



Tellus

Geoconsult LTD

AMIRUL ISLAM

PHASE 1 CONTAMINATED LAND DESK STUDY

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Improving the Environment for Business

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1. INTRODUCTION

This report is prepared in accordance with instructions received from Imirul Islam. Tellus Geoconsult LTD (Tellus) were instructed to prepare a Phase 1 Contaminated Land Desk Study report of an approximate 0.29-hectare site named “Marsden Cottage”, located at Lizard Lane, South Shields (the site).

The site comprises an existing dwelling that is being replaced with another.

2. SCOPE OF WORK

This Phase 1 Contaminated Land Desk Study comprises the following scope of work:

- Identify and review all contemporary information for the site and surrounds;
- Review all historical mapping to assess the historic land uses of the site and surrounding area;
- Development of an initial Conceptual Model (CM) for the site;
- Undertake a preliminary assessment of ground stability issues;
- A preliminary risk assessment of potential liabilities relating to contamination; and
- Recommendations for additional works, as necessary.

This report has been prepared in accordance with the Environment Agency (EA) protocol Land Contamination Risk Management (LCRM; which replaces CLR 11, Model Procedures for the Management of Land Contamination).

3. LEGISLATIVE CONTEXT

As the site is being assessed to determine the potential for future development, the key legislation applicable is the Planning Regime. Planning guidance relating to the development of land potentially affected by contamination is detailed in the National Planning Policy Framework (NPPF).

The NPPF states that planning decisions should ensure that:

- a site is suitable for its new use taking account of ground conditions and land instability, including from natural hazards or former activities such as mining, pollution arising from previous uses and any proposals for mitigation including land remediation or impacts on the natural environment arising from that remediation;
- after remediation, as a minimum, land should not be capable of being determined as contaminated land under Part 2A of the Environmental Protection Act 1990; and
- adequate site investigation information, prepared by a competent person, is presented.

The statutory definition of contaminated land is given in Part 2A of the Environmental Protection Act (EPA) 1990 (Part 2A). This does not include land that is already regulated through other means, such as Waste Management Legislation or the Integrated Pollution Prevention and Control (IPPC) regime.

In addition, the NPPF states that the planning system should contribute to, and enhance the natural and local environment by preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability.

The primary regulators under the NPPF are the Local Planning Authorities (LPA).

In this case the LPA is South Tyneside Council (STC).

4. SOURCES OF INFORMATION

The assessment is based upon the following sources of information:

- EA Contaminated Land Risk Management, 2020;
- Groundsure report including historic County Series and Ordnance Survey Plans;
- Site visit;
- Google Earth Pro;
- BGS Published Geological Plans and scanned borehole logs - www.bgs.com;
- Coal Authority Records - <http://mapapps2.bgs.ac.uk/coalauthority/home.html>;
- The Coal Authority, Risk Based Approach to Development Management, Guidance for Developers, V4, 2017 and gov.uk/guidance/planning-applications-coal-mining-risk-assessments;
- Durham Mining Museum records (www.dmm.org.uk);
- Department of Environment, Waste Management Paper No 27 – Landfill Gas; and
- CIRIA C552 - Contaminated Land Risk Assessment, a Guide to Good Practice, 2001.

5. DEVELOPMENT PROPOSALS

The site is being redeveloped for residential use comprising replacement of an existing dwelling with another.

The latest proposed site layout plan is provided in Appendix 1.

The LPA will require the developer to demonstrate that the condition of the site is suitable for its proposed end use. This report commences the risk assessment process to evaluate the site and to address potential contamination concerns. Potential contaminant linkages are identified and ranked with regards to risk to receptors.

6. SITE DETAILS AND DESCRIPTION

Table 1 documents the current site details and description.

Table 1 Site Details and Description	
Location	Marsden Cottage, Lizard Lane, South Shields, South Tyneside, NE34 7AD. A site location plan is provided in Appendix 1.
National Grid Reference	439775 564485.
Approximate Site Area	0.29-hectares.
Topography and Features	According to Google Earth Pro the site is situated at around 73m AOD and sits above a steep quarry face. The off-site local topography typically falls to the east towards the coastline of the North Sea; the coastline is located approximately 700m to the east of the site. The site comprises an existing detached dwelling with gardens and a long access drive that also serves another dwelling.
Current Land Use	Residential.
Access / Boundaries	The site has access directly from a junction with Lizard Lane. A long road/driveway is present that provides to the site and a neighbouring dwelling. The rest of the site has vegetation at surface with mature trees present. The boundaries are undefined and comprise the walls of the dwelling, a perimeter boundary wall between the site and Whitburn Golf Clubs playing greens, and a wall is present to the north beyond the access drive.
Adjacent Land Uses	Marsden Old Hall Quarry is present to the immediate north and west of the site (now a nature reserve), and a golf course is present to the east and south. Lizard Lane runs north/south past the site to the east and divides the golf course into two. A large caravan park is present to the north-east on Lizard Lane and the residential dwellings of Marsden extend up to the nature reserve at its northern boundary.

7. SITE HISTORY

A review of historic County Series and Ordnance Survey plans (see Appendix 2) has been undertaken to identify former potentially contaminative land use on and adjacent to the site.

Table 2 summarises the history of the site and the surrounding area in terms of historical features with a potential to impact site development; either through contamination being present on site of origin or due to the cross boundary travel of contaminants into the site from off-site features within 250m of the site boundary.

Table 2 Site History

Map Edition	On Site	Off Site
1855 – 1857	The site appears undeveloped and within the immediate environs of Marsden Hall.	Industry is present to the north of the site from first mapping comprising a limestone quarry with an old shaft and a lime kiln , it is present 150m to the north-west of the site. A small clay pit is present 240m north of the site with numerous other small quarries in the greater area >250m from the site. Otherwise the site is generally surrounded by hedged fields, and the North Sea Coastline is present 600m to the east of the site. A large development named “Lizards” is present 200m to the south-east of the site., probably a farmstead.
1895 - 1896	No significant changes other than several small buildings appear within the north of the site from 1896.	The quarry increases in size and mineral railway lines extend east from it; they connect to the South Shields, Marsden and Whitburn Colliery railway and sidings appear to extend to another large quarry in Marsden, but this quarry is >500m from the site.
1914 - 1938	A larger building appears in the north of the site from 1914, with trees and a garden area to the south of it.	A reservoir is present 100m to the north-east of the site. The quarry void extends to within 20m of the site to the north. Industry increases in scale in Marsden centred around the quarrying and Whitburn with Whitburn Colliery present. The colliery is located too far from the site to be significant and is not considered further.
1940 - 1957	A road/driveway extends across the garden area within the south of the site which appears to be part of Marsden Hall and it connects to a large building to the immediate west of the site. From 1955 Marsden Hall is labelled as the “NCB Group Office”. A small tank is present to its north, at the boundary with the quarry, possibly a water tank.	The quarry to the north of the site is now labelled as “old”, the reservoir is no longer present to the north-east and the railway lines are gone, leaving disturbed ground behind along its route on either side of Lizard Lane. Housing now extends up to the quarries northern boundary. From 1951 the fields to the immediate south of the site are labelled as a “Golf Course”. From 1957 the fields to the east of the site beyond Lizard Lane are also labelled as a golf course (Whitburn Golf Course).
1966 - 1968	No significant changes	The quarry to the immediate north of the site is re-activated, with active workings noted.
1974 - 2025	The building on the site is labelled as “Marsden Cottage” from 1989.	The quarry to the immediate north is now disused again. A caravan site appears 200m north-east of the site to the north of the Golf Club, the disturbed ground from the former railway is no longer present. A circular feature is present 150m south-west, named “Swallow Ridge” from 1974.

Note - all distances to features quoted In Table 2 are approximate.

7.1 Aerial Photographs

Aerial photographs presented in the Groundsure report show the site as the current Marsden Cottage dwelling and garden from 1999 to 2021, it is located next door to Marsden Hall with an access road from Lizard Lane. Off-site a former quarry void is present to the north and west, now a nature reserve, with housing beyond. A Golf Course is present to the immediate east and south, and a large caravan park is present to the north-east.

7.2 Site Walkover Survey

A site walkover was undertaken by an experienced Tellus environmental engineer on 08 December 2025.

Observations from the walkover are as follows.

The site is located off Lizard Lane, South Shields. A junction with Lizard Lane provides access to both Marsden Hall and the site, Marsden Hall has its own private road from the junction with a side road serving the site and a neighbouring dwelling.

The site comprises an existing dwelling and rear garden, with a small garden to the front / side that has a propane tank within it. The rear garden is turfed and has mature trees and vegetation present, the front side garden has artificial grass at surface.

The site is located on very high ground, ground levels fall away on all sides and to the immediate north is a quarry face from a former limestone quarry, the site is perched above the quarry but it is well set back from the face and boundary walls following the access road and landscaping prevent access to the quarry face.

The greens of Whitburn Golf Club extend up to the sites back garden wall, the greens are also present across Lizard Lane to the east of the site.

The former limestone quarry is now a nature reserve, it was frequented by dog walkers at the time of the visit and it comprises a flat grassed field representing the base of the former quarry, with a raised embankment that follows Quarry Lane at its northern boundary, possibly placed to shield the residential dwellings and housing estate at Quarry Lane from the original quarrying activities.

A former railway line provides a path through the nature reserve, and on the opposite side of Lizard Lane to the quarry a large static caravan holiday park is present, used by tourists due to its closeness to the coastline of the North Sea and the many beaches and recreational areas.

There are no pathways to the site from the quarry, the site sits some 20m above it behind a cliff face, and there are no other sources of contamination in the off-site area, the site is located within a residential setting, surrounded by a nature reserve and a golf course. Development proposals simply comprises replacing the existing dwelling with another. There was no obvious ACM on the dwelling such as concrete tiles and facias.

Photographs taken during the site visit are presented in Appendix 3.

8. GEOLOGY

Reference to BGS online GeoIndex records and information presented by Groundsure indicates the following geological sequence of strata beneath the site.

8.1 Made Ground

Made Ground is not recorded on site by the BGS. Worked ground is recorded 74m to the north of the site for a “void” comprising an old quarry, and Made Ground is recorded 202m north-east and 225m east of the site for an “artificial deposit”; the Made Ground is located close to the coastline of the North Sea.

8.2 Superficial Deposits

Superficial deposits are not recorded by the BGS within the site; the closest superficial deposits are recorded 63m to the south for Glacial Till. Pelaw Clay Member deposits are recorded 147m to the north.

8.3 Solid Geology

The site is underlain by the Roker Formation comprising Dolostone (Dolomitic Limestone) of the Permian Period. There are no coal seams present within the Dolostone, it presents as a Principal Aquifer. The Dolostone sits unconformably above coal measures strata at a thickness of around 100m (based on a shaft log for nearby Whitburn Colliery sunk in 1874 and closed in 1968).

There are no faults recorded on site. A fault is present 71m to the south-east, it trends south-west / north-east and its displacement is not known.

8.3.1 BGS Borehole Logs

There are no BGS borehole logs available for the site itself, with records of limited use within 250m of the site in the surrounding area. 5 No. borehole records are present to the immediate north of the site in Marsden Hall / Marsden Hall Quarry but all are confidential.

BGS borehole NZ36SE299 was sunk 179m north of the site at Lake Avenue, it was terminated at shallow depth at 5.0m bgl and proved superficial deposits comprising soil over firm brown clay and firm dark Boulder Clay (drillers descriptions) from surface to 4.80m bgl, with rockhead then proven comprising Magnesian Limestone to the termination depth of the borehole at 5.0m bgl. Chiselling for one hour failed to make progress due to bedrock.

8.4 Preliminary Coal Mining Assessment

8.4.1 Deep Coal Mining

Groundsure state that the site is “in an area which may be affected by past, current or future coal mining”.

Examination of the Mining Remediation Authority records (former Coal Authority) identifies that the site is not located within a “High Risk Area (HRA)” for mining, and there are no HRA present within the surrounding off-site area.

Due to the site being located above Roker Formation strata comprising Dolomitic Limestone, proven to a thickness of 100m on a nearby Whitburn Colliery shaft log, risks from shallow

mining are low within the site and there are no records of mine entries within the site or surrounding area on the Mining Remediation Authority (former Coal Authority) viewer.

The site is in a coal mining reporting area meaning the developer should be aware for a potential for unrecorded (ancient) mining features such as bell pits when redeveloping the land. However, due to the Roker Formation that underlies the site not having productive coal seams present, risks from ancient bell pits are not expected.

Also, information on the Mining Remediation Authority's viewer confirms the following:

- There are no mine entries recorded on site or within 20m of its boundary (i.e. within influencing distance);
- There are no fissure or breaklines on site or within 250m of it;
- There are no past or current opencast sites on site or within 250m of it;
- There are no past shallow coal workings on site or within 250m of it;
- There are no probable shallow coal workings on site or within 250m of it; and
- There are no coal outcrops on site or off site within potential influencing distance (none within 1.0km).

There are no coal outcrops within circa 1.0km of the site, the site is located above Dolomitic Limestone without productive coal seams. The Dolomitic Limestone sits unconformably above coal measures strata; coal seams are present below the Dolomite unit within Coal Measures Strata but are at significant depth and are of low risk to surface development.

Based on this information and the underlying geology, coal mining legacy risks are considered low.

8.4.2 Other Mining

None identified. No records for brine, gypsum, tin or clay mining on site.

8.5 Brit Pits

The Groundsure report confirms that there are 4 No. Brit Pits recorded within 250m of the site. The closest is recorded 59m to the north for Marsden Hall Quarries, the commodity worked was Dolomite and another two quarries operated by Marsden Hall Quarries are recorded 139m west and 169m north-west, also for the working of Dolomite. A clay pit is also recorded 230m north in Marsden for the working of clay and shale.

8.6 Surface Ground Workings

30 No. surface ground workings within 250m of the site reflecting the widespread presence of quarrying in the off-site area. Unspecified workings are recorded on site as taken from the 1968 OS Plan (1:10,560 scale), however, it is due to the digitised boundary of the site

overlapping with the Groundsure surface ground workings layer on their GIS, the site boundary adjoins the former workings, the workings are not actually within the site.

8.7 Natural Hazards

The Groundsure report records natural hazard risks on site as follows.

- Potential for Shrinking or Swelling Clay Ground Stability Hazards – Negligible;
- Potential for Running Sand Ground Stability Hazards – Negligible;
- Potential for Compressible Ground Stability Hazards – Negligible;
- Potential for Collapsible Ground Stability Hazards – Very low;
- Potential for Landslide Ground Stability Hazards – Very Low; and
- Potential for Ground Dissolution Stability Hazards – Very Low.

8.8 Tunnels

None identified within 250m of the site.

9. ENVIRONMENTAL SETTING

Information from the Groundsure Report (see Appendix 4) has been reviewed to confirm the environmental setting of the site, discussed next.

9.1 Waste Operations

9.1.1 Landfill

There are records of one active or recent landfill within 250m of the site. The landfill is recorded 249m east of the site at O' Brien Aggregate Marsden Limited at Marsden Quarry. It is an inert landfill, its Waste Management Licence number is 64063. An inert landfill 249m from the site is not considered to represent a gas risk to the site, it is too far away and inert waste will not be producing gas under pressure that can migrate out of the landfill. It is also licensed meaning it will be regularly monitored for gas generation/migration, and gas would not be allowed to migrate out of the landfill.

