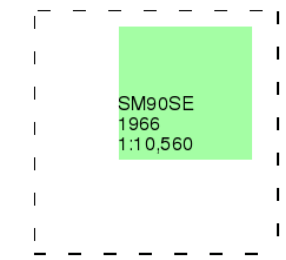
Ordnance Survey Plan

Published 1966

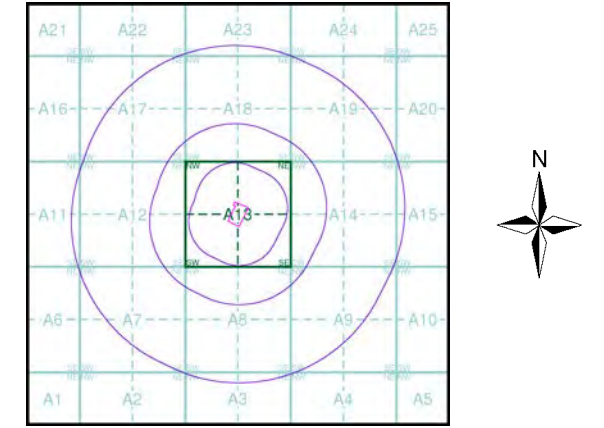
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The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



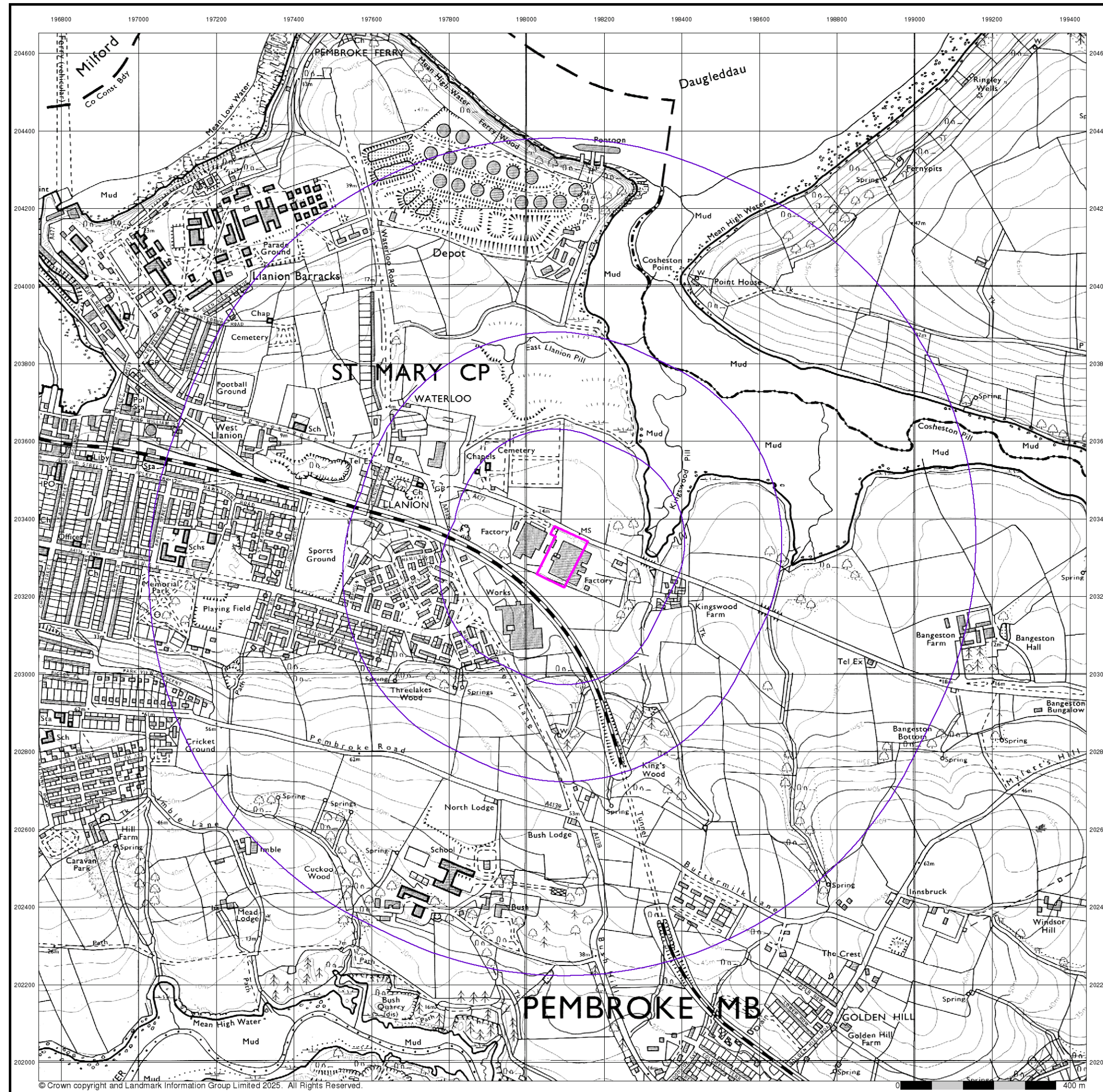
Historical Map - Slice A



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Ordnance Survey Plan

Published 1971

Source map scale - 1:10,000

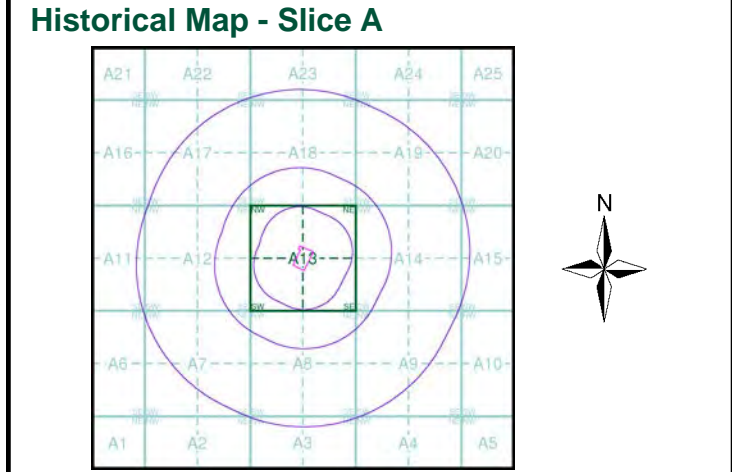
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