A further two landfills are recorded 54m north and 105m north at a disused quarry off Quarry Lane, Marsden; both appear to be historical landfill with the reference number ST 037. The landfill closest to the site comprises a rectangle of ground within Whitburn Golf Course, the other is at the northern boundary of Marsden Old Hall Quarry Nature Reserve, also comprising a rectangle of ground that is raised above the floor of the quarry. There are no further details available for it meaning it must predate the introduction of the Control of Pollution Act (COPA) 1974 in the UK, which placed a legal duty on landfill operators to maintain records of waste infilling.

The generally accepted cut off distance for risk of landfill gas migration is 250m (DoE Waste Management Paper No 27 – Landfill Gas).

9.1.2 Waste Management Operations

There are no records for waste management facility's within 250m of the site.

9.2 Controlled Waters

9.2.1 Surface waters

Groundsure record no surface waters on site and there are none recorded within 250m of the site.

There are no surface water abstraction licenses within a 1.0km radius of the site.

The site is not recorded to be within a Risk of Flooding from Rivers and Sea (RoFRaS) or Flood Zones 2 and 3; flood risks are not present.

Surface water flooding risk on site is recorded as Negligible.

There are no records for surface water abstraction licenses within 1.0km of the site.

9.2.2 Groundwater

The Groundsure Report states that the site is located within an area designated as a Principal Aquifer (former major aquifer) of high vulnerability as classified by the EA in accordance with the Water Framework Directive. Principal aquifers have high intergranular and/or fracture permeability and can provide a high level of water storage and may support water supply and river base flow on a strategic scale.

Superficial deposits are not recorded and have no aquifer status.

The site is not located within a Source Protection Zone.

There is one licensed active groundwater abstractions within a 2.0km radius of the site; it is held by the Coal Authority for the treating of mine water contamination at Whitburn Coastal Park, 1.26km south-east of the site.

Groundwater flooding risks are recorded as Negligible.

9.3 Radon

The site is within a Lower Probability Area where less than 1% of homes at or above the action level. In accordance with BR211 by the Building Research Establishment, basic radon protection measures are not considered necessary for new buildings at the site.

9.4 Ecology

There are records for protected ecological sites within 1.0km of the site, mainly for the Coastline of the North Sea where SSSI, RAMSAR, SAC and SPA are present.

The site itself is recorded as being in a Local Nature Reserve (LNR) for Marsden Old Quarry but this is just due to the sites digitised boundary slightly overlapping the LNR boundary; the LNR is actually off-site to the immediate north of the site. The site is within the Tyne & Wear Greenbelt.

9.4.1 Invasive and Protected Species

No invasive or protected species were noted during the site walkover. However, to fully confirm the absence of invasive or protected species advice by a suitably qualified consultant ecologist would need to be sought.

9.5 Contaminated Land

There are no records of sites designated as contaminated land under Part 2A of the Environmental Protection Act 1990 within 500m of the site.

9.6 Fuel Stations

No current or recent fuel stations identified within 250m of the site. There are no records for historical garages within 250m of the site.

9.7 Other Relevant Environmental Information

There are no COMAH or NIHHS regulated facilities within 500m of the site, or Planning Hazardous Substance Consents.

There are no high-pressure gas pipelines or high voltage electricity cables recorded within 500m of the site.

There are no recent industrial land uses within 250m of the site.

9.8 Unexploded Ordnance

As with most coastal areas of the North East of England, South Shields suffered from incendiary and high explosive bombing during World War 2 (WWII) due to the presence of industry important to the war effort locally; principally associated with docks, shipbuilding and the nearby River Tyne.

Unexploded Bomb Risk Mapping from Zetica indicates a Low risk at the site, with a bombing density of 15 bombs per 1000 acres (see UXO risk mapping in Appendix 5).

The site comprises a dwelling that pre-dates WWII. It is therefore considered very unlikely that the site has been subject to ordnance risks, and any ordnance falling in gardens would not have been left at the time, it would have been dealt with due to the closeness of the surrounding dwellings.

A detailed appraisal of UXO risk is outside the scope of this report.

10. POTENTIAL CONTAMINATION SOURCES

A review of the sites history and environmental setting has identified potential sources of contamination on the site itself due to its past use and location.

The potential contaminants identified as potentially being present on the site as a result of its past use and location are detailed below:

- **Agrochemicals** – Pesticides, herbicides, fertilisers (agriculture)
- **Ground Gas** – Landfill gas (methane, carbon dioxide, trace gasses, depleted oxygen).

11. ENVIRONMENTAL ASSESSMENT

11.1 Preliminary Risk Assessment

In accordance with the current UK Government policy of the “suitable for use” approach to the remediation of contaminated land, a qualitative contamination risk assessment of the site has been undertaken, with regard to the proposed change of land use, and in relation to the wider environment.

An initial Conceptual Model (CM) has been derived from the assessment of information gained from the preceding desk study information.

The model has been derived using a SOURCE – PATHWAY – RECEPTOR methodology to enable potential pollutant linkages to be identified, assessed and ranked in terms of importance by consideration of:

1. The presence and degree of integrity of pollution linkages
2. Evaluation of the significance of contamination risk based upon the severity of harm and sensitivity of receptors to which harm or pollution may be caused

The identification and significance of potential “pollutant linkages” discussed above is a key component in the evaluation of potentially contaminated land. An approach based on CIRIA C552 - *Contaminated Land Risk Assessment, a Guide to Good Practice (2001)* has been used as a basis for risk assessment in this report.

The classification of risk is presented in Tables 3 to 5, with the Preliminary Risk Assessment (initial Conceptual Model) presented in Table 6.

11.2 Risk Assessment Approach / Method

11.2.1 Stage 1 – Potential Consequence of Contaminant

Potential consequences relating to contaminants are detailed in Table 3.

Table 3
Potential Consequence of Contaminant

Classification	Human Health	Controlled Water	Ecology, Flora & Fauna	Property	
				Structures	Crops & Animals
Severe	Irreversible damage to human health	Substantial pollution of sensitive water resources	Significant change to the number of one or more species or ecosystems	Irreparable damage to buildings, structures or the environment	Loss in value of livestock / crops resulting from death, disease or physical damage
Moderate	Non-permanent health effects to humans	Pollution of non-sensitive water resources or small scale pollution of sensitive water resources	Change to population densities of non-sensitive species	Damage to sensitive buildings, structures or the environment	Non-permanent health effects from disease or physical damage which result in reduction in value
Mild	Slight short term effects to humans	Slight pollution of non-sensitive water resources	Some change to population densities but with no negative effects on the function of the ecosystem	Easily repairable effects of damage to buildings or structures	Slight or short term health effects which result in slight reduction in values
Negligible	No measurable effects on humans	Insubstantial pollution to non-sensitive water resources	No significant changes to population densities in the environment or in any ecosystem	Very slight non-structural damage or cosmetic harm to buildings or structures	No significant reduction in value

11.2.2 Stage 2 – Likelihood of Contaminant Linkage

Stage 2 assesses the probability of the selected contaminant and receptor being linked by the identified pathway.

The probability is based on site specific conditions and ranked in Table 4.

Table 4
Likelihood of Contaminant Linkage

Very unlikely	0% to 5%
Unlikely	5% to 45%
Possible	45% to 55%
Likely	55% to 95%
Almost certain	95% to 100% (i.e. impact noted during investigation)

11.2.3 Stage 3 – Overall Risk Classification

Stage 3 provides an overall assessment of the actual risk based on the consequence of the risk being realised and the likelihood of the risk being realised. The risk classifications are assigned using the consequence / likelihood matrix presented in Table 5.

Table 5 Risk Classification					
Potential Consequence	Likelihood				
	Very Unlikely	Unlikely	Possible	Likely	Almost Certain
Severe	Low	Low to Moderate	Moderate to High	High	Very High
Moderate	Negligible to Low	Low	Moderate	Moderate to High	High
Mild	Negligible	Low	Low	Low to Moderate	Moderate
Negligible	Negligible	Negligible	Negligible to Low	Low	Low

Overall risks are described as follows:

Very High	There is a high probability that severe harm could arise to a designated receptor from an unidentified contaminant without appropriate remedial action.
High	A designated receptor is likely to experience significant harm from an identified contaminant without remedial action.
Moderate	It is possible that harm could arise to a designated receptor from an identified contaminants, but it is likely that such harm would be relatively localised or non-permanent. Remedial action may be necessary.
Low	It is possible that harm could arise to a designated receptor from an identified contaminant; however, this is likely to be mild.
Negligible	The presence of the identified contaminant does not give rise to the potential to cause significant harm.

11.3 Summary

A preliminary risk assessment is presented in Table 6. The assessment is based on the three stages above and has been undertaken for specific contaminants / groups of contaminants identified as being potentially present.

It should be noted that risks associated with redevelopment workers are not included in the initial CM, as these would be mitigated using appropriate health and safety management. Risk associated with redevelopment workers would not represent a key driver for the remediation of a site.

For the purpose of this report only the main hazards, pathways, receptors and potential pollutant linkages identified within 250m of the site to date are detailed in Table 6.

Table 6

Initial Conceptual Model Summary

Linkage Number	Source	Contaminant	Receptor	Pathway	Potential Effect	Potential Consequence of Linkage	Likelihood Linkage	Risk Classification	Comment
1	Agriculture (on-site / off-site)	Agrochemicals	Human Health						
			Current Site Users	Dermal contact, ingestion and inhalation	Toxic carcinogenic, hazardous to human health	Moderate	Unlikely	Low	Site not been in agricultural use for over 100 years. Agrochemicals would have long since broken down in the environment.
			Future Site Users	Dermal contact, ingestion and inhalation	Toxic carcinogenic, hazardous to human health	Moderate	Unlikely	Low	As Linkage ID1.
3			Adjacent Site Users	Dermal contact, ingestion and inhalation	Toxic carcinogenic, hazardous to human health	Moderate	Unlikely	Low	As Linkage ID1.
4	Historical Landfill (off-site)	Landfill gas (CH ₄ , CO ₂ ,	Human Health						
			Future Site Users	Inhalation	Toxic carcinogenic, hazardous to human health	Severe	Unlikely	Low to Moderate	Site sits on cliff above a former limestone quarry some 20m above the level of the quarry. The quarry is a nature reserve accessed by the public. A historical landfill is present at the northern

Table 6

Initial Conceptual Model Summary

Linkage Number	Source	Contaminant	Receptor	Pathway	Potential Effect	Potential Consequence of Linkage	Likelihood Linkage	Risk Classification	Comment
									boundary of the nature reserve, comprising a raised mound, the mound is still visible on site. Another is present in a golf course at the same level as the nature reserve. No pathway into site from the landfills and they pre-date COPA 1974, meaning they are over 50 years old, gas risks into the site not plausible.

Note – No shaded pollutant linkages identified that require further risk assessment and/or mitigation measures prior to site redevelopment. Risks to construction workers will be mitigated using appropriate health and safety management and controlled in Risk Assessments and Method Statements for the work in accordance with the appropriate Health and Safety legislation.

11.4 Preliminary Risk Assessment – Initial Conceptual Model Summary

The initial CM presents an overall risk classification for each potential source of contamination listed in Table 6, based on the potential consequences of contamination and the likelihood of a contaminant receptor linkage.

The initial CM identifies four potential pollutant linkages at the site as a result of the sites past use/location. Of these, none are considered potentially significant for risks to human health reflecting the sites sole historical use as a dwelling located next to a large manor house, without off-site neighbours. The site sits above a rock face some 20m above the surrounding ground to the north and east. A limestone quarry is present to the immediate north below the rock face; it now comprises a nature reserve used by the public and the quarry floor is still present (i.e. the quarry has not been filled). A raised mound at its northern boundary next to the dwellings of Quarry Lane is recorded as landfill, but it is over 50 years old and pre-dates COPA 1974. It will therefore be unlined and will have been operated on a dilute and disperse basis and was possibly used to raise ground levels to shield the quarry from the housing to the north. Another is present in Whitburn Golf Club next to its boundary with a caravan site and is not visible.

There is no logical pathway for any gas within the historical landfills to impact the site, any gas would simply dissipate to atmosphere in the vicinity of the landfills. Also, railway lines and sidings in the quarry could be a source of contamination, but again, there is no pathway present for it to be able to impact the site and it is now used as a footpath.

11.4.1 Initial Conceptual Model Assumptions & Uncertainties

The risk classification presented in Table 6 is based on the following assumptions and uncertainties.

- It has been assumed that all relevant potentially contaminative processes at the site have been identified;
- Agrochemicals were not used commonly in the UK until the 1940s, the house and its garden pre-date this period;
- No off-site sources of contamination have been identified within 250m of the site historically other than the aforementioned quarrying and landfill;
- All potential human health risks during construction are transient and will be suitably controlled by PPE / RAMS and the appropriate Health & Safety legislation;
- A pre-demolition survey for asbestos containing materials (ACM) will be required for the dwelling, with any ACM removed to a suitably licensed disposal facility;
- Groundwater comprises a Principal Aquifer of high vulnerability but no SPZ or abstraction licences present, no source of gross contamination identified on site that could impact groundwater;

- Superficial deposits are absent within the site, there is likely to be a thin layer of surficial material overlying bedrock;
- The site is in a low risk area for coal mining situated above Dolostone strata (dolomitic limestone), shallow mining risks and/or risks from mine entries have not been identified; and
- There is no information/evidence available to suggest that there has ever been a pollution incident relating to the storage of organic or other pollutants at the site.

12. SUMMARY AND CONCLUSIONS

12.1 Environmental Setting

The site comprises an existing dwelling located next to Marsden Hall. It is situated at a significant elevation to surrounding ground levels above a limestone cliff from a former quarry feature; the quarry is now a nature reserve to the immediate north of the site. Golf club greens extend up to the site boundary to the south.

The site is located within an environmentally insensitive area. Superficial deposits are not recorded meaning bedrock is likely to be shallow with a thin surficial soil layer at surface. Groundwater comprises of a Principal Aquifer of high sensitivity, however, there are no SPZ or abstraction licenses present and there are no sources of contamination present on site that could impact the aquifer.

There are no recorded protected ecological habitats on site or off other than the nature reserve which is not significant to the site redevelopment proposals that simply comprise the replacement of an existing dwelling with another.

12.2 Contamination

No potentially significant Source-Pathway-Receptor contaminant linkages have been identified that require further evaluation, subject to agreement of the findings of this report by STC and following the recommendations below.

12.3 Ground Gas

Ground gas risks not identified.

12.4 Controlled Waters

Controlled waters risks not identified.

13. RECOMMENDATIONS

13.1 Contamination – Human Health, Property

Based on the findings of this report, there are no potentially significant source-pathway-receptor contaminant linkages present for contamination that require further appraisal by way of an intrusive ground investigation, subject to the agreement of this report by STC and the following of the recommendations below.

13.2 Redevelopment Workers

It is recommended that development workers wear suitable PPE appropriate to the task controlled by RAMS and the relevant H&S legislation. This should include as a minimum a high viz jacket and trousers, eye protection, hard hat, gloves and disposable masks if dust is generated. Good hygiene practices should be followed such as not eating, drinking or smoking in working areas, with the use of hand washing/sanitizer at break times.

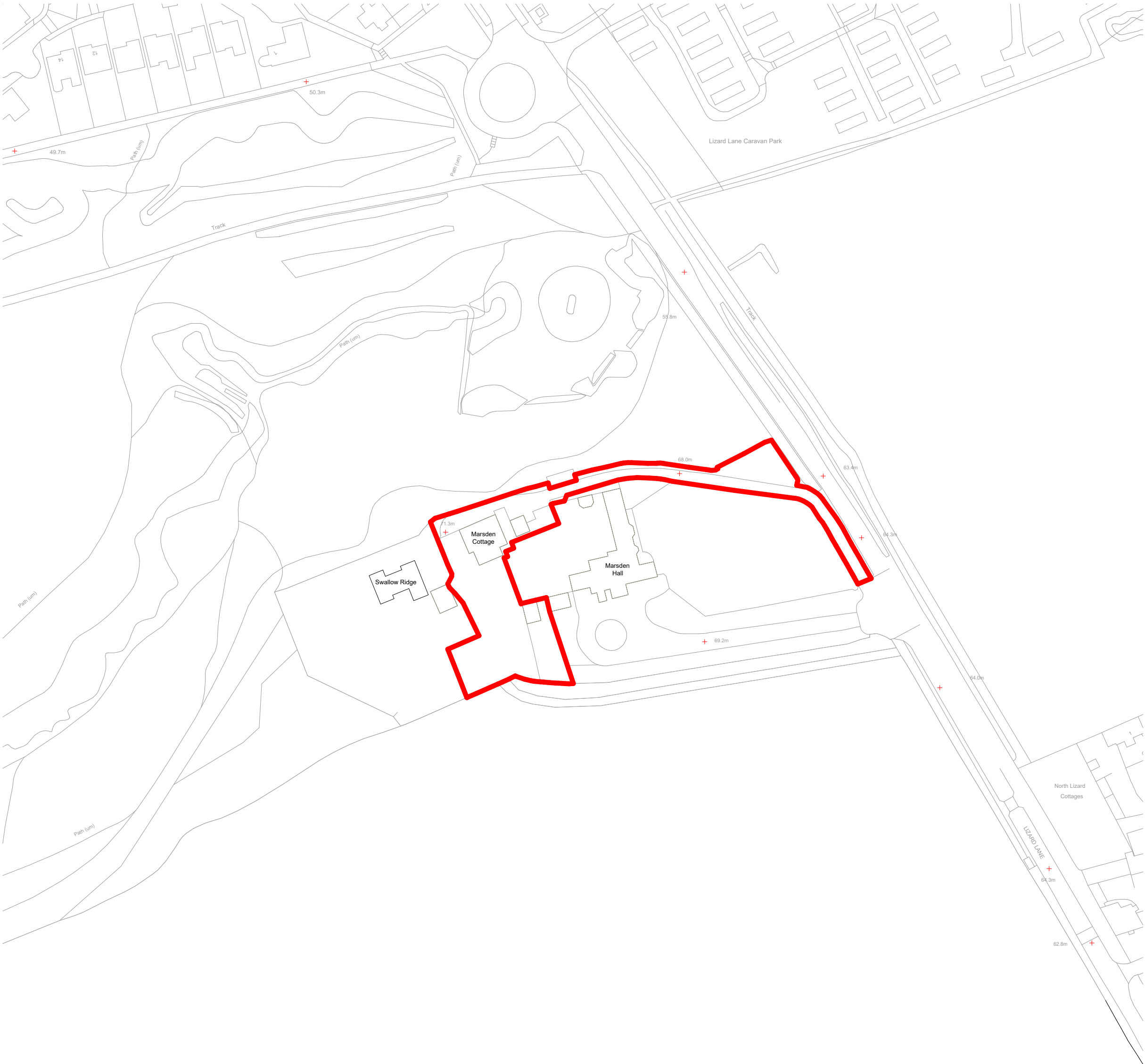
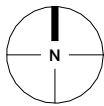
13.3 Unexpected Contamination / Watching Brief

A watching brief should be maintained on site by the developer during any ground excavation / redevelopment works, including the breaking out and removal of the existing foundations. In the highly unlikely event that suspected problematic contamination is encountered during ground works, such as free phase oils, fibrous material, wastes, odorous or unusually coloured ground, then work should stop, the material isolated and a suitably qualified contaminated land professional appointed who can liaise with the Contaminated Land Officer at STC to agree a way forward.

Lastly, if the development proposals change then the findings and recommendations of this report should be re-reviewed.

APPENDIX 1 – DRAWINGS

Do not scale from drawings unless by agreement with Architect/Engineer. Work to figured dimensions only. Check all dimensions on site prior to commencing the works. Drawings to be read in conjunction with other relevant consultant information. Where any discrepancy is found to exist it should be reported to the Architect/Engineer immediately.



Revision	Date	Issued	Description
P1	18/11/25	AF	Client Issue: Prior to Planning Submission

Client & Project

Private

Marsden Cottage

Address

Marsden Cottage

Lizard Lane
South Shields
NE34 7AD

Drawing Title

Location Plan

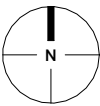
Status / Stage	Scale @ A2	Drawn	Checked	Approved
3	1 : 1250	AF	CF	HA

Drawing Number	Revision
1576-FITZ-XX-XX-DR-A-(05)1000	P1

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North East
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Revision	Date	Issued	Description
P1	18/11/25	AF	Client Issue: Prior to Planning Submission

Client & Project

Private

Marsden Cottage

Address

Marsden Cottage

Lizard Lane
South Shields
NE34 7AD

Drawing Title

Proposed Site Plan

Status / Stage	Scale @ A2	Drawn	Checked	Approved
3	1 : 200	AF	CF	HA

Drawing Number	Revision
1576-FITZ-XX-XX-DR-A-(05)3000	P1

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APPENDIX 2 – HISTORICAL PLANS

Site Details:

MARSDEN COTTAGE, LIZARD
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TYNESIDE, NE34 7AD

Client Ref: 2057
Report Ref: GS-YLQ-TTL-TLO-JCT
Grid Ref: 439803, 564482

Map Name: County Series

Map date: 1857

Scale: 1:2,500

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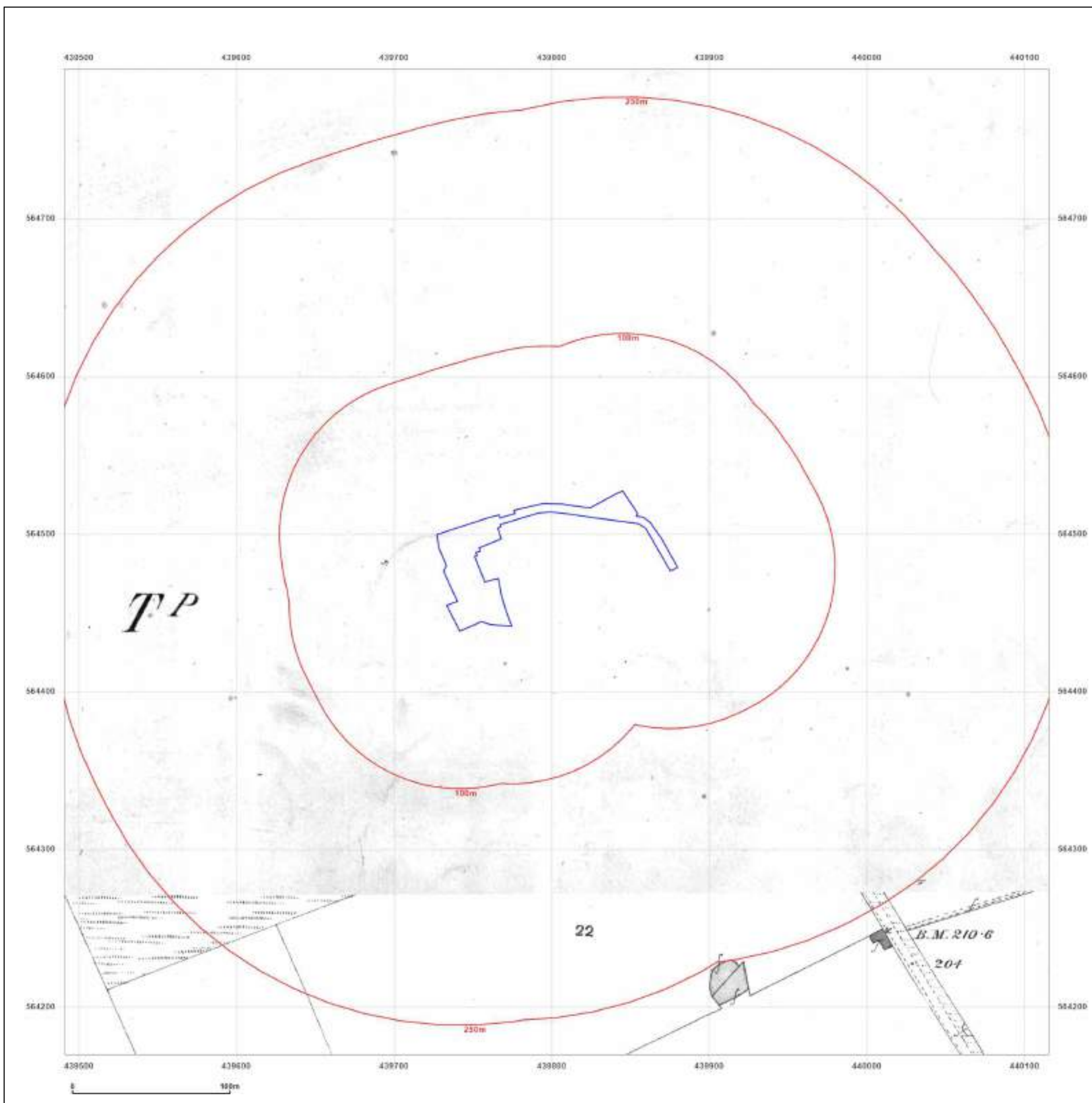


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TYNESIDE, NE34 7AD

Client Ref: 2057
Report Ref: GS-YLQ-TTL-TLO-JCT
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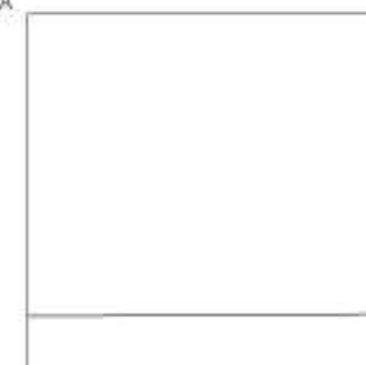
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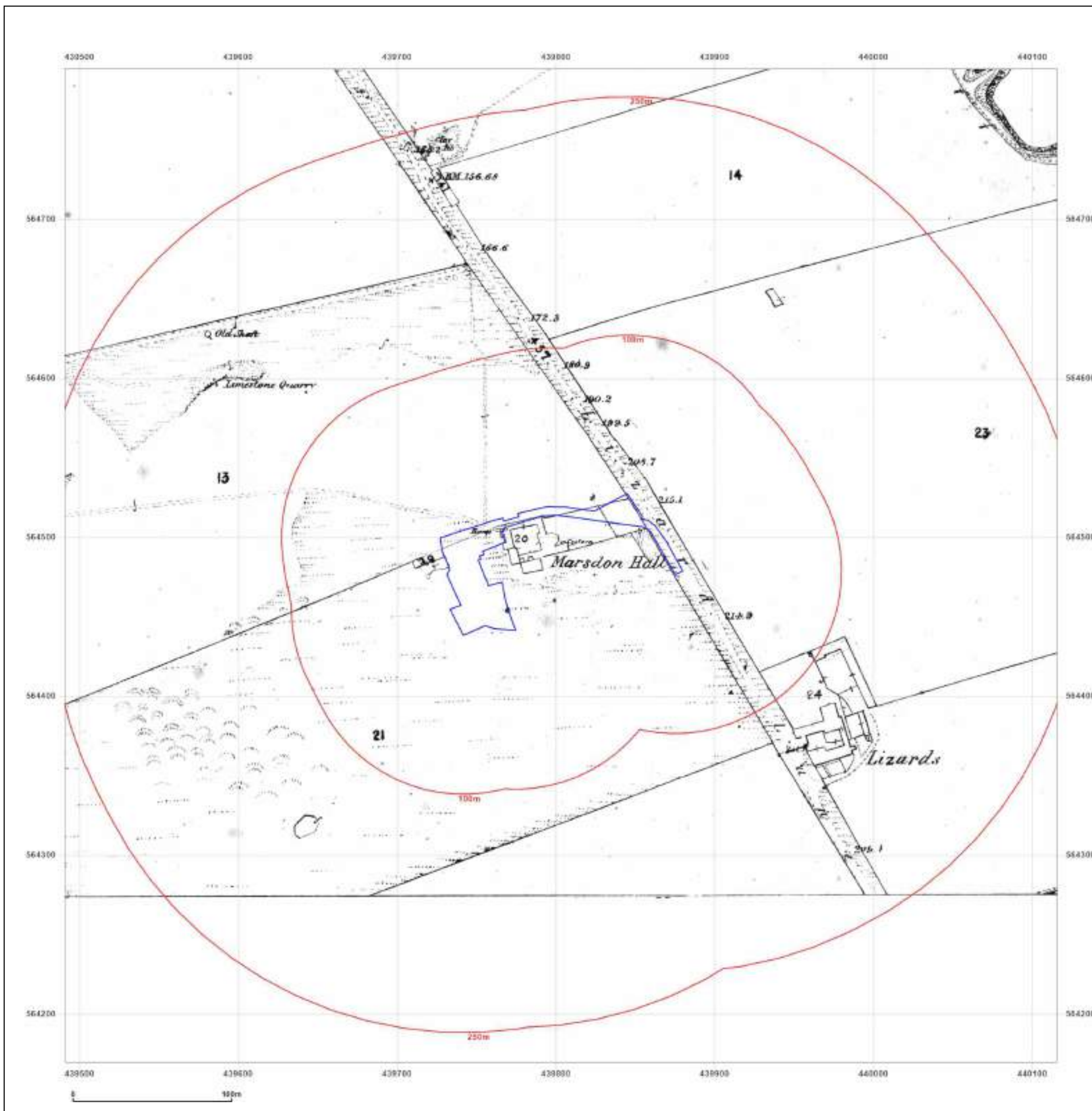