SM90SE

1971

1:10,000

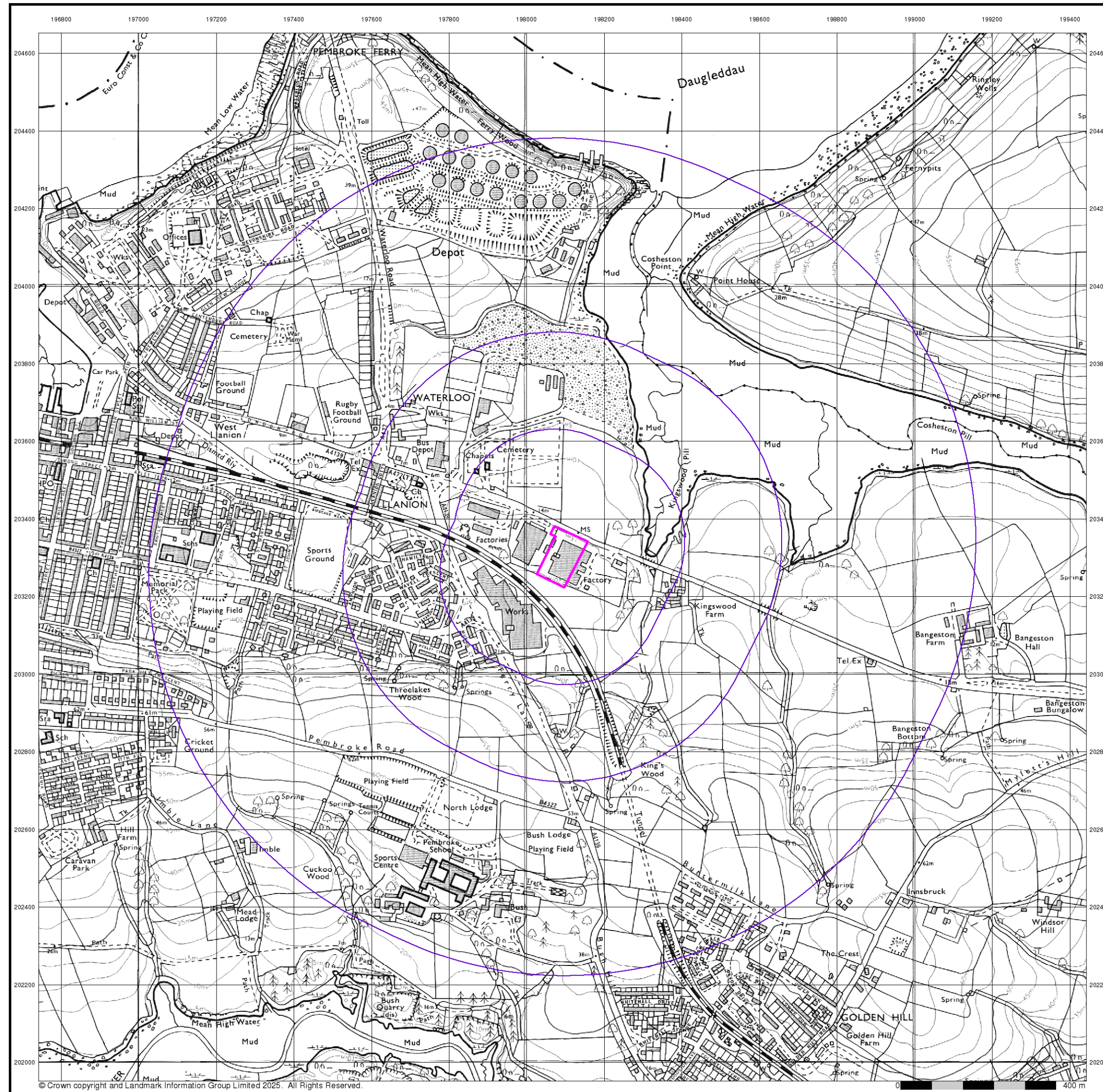


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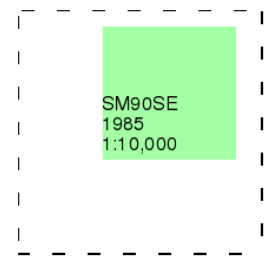
Ordnance Survey Plan

Published 1985

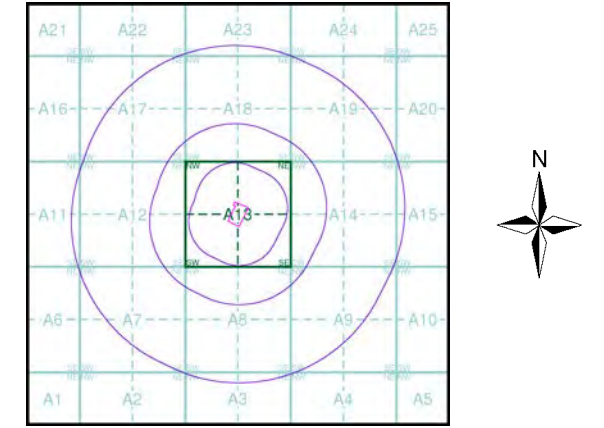
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



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