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Client Ref: 2057
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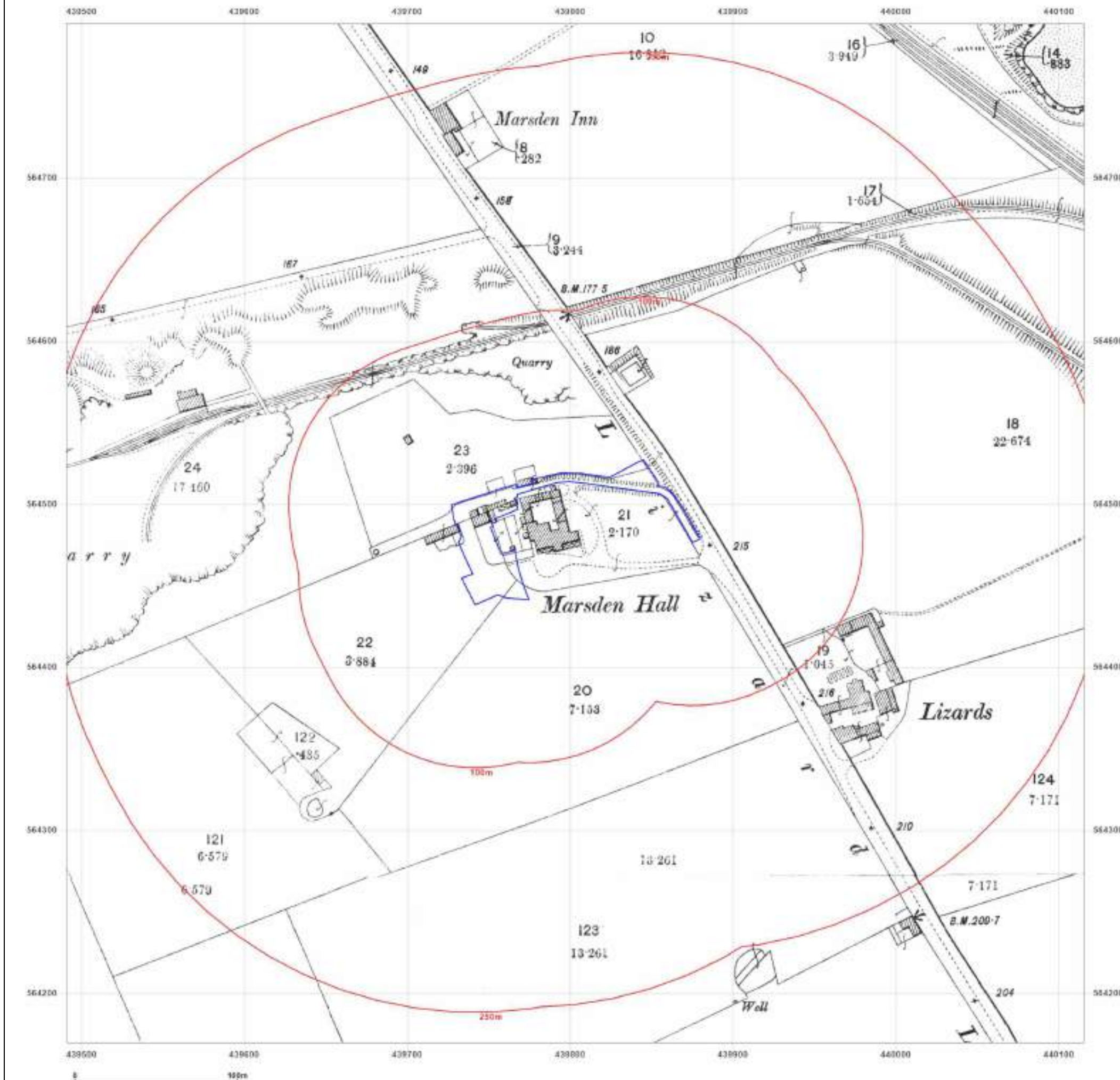


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Map Name: County Series

Map date: 1914-1915

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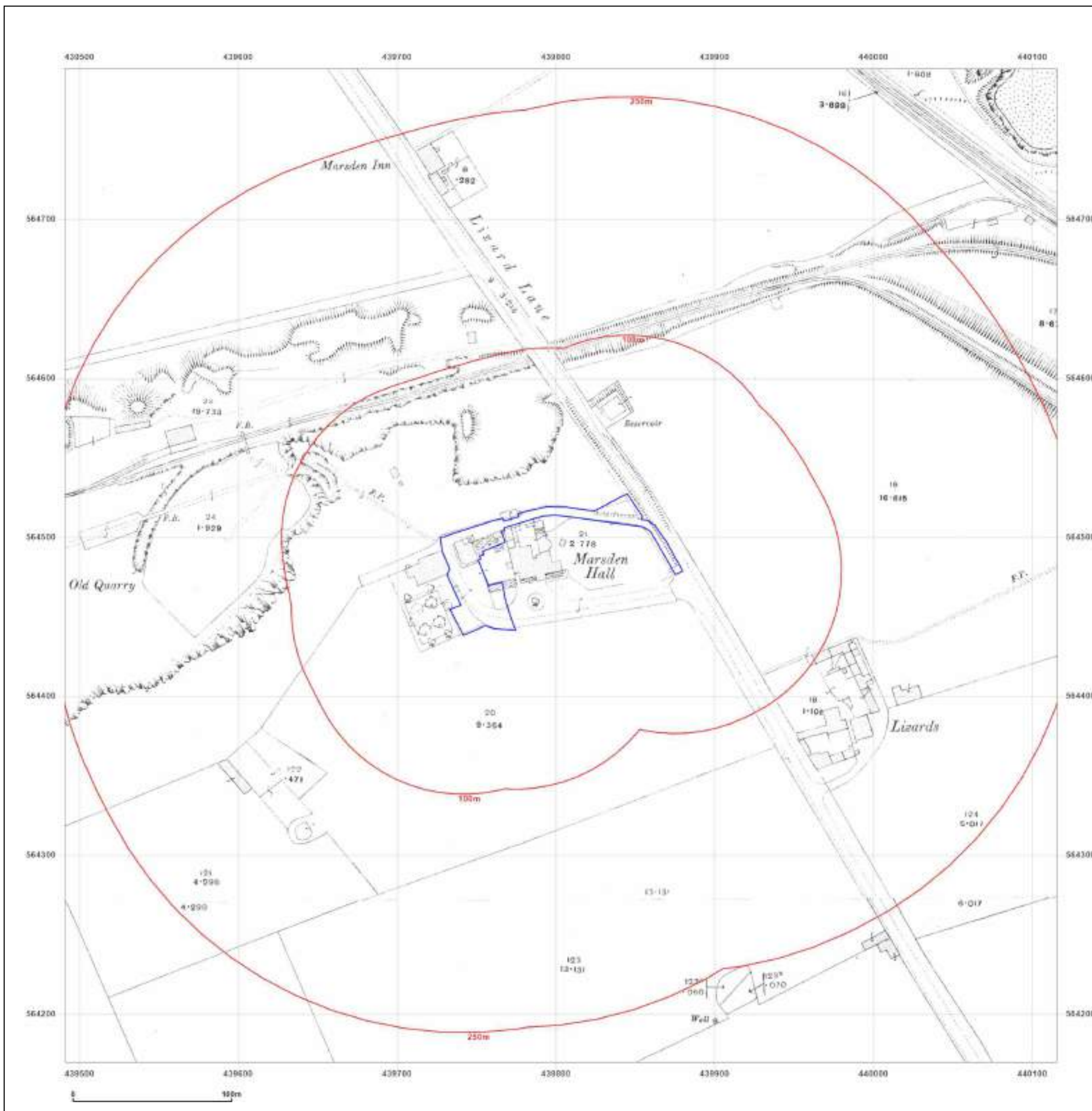


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Map Name: National Grid

Map date: 1955-1956

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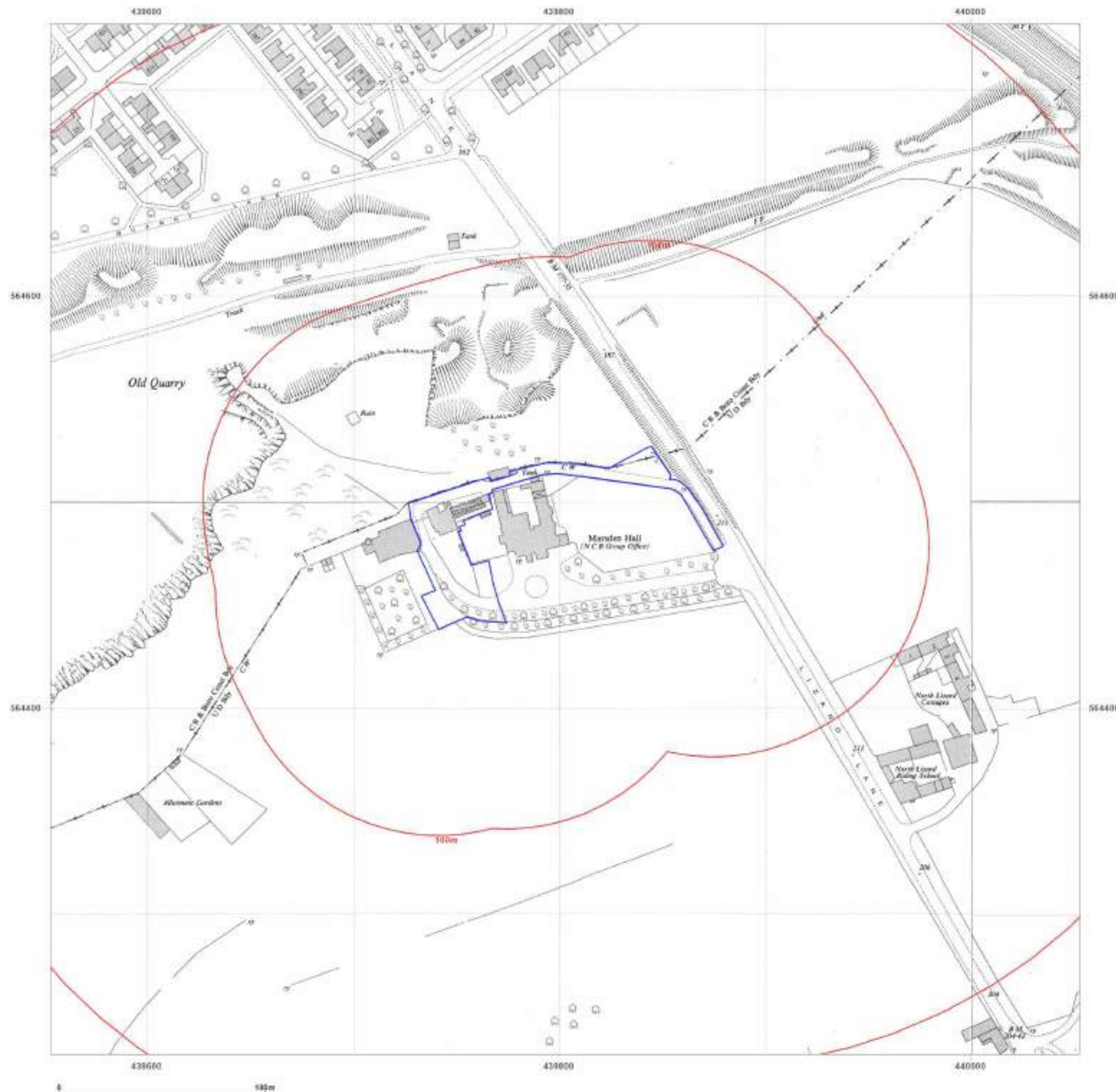


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Grid Ref: 439803, 564482

Map Name: National Grid

Map date: 1956-1957

Scale: 1:1,250

Printed at: 1:2,000



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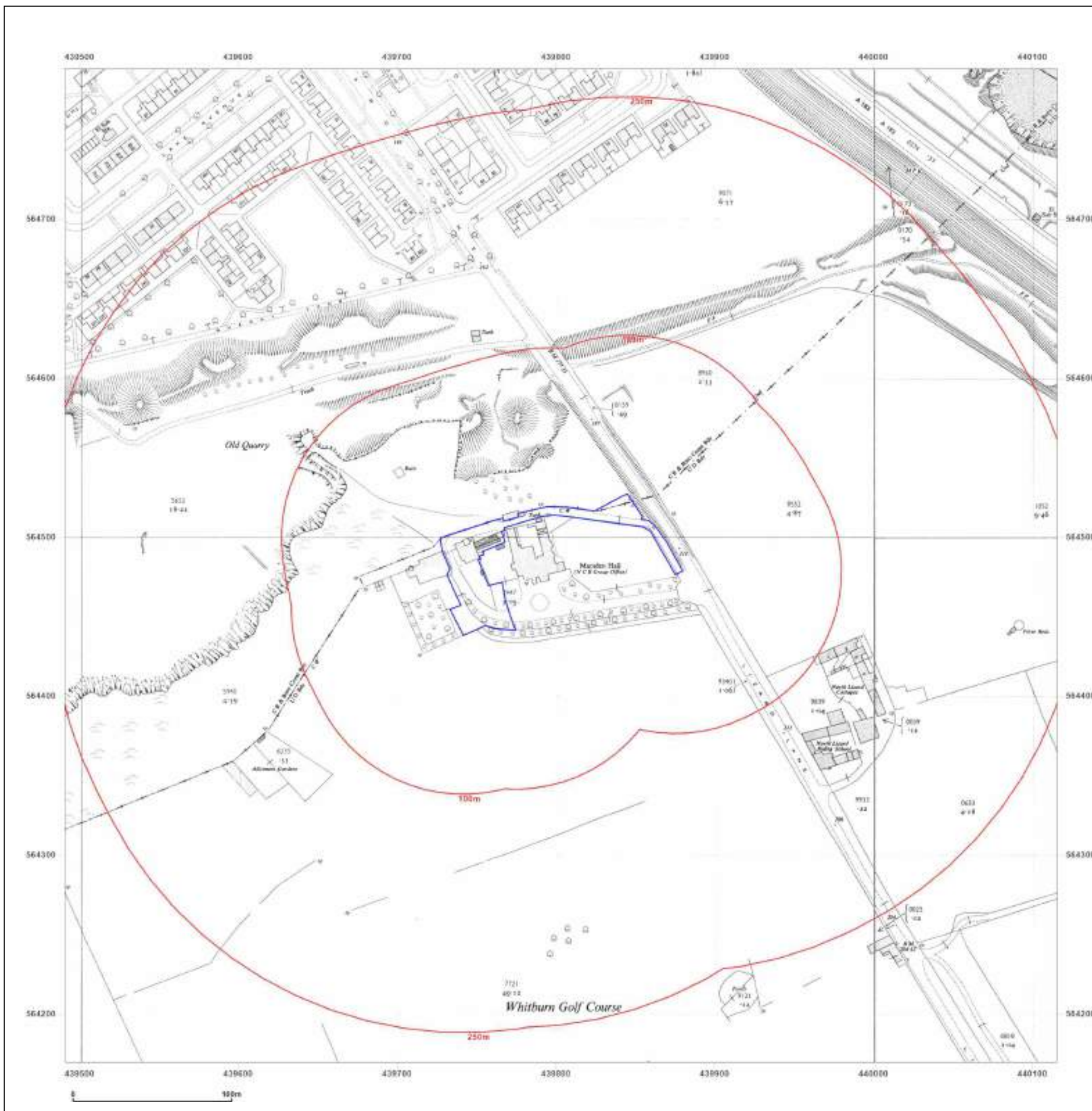


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Report Ref: GS-YLQ-TTL-TLO-JCT
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Map Name: National Grid

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Grid Ref: 439803, 564482

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Map date: 1989-1993

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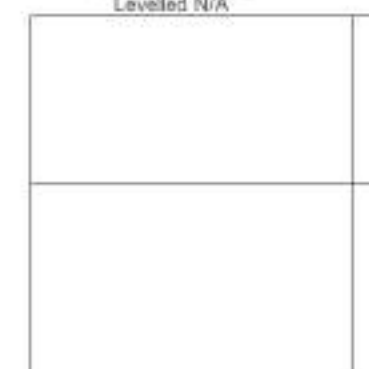
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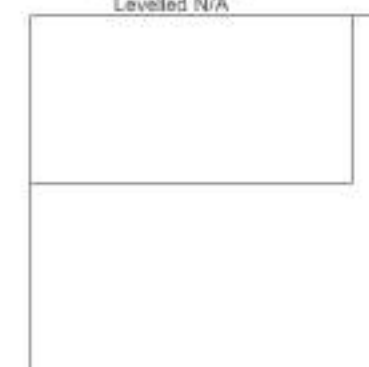
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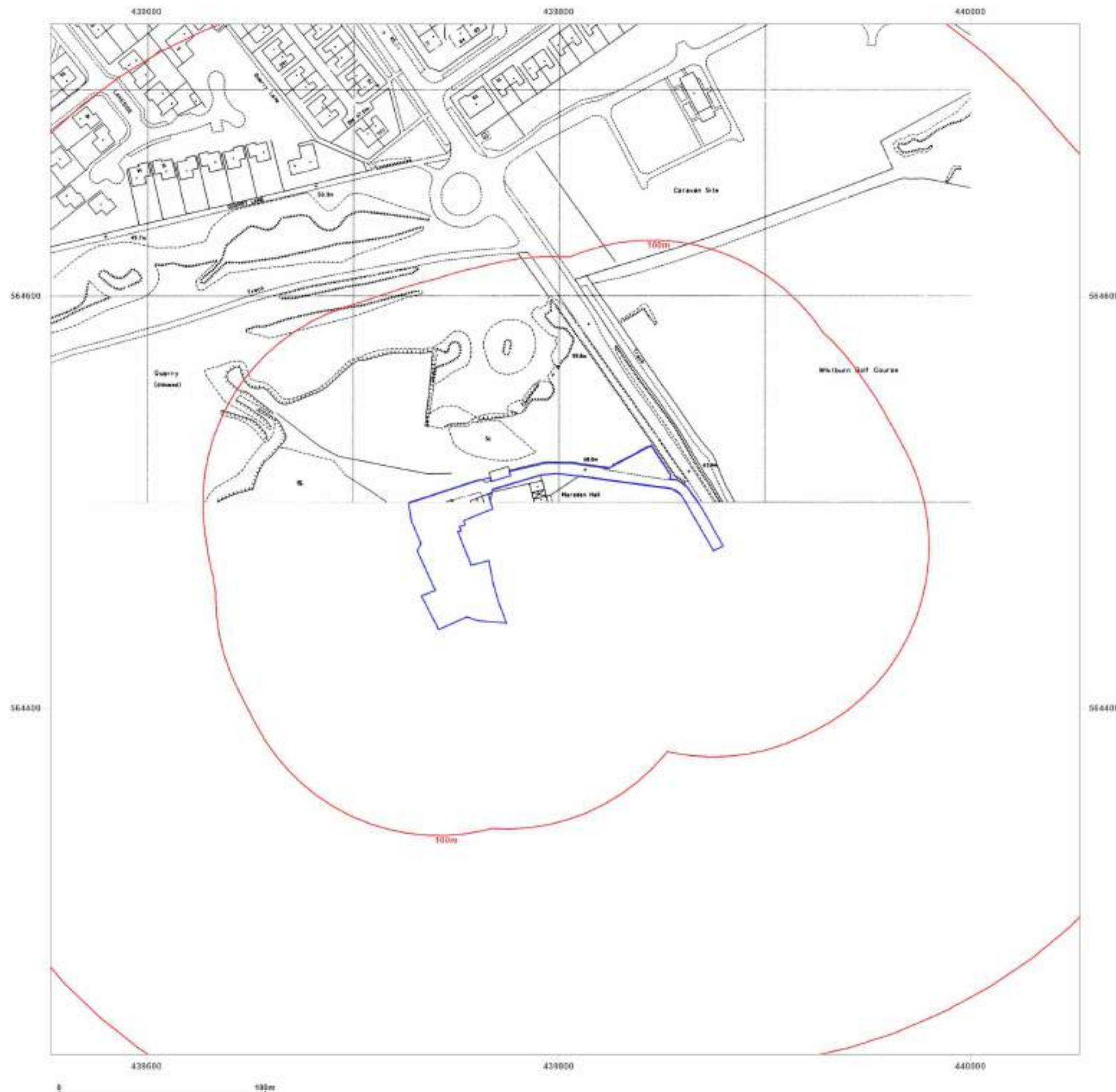


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TYNESIDE, NE34 7AD

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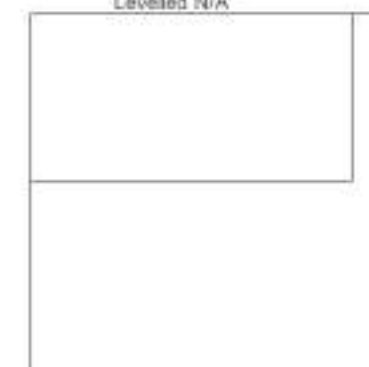
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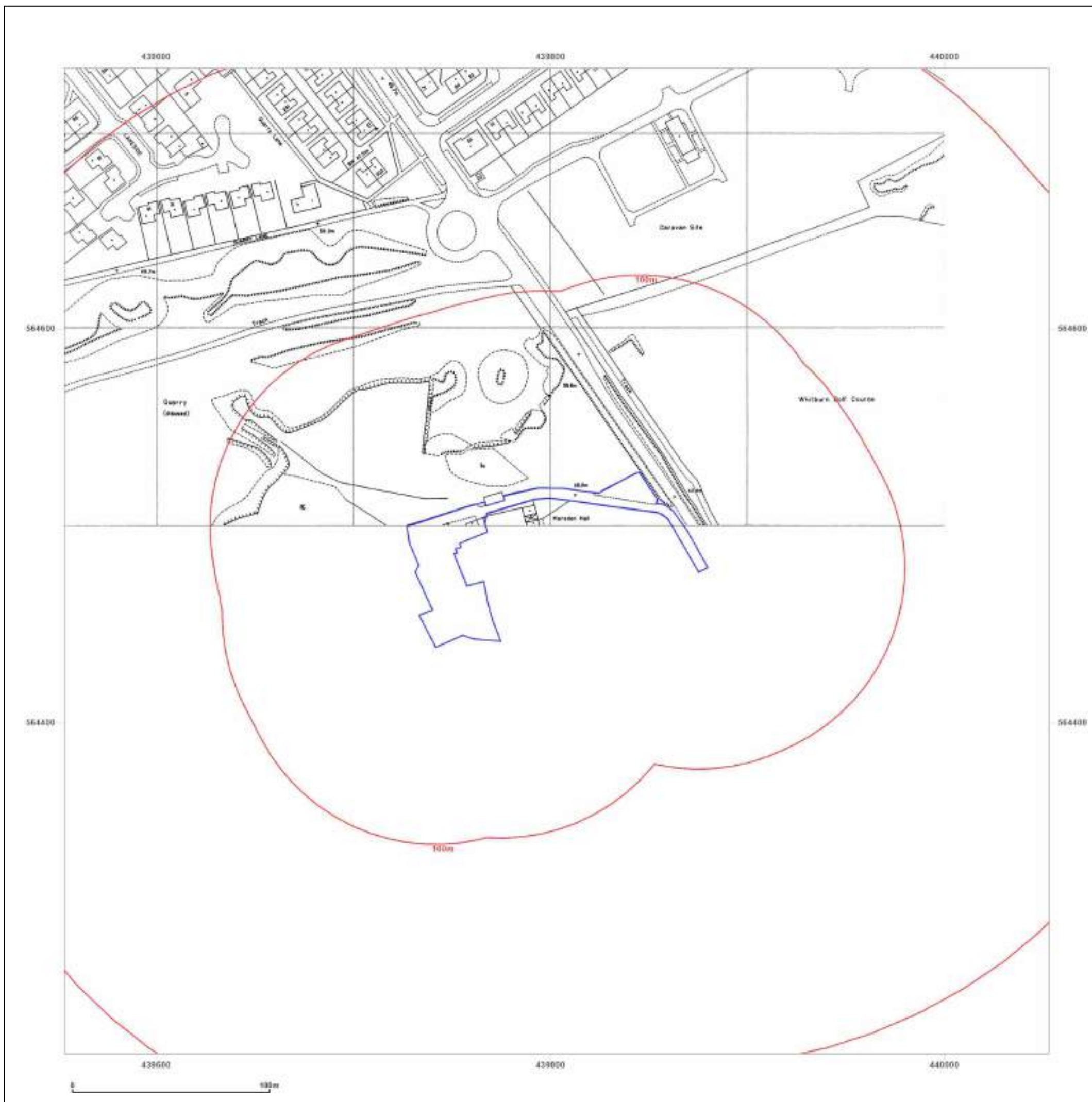


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TYNESIDE, NE34 7AD

Client Ref: 2057
Report Ref: GS-YLQ-TTL-TLO-JCT
Grid Ref: 439803, 564482

Map Name: LandLine

Map date: 2003

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Client Ref: 2057
Report Ref: GS-YLQ-TTL-TLO-JCT
Grid Ref: 439803, 564482

Map Name: County Series

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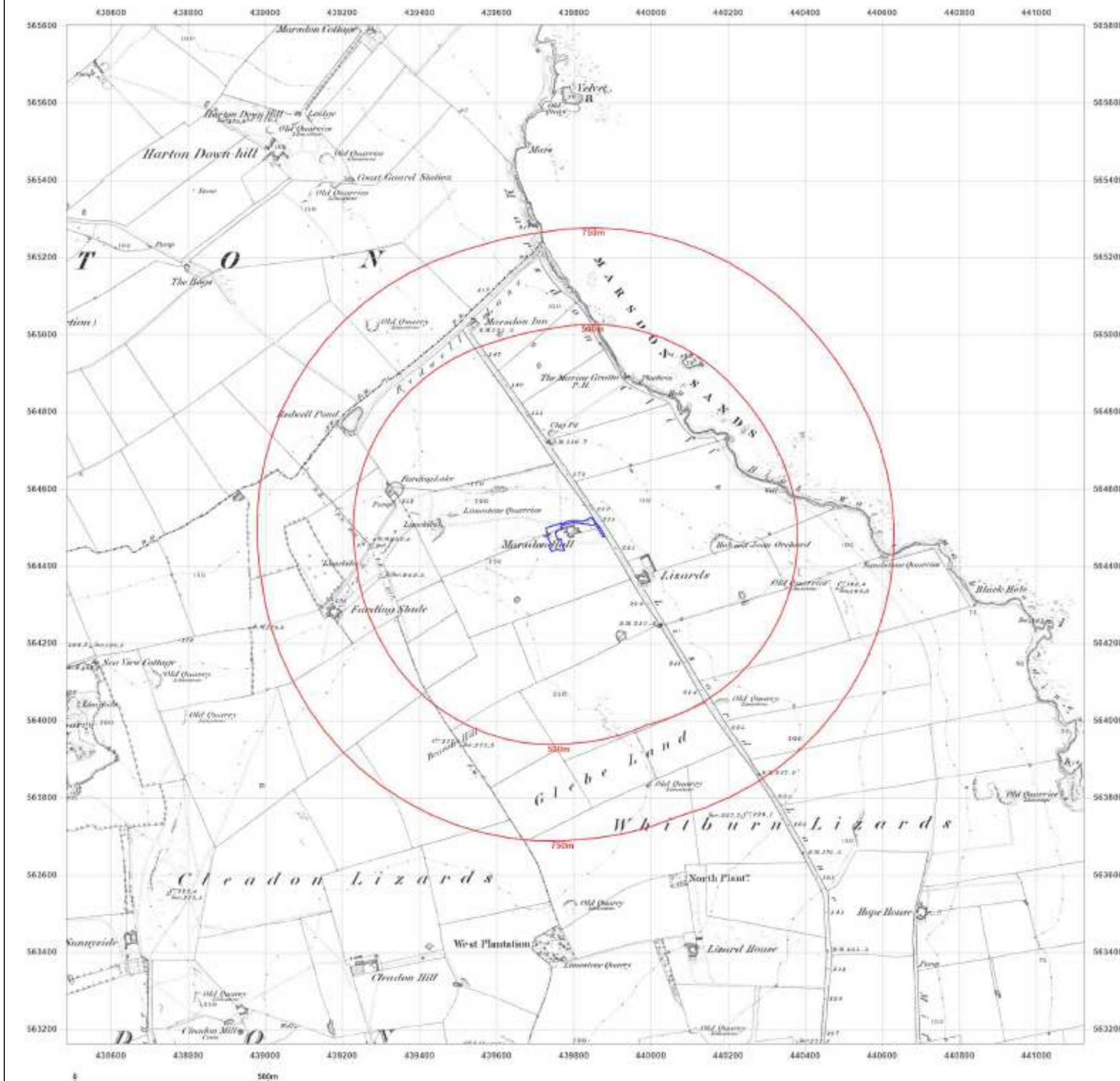


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TYNESIDE, NE34 7AD

Client Ref: 2057
Report Ref: GS-YLQ-TTL-TLO-JCT
Grid Ref: 439803, 564482

Map Name: County Series

Map date: 1895

Scale: 1:10,560

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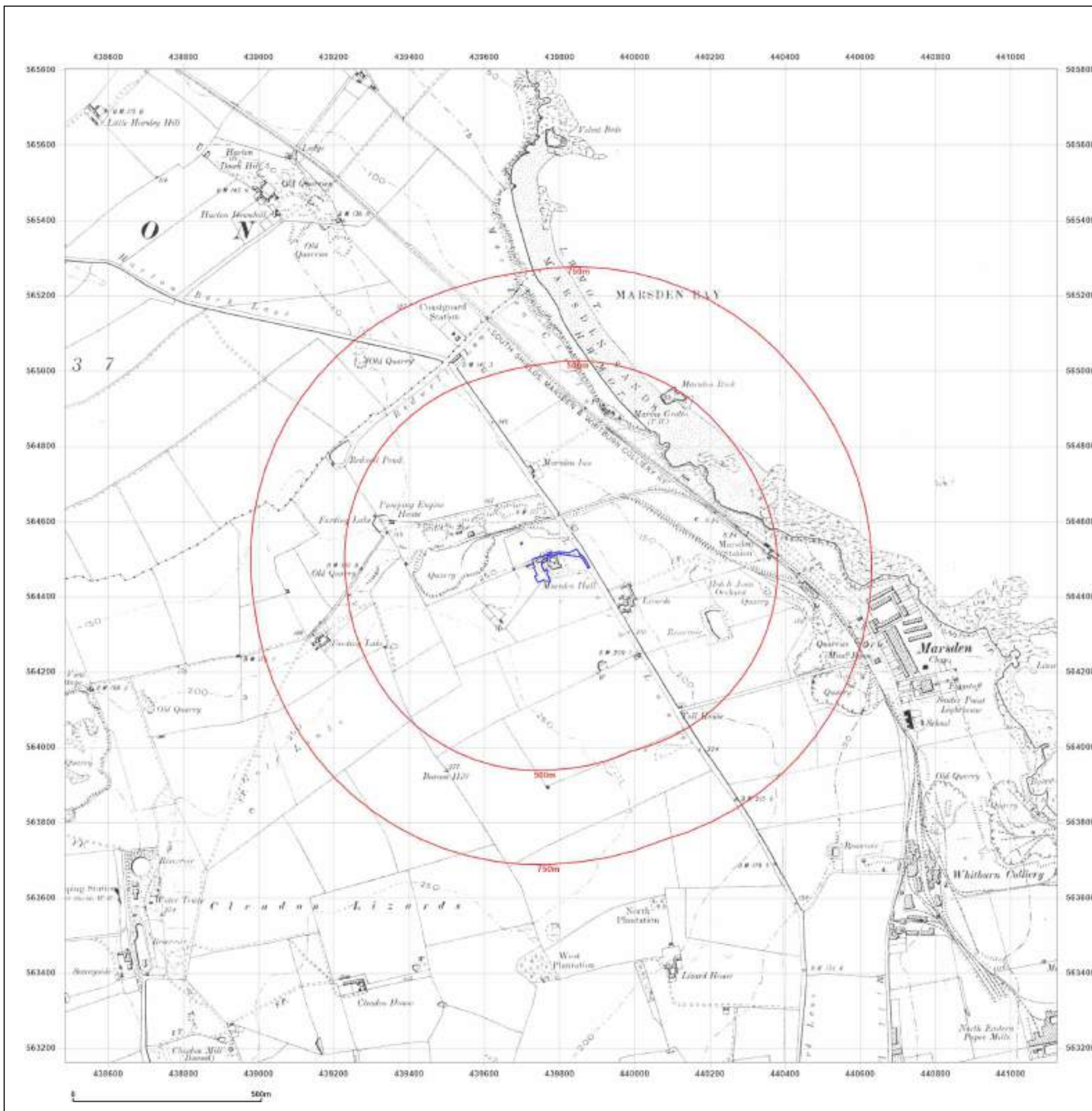


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Client Ref: 2057
Report Ref: GS-YLQ-TTL-TLO-JCT
Grid Ref: 439803, 564482

Map Name: County Series

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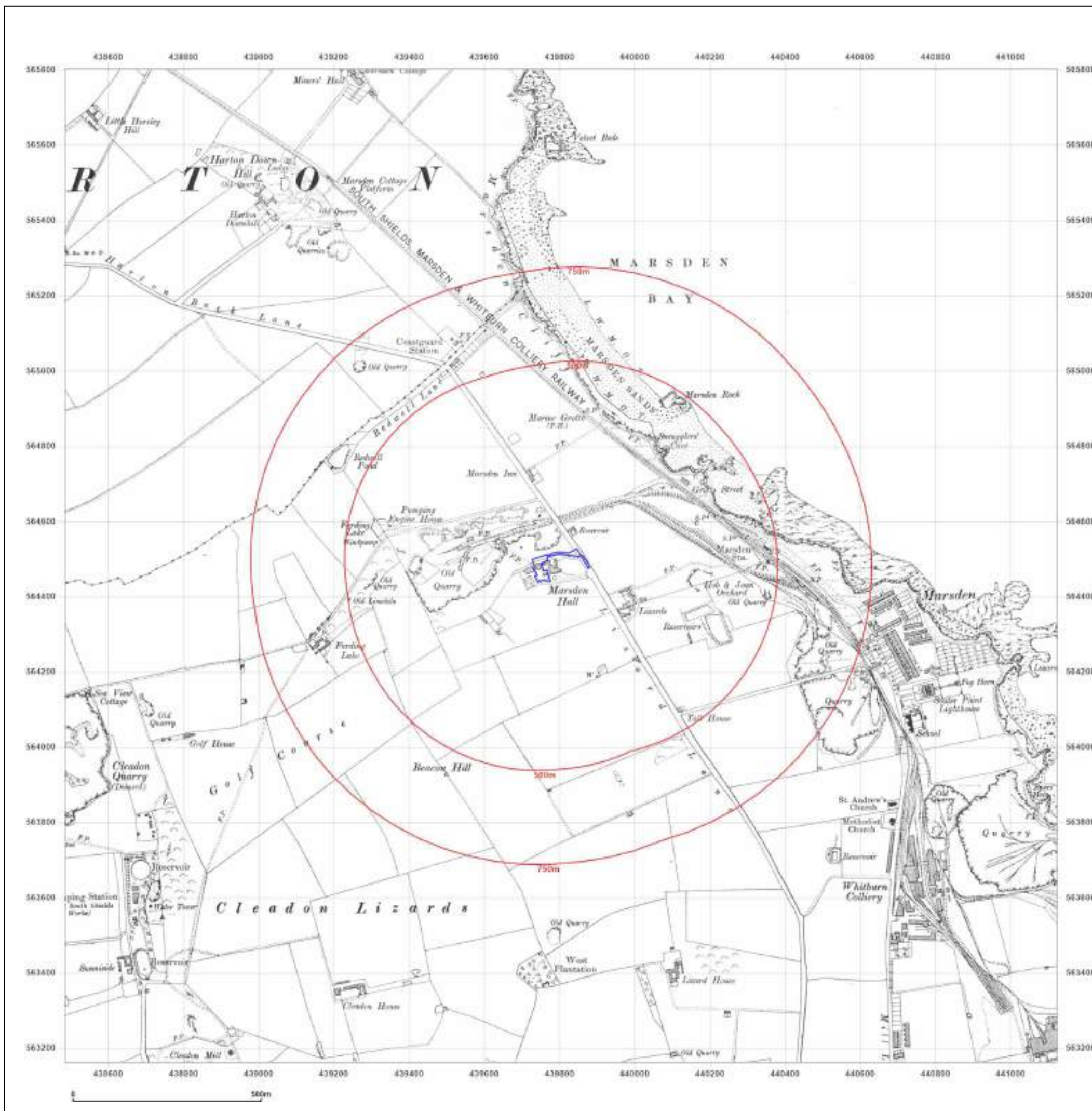


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Client Ref: 2057
Report Ref: GS-YLQ-TTL-TLO-JCT
Grid Ref: 439803, 564482

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Revised 1921
Edition 1921
Copyright N/A
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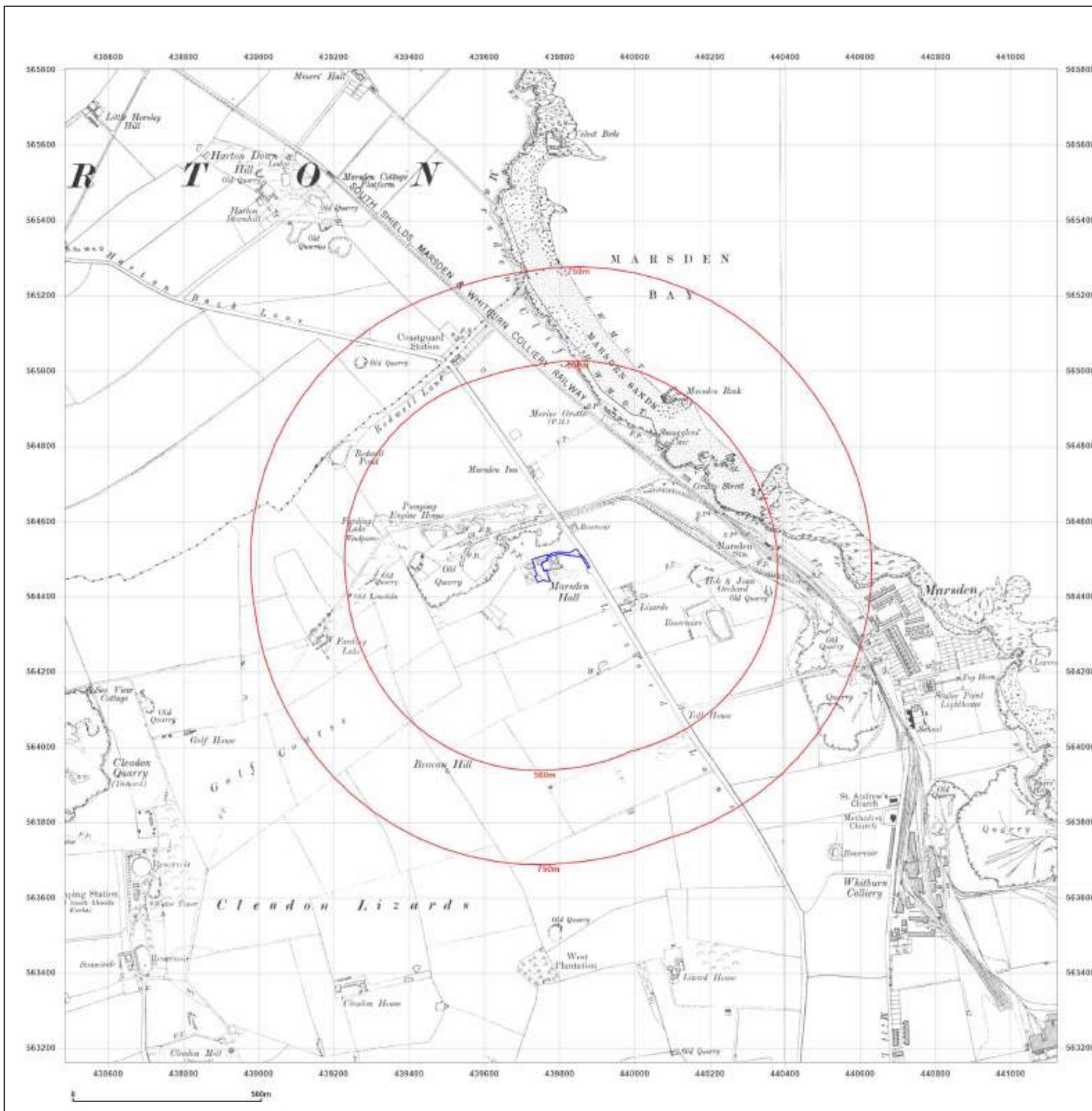


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Site Details:

MARSDEN COTTAGE, LIZARD
LANE, SOUTH SHIELDS, SOUTH
TYNESIDE, NE34 7AD

Client Ref: 2057
Report Ref: GS-YLQ-TTL-TLO-JCT
Grid Ref: 439803, 564482

Map Name: County Series

Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1856
Revised 1938
Edition 1938
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Surveyed 1856
Revised 1938
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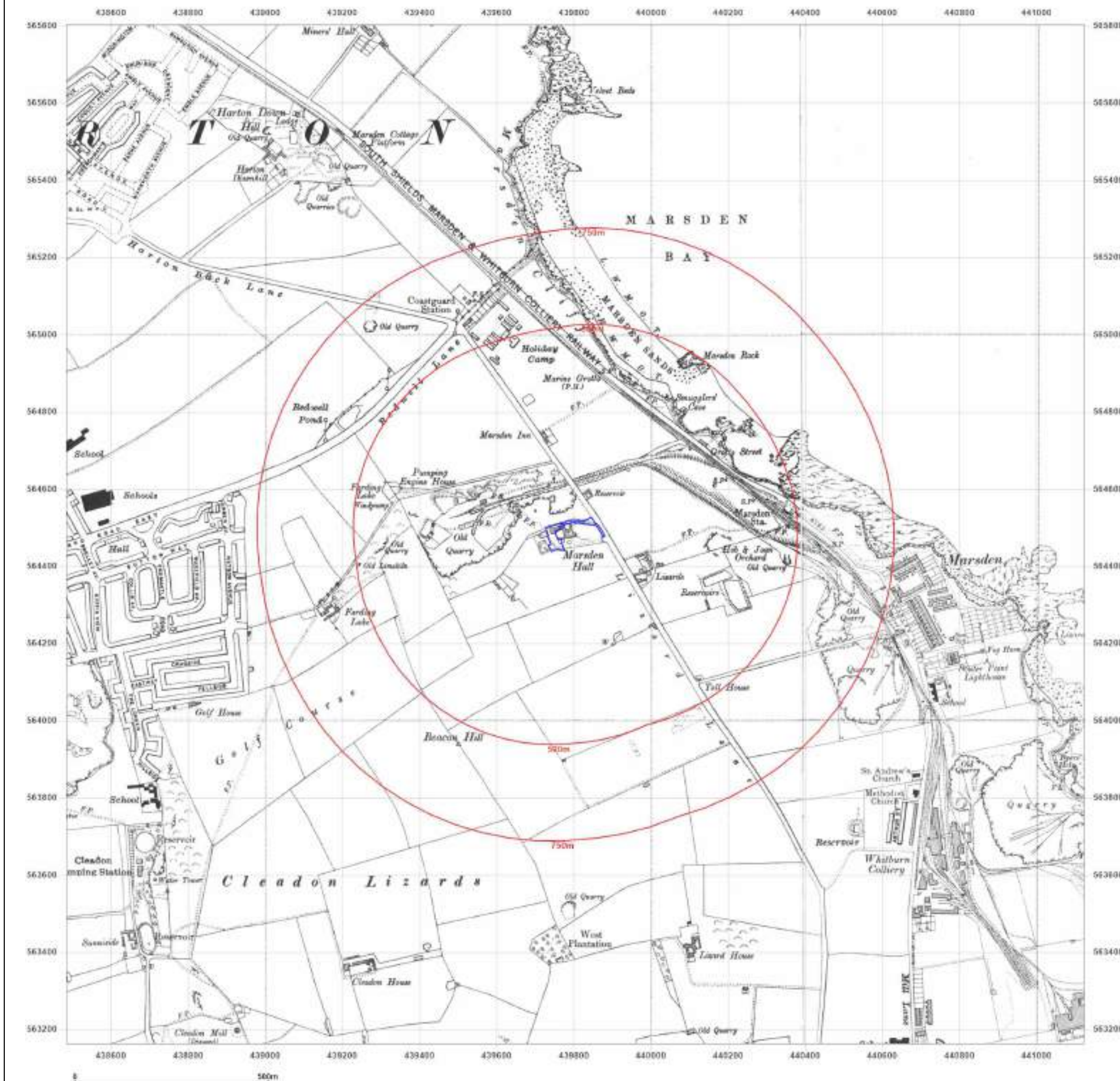


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Site Details:

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TYNESIDE, NE34 7AD

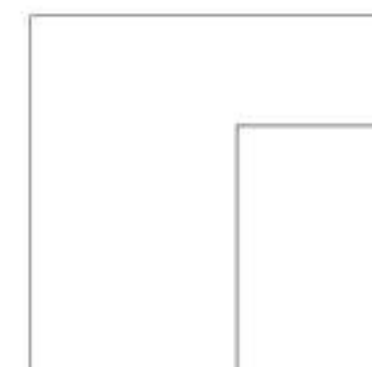
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Report Ref: GS-YLQ-TTL-TLO-JCT
Grid Ref: 439803, 564482

Map Name: Provisional

Map date: 1966

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1966
Revised 1966
Edition N/A
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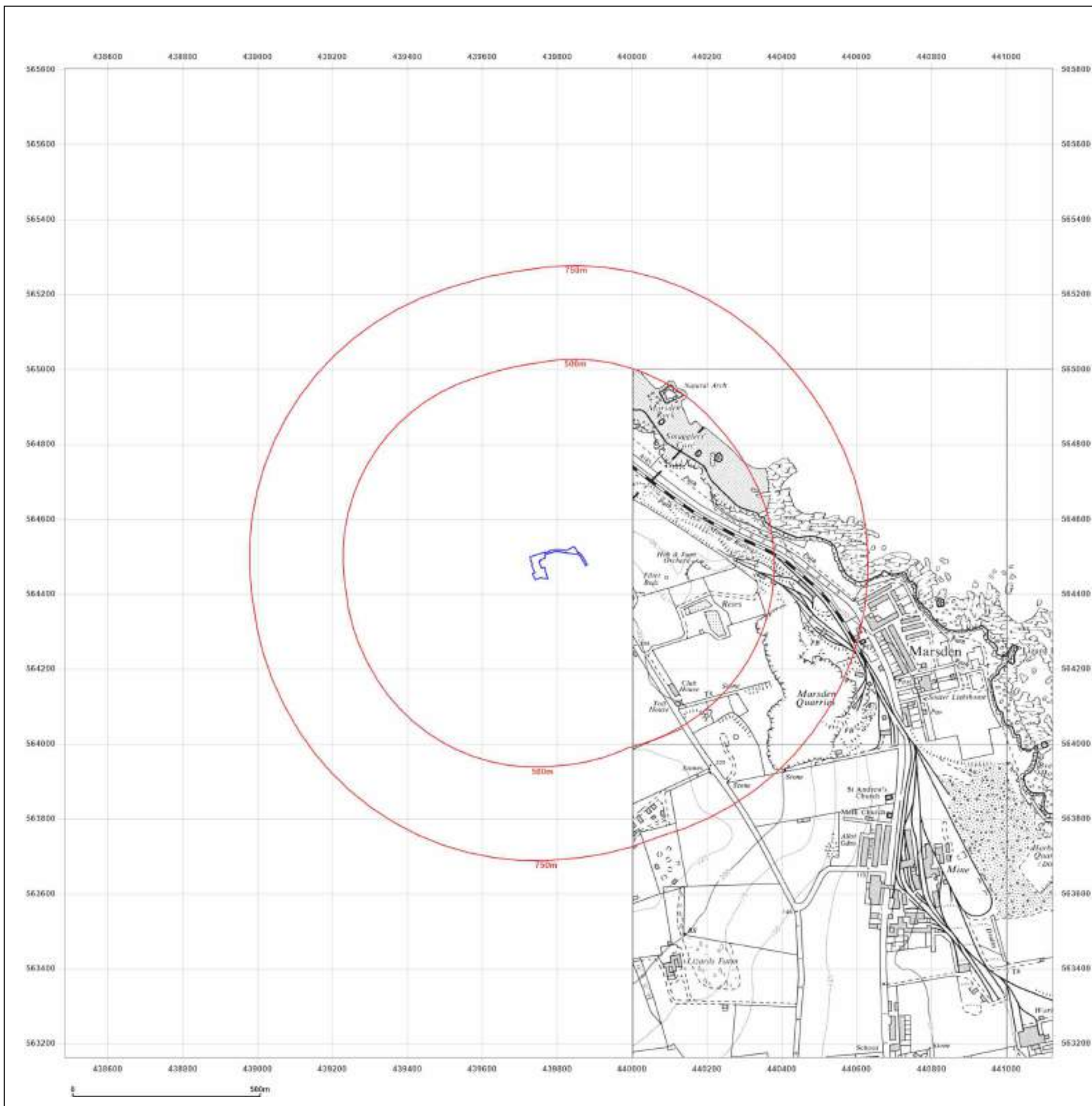


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Site Details:

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LANE, SOUTH SHIELDS, SOUTH
TYNESIDE, NE34 7AD

Client Ref: 2057
Report Ref: GS-YLQ-TTL-TLO-JCT
Grid Ref: 439803, 564482

Map Name: Provisional

Map date: 1966-1968

Scale: 1:10,560

Printed at: 1:10,560



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Edition N/A
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Surveyed 1968
Revised 1968
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1968
Revised 1968
Edition N/A
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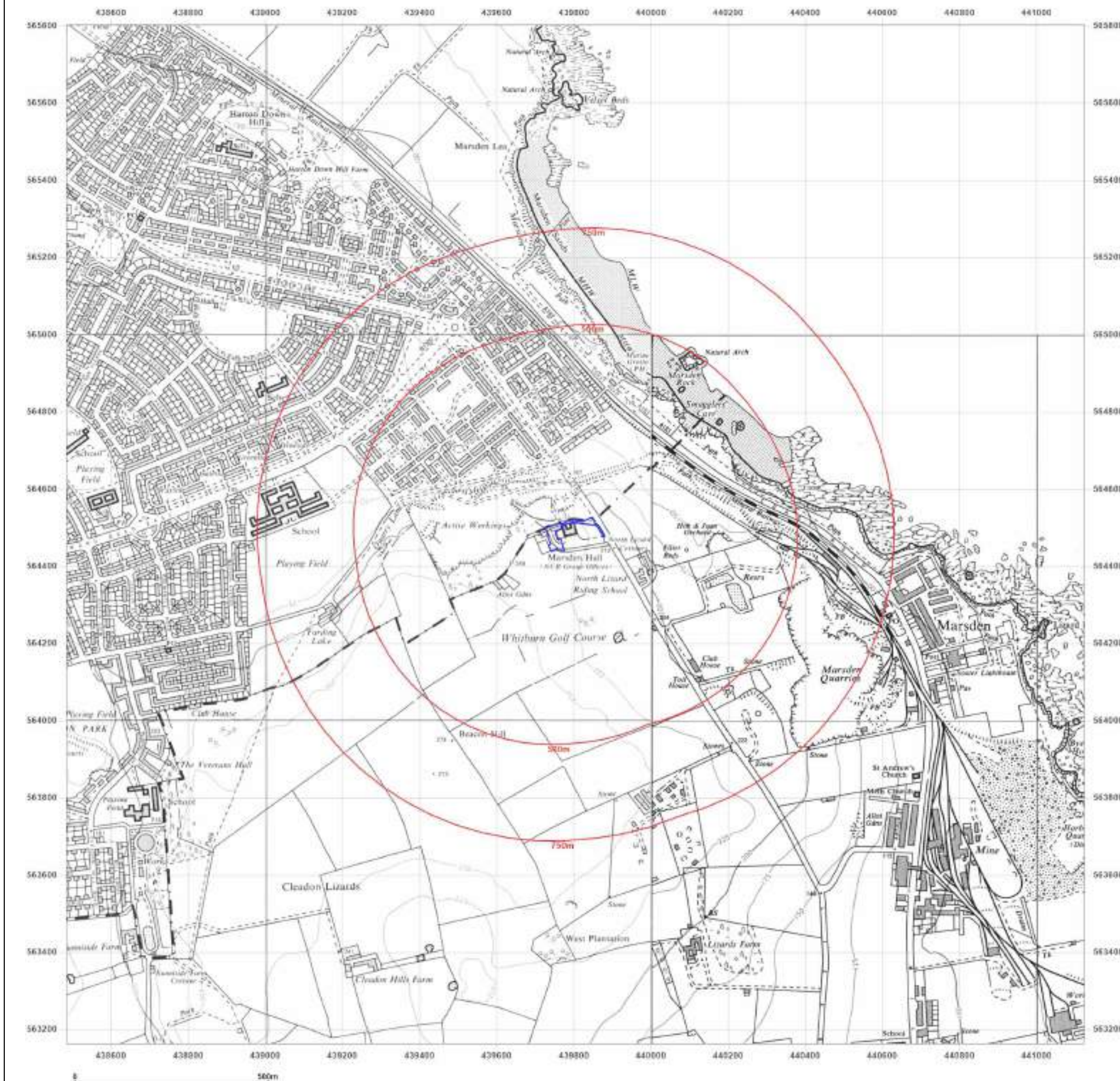


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TYNESIDE, NE34 7AD

Client Ref: 2057
Report Ref: GS-YLQ-TTL-TLO-JCT
Grid Ref: 439803, 564482

Map Name: National Grid

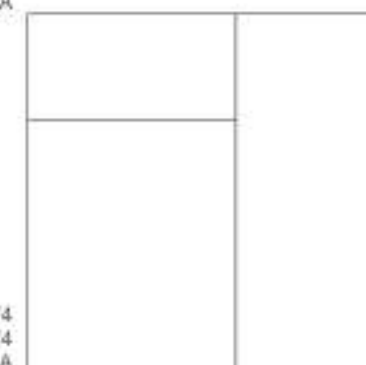
Map date: 1974

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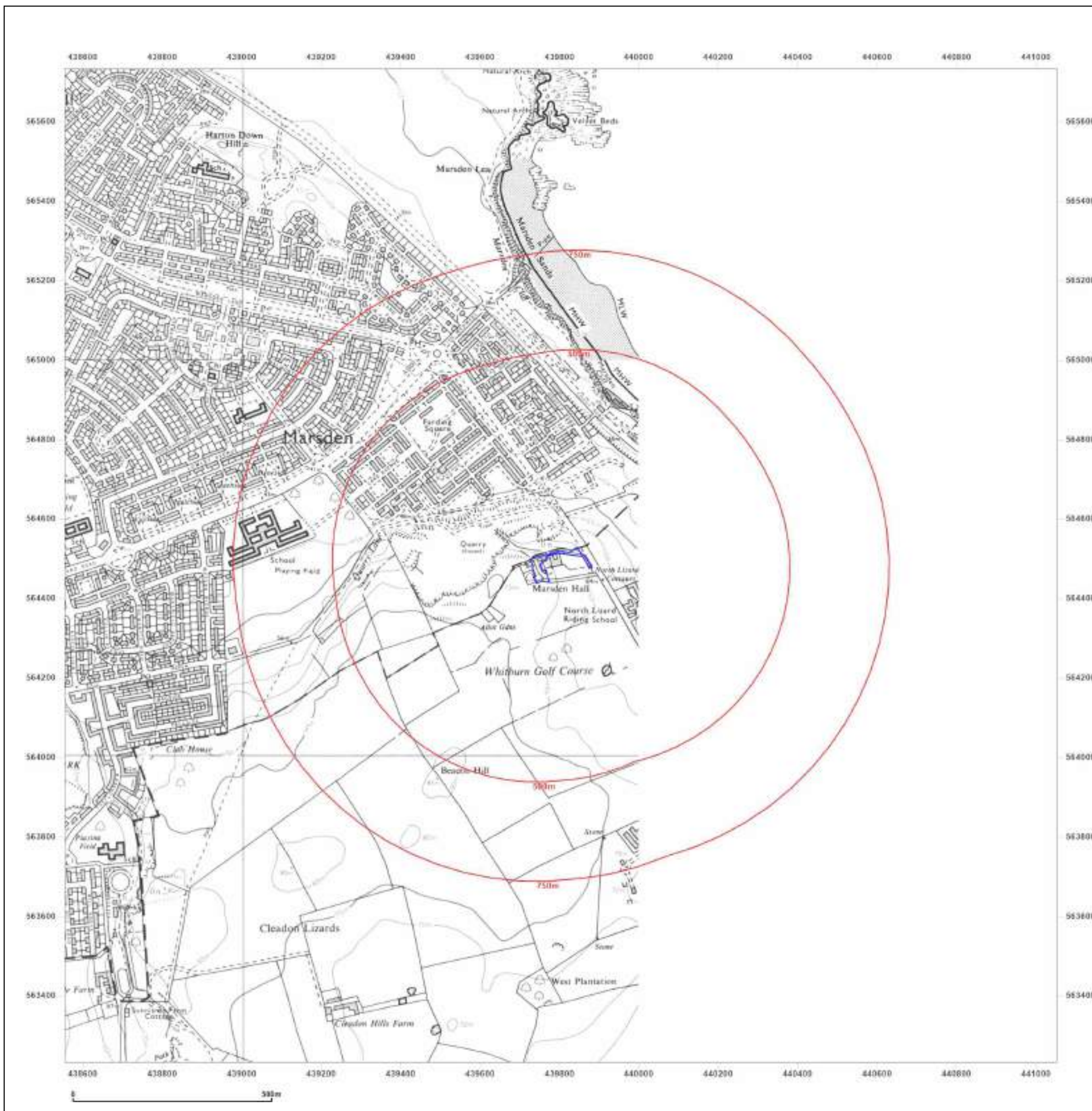


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Site Details:

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TYNESIDE, NE34 7AD

Client Ref: 2057
Report Ref: GS-YLQ-TTL-TLO-JCT
Grid Ref: 439803, 564482

Map Name: National Grid

Map date: 1983-1985

Scale: 1:10,000

Printed at: 1:10,000



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Revised 1985
Edition N/A
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Surveyed 1975
Revised 1983
Edition N/A
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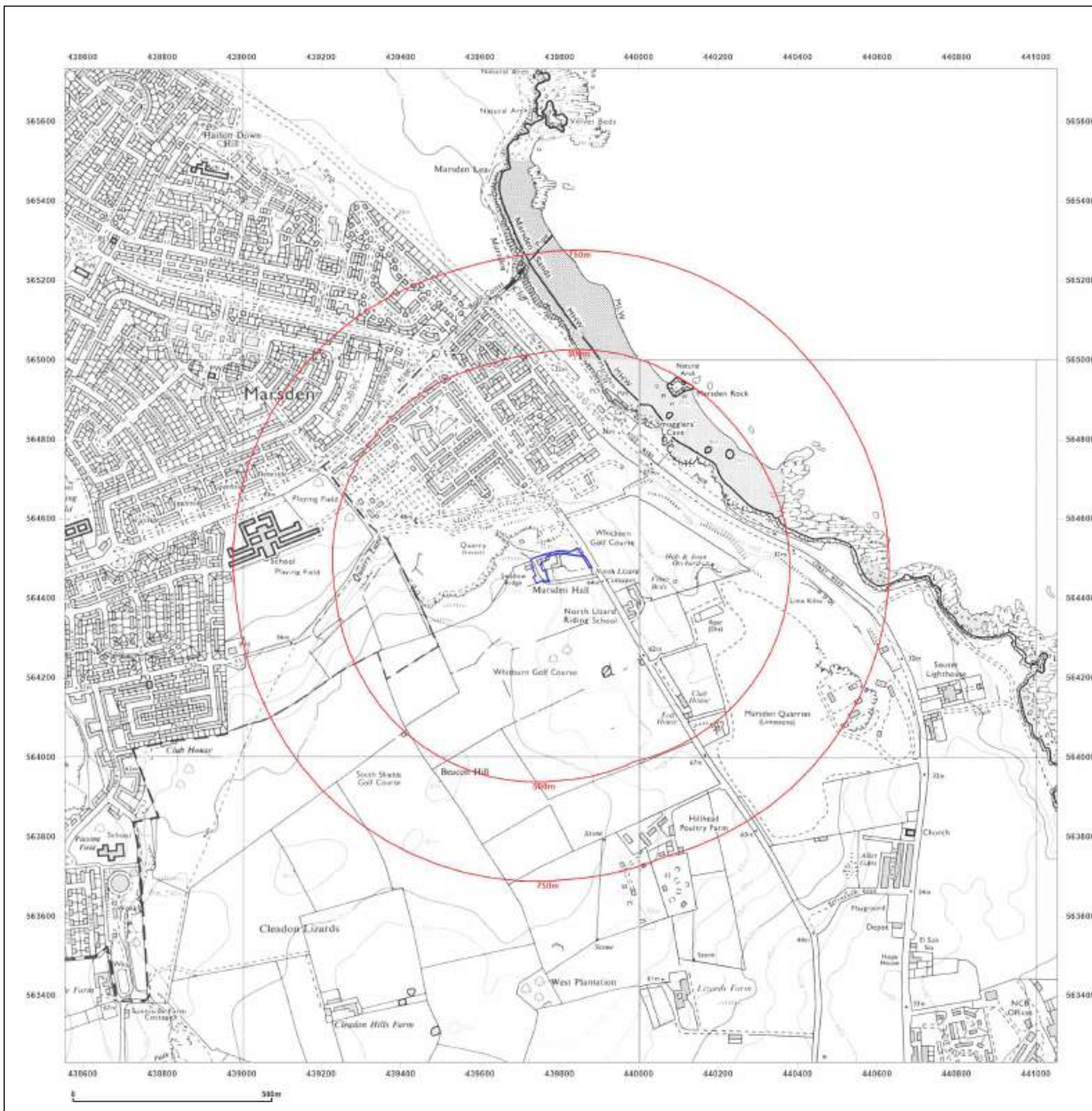


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TYNESIDE, NE34 7AD

Client Ref: 2057
Report Ref: GS-YLQ-TTL-TLO-JCT
Grid Ref: 439803, 564482

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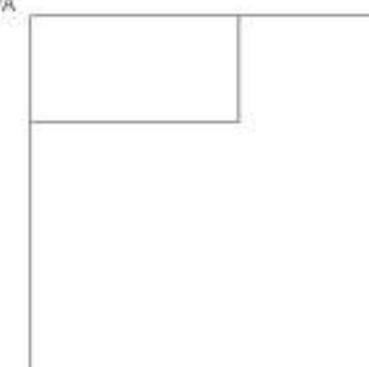
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Site Details:

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TYNESIDE, NE34 7AD

Client Ref: 2057
Report Ref: GS-YLQ-TTL-TLO-JCT
Grid Ref: 439803, 564482

Map Name: National Grid

Map date: 2001

Scale: 1:10,000

Printed at: 1:10,000

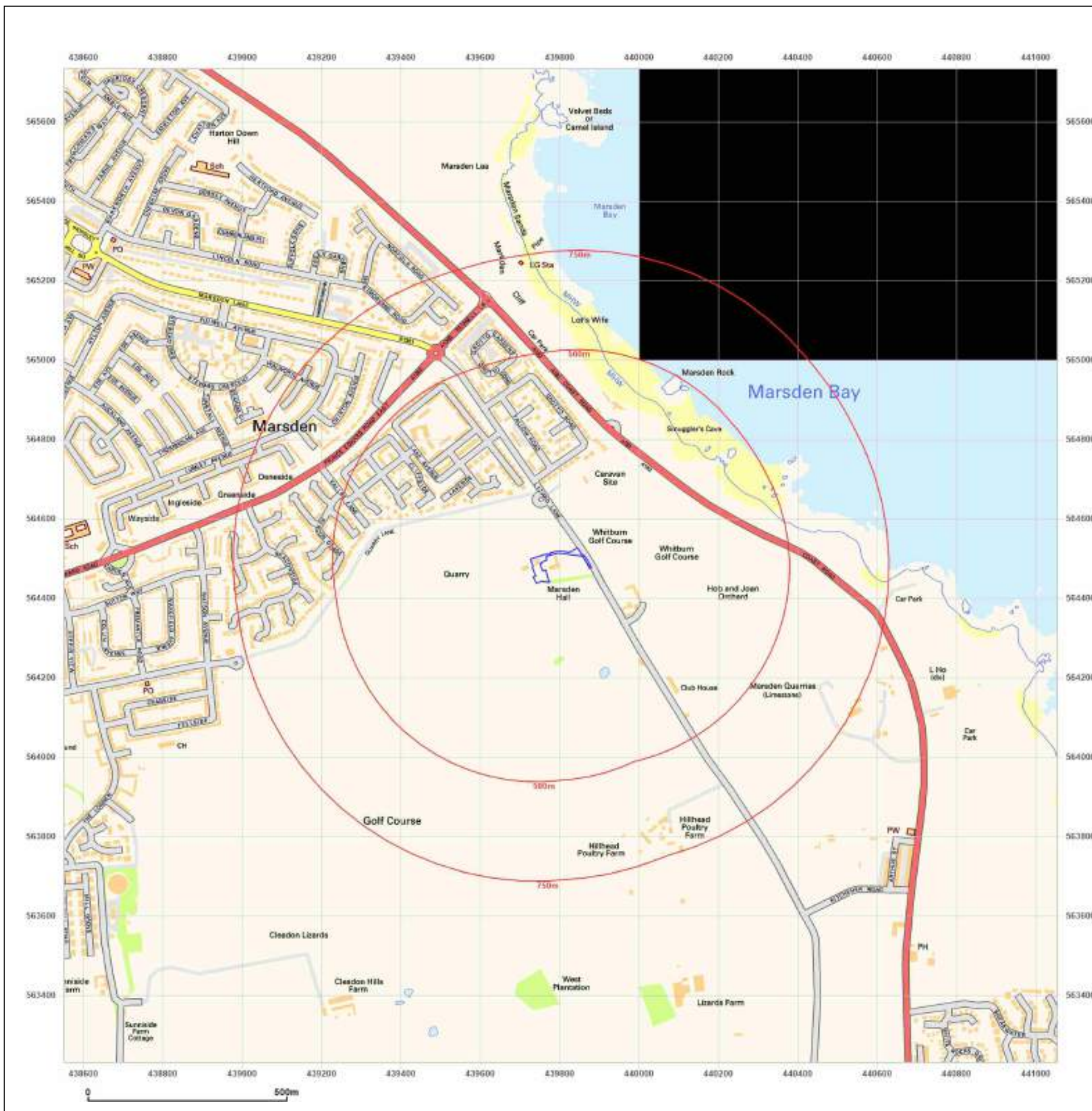


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Site Details:

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TYNESIDE, NE34 7AD

Client Ref: 2057
Report Ref: GS-YLQ-TTL-TLO-JCT
Grid Ref: 439803, 564482

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000

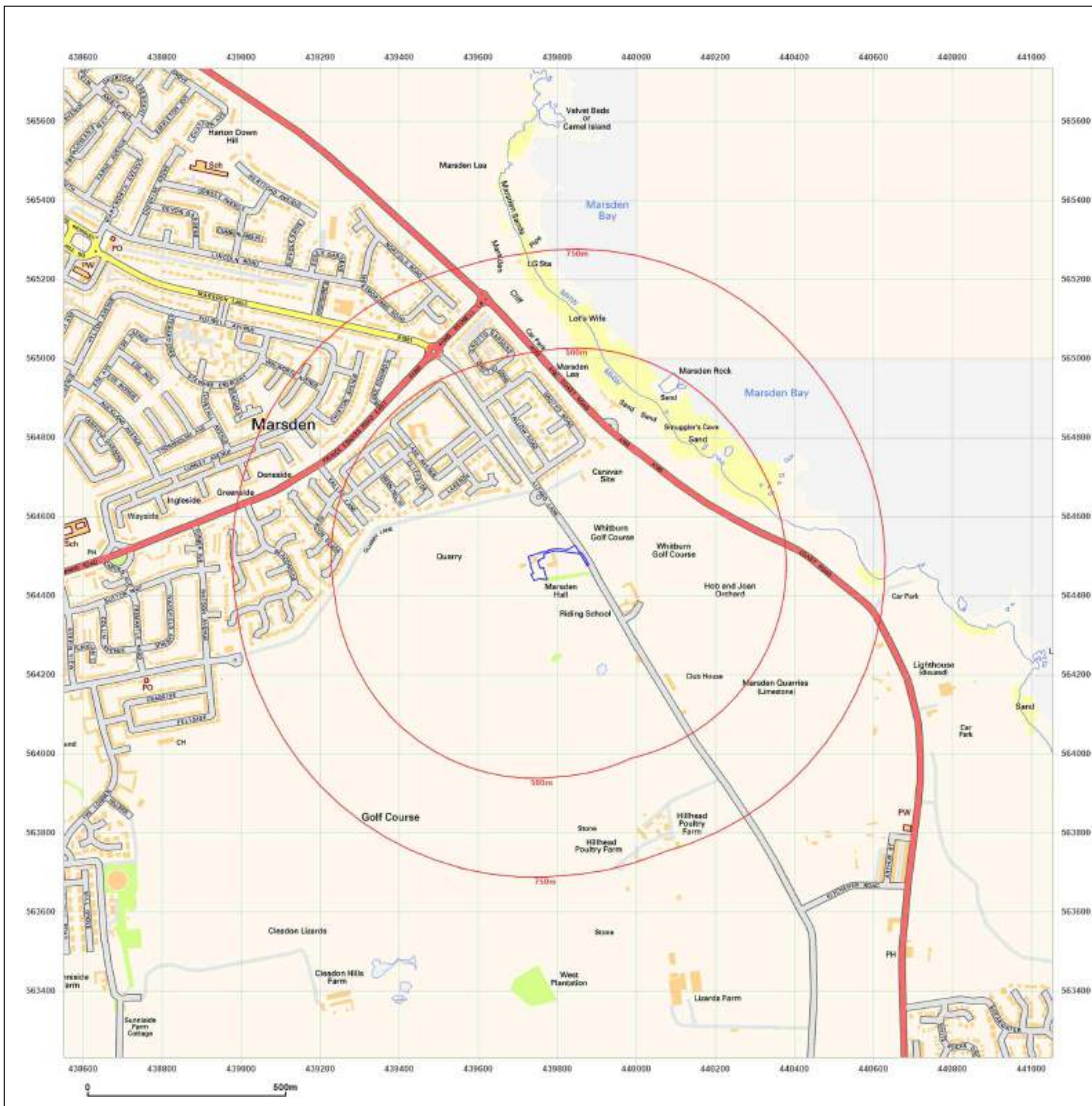


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Site Details:

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TYNESIDE, NE34 7AD

Client Ref: 2057
Report Ref: GS-YLQ-TTL-TLO-JCT
Grid Ref: 439803, 564482

Map Name: National Grid

Map date: 2025

Scale: 1:10,000

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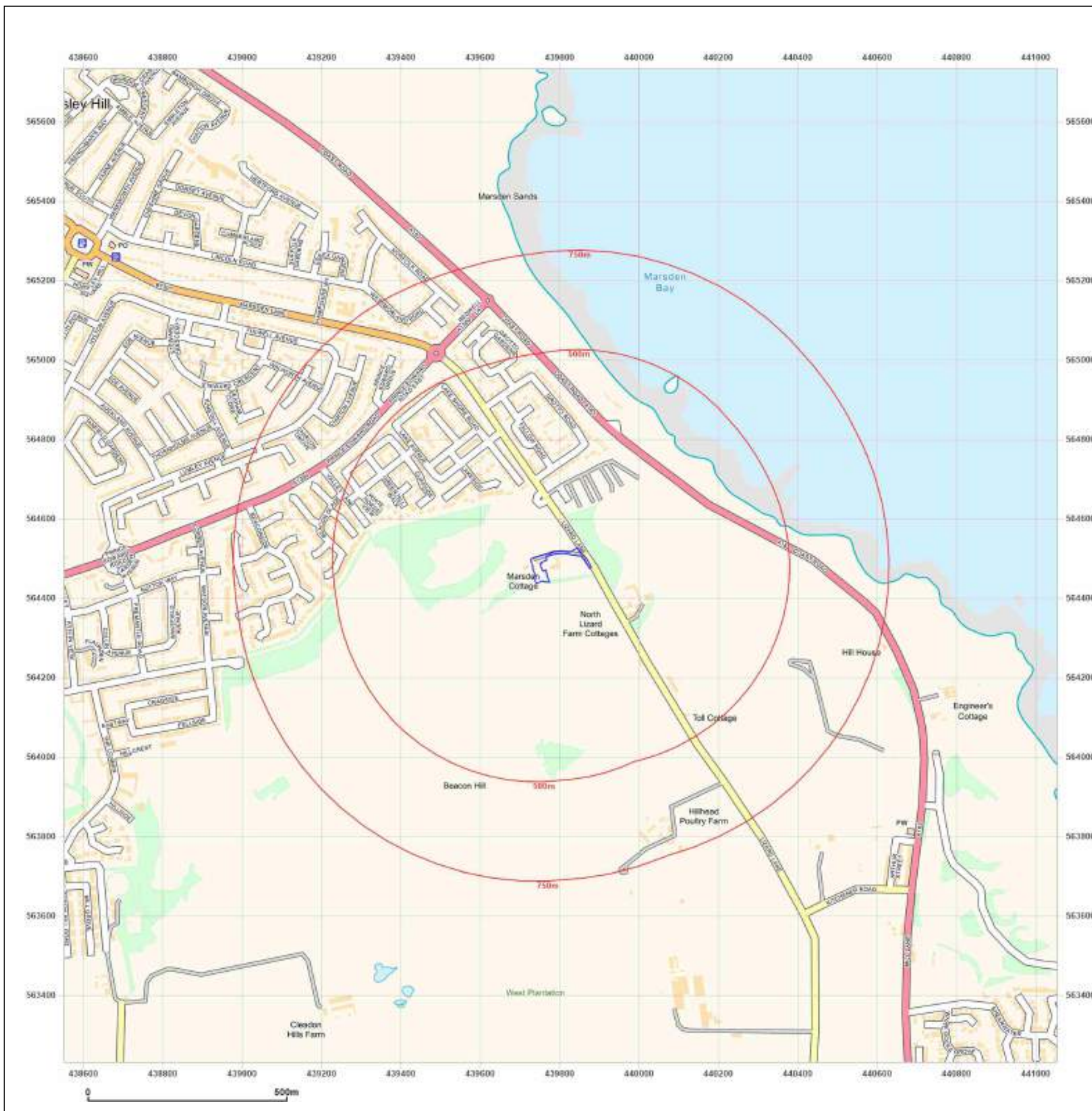


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APPENDIX 3 – SITE PHOTOGRAPHS

Site Walkover Photographs

Marsden Cottage,
Lizard Lane,
North Tyneside



Photographic Plate 1 – Site access road from Lizard Lane looking east. Marsden Hall boundary wall to rhs of picture.



Photographic Plate 2 – Site access road looking west towards site. Area above quarry face to rhs of picture

Site Walkover Photographs

Marsden Cottage, Lizard Lane, North Tyneside



Photographic Plate 3 – The site, existing dwelling to be replaced.



Photographic Plate 4 – Rear garden area. Golf club greens are present beyond the boundary wall at perimeter of garden.

Site Walkover Photographs

Marsden Cottage, Lizard Lane, North Tyneside



Photographic Plate 5 – Propane tank to side of dwelling.



Photographic Plate 6 – New build dwelling next door to west.

Site Walkover Photographs

Marsden Cottage,
Lizard Lane, North
Tyneside



Photographic Plate 7 – Entrance to old quarry / nature reserve on Lizard Lane below the site.



Photographic Plate 8 – Quarry face to north of site, site sits behind it on top.

Site Walkover Photographs

Marsden Cottage, Lizard Lane, North Tyneside



Photographic Plate 9 – Raised mound / embankment at northern boundary of quarry on quarry lane, residential houses beyond. Mound is recorded as a historical landfill.



Photographic Plate 10 – Static caravan park adjacent nature reserve.

Site Walkover Photographs

Marsden Cottage,
Lizard Lane, North
Tyneside



Photographic Plate 11 – Whitburn Golf Club Greens to immediate south of site.



Photographic Plate 12 – Static caravan holiday park adjacent nature reserve.

APPENDIX 4 – GROUNDSURE REPORT

MARSDEN COTTAGE, LIZARD LANE, SOUTH SHIELDS, SOUTH TYNESIDE, NE34 7AD

Order Details

Date: 05/12/2025
Your ref: 2057
Our Ref: GS-9FP-FOQ-JAT-GZB

Site Details

Location: 439775 564485
Area: 0.29 ha
Authority: [South Tyneside Council](#) ↗



Summary of findings

[p. 2 >](#)

Aerial image

[p. 9 >](#)

OS MasterMap site plan

[p.14 >](#)

[Insight User Guide](#) ↗

Contact us with any questions at:

info@groundsure.com ↗

01273 257 755

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
15 >	1.1 >	Historical industrial land uses >	1	7	20	39	-
18 >	1.2 >	Historical tanks >	0	2	3	0	-
19 >	1.3 >	Historical energy features >	0	0	0	3	-
19	1.4	Historical petrol stations	0	0	0	0	-
19	1.5	Historical garages	0	0	0	0	-
20	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped >	On site	0-50m	50-250m	250-500m	500-2000m
21 >	2.1 >	Historical industrial land uses >	1	9	22	48	-
24 >	2.2 >	Historical tanks >	0	3	3	0	-
25 >	2.3 >	Historical energy features >	0	0	0	6	-
25	2.4	Historical petrol stations	0	0	0	0	-
26	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
27 >	3.1 >	Active or recent landfill >	0	0	1	0	-
28	3.2	Historical landfill (BGS records)	0	0	0	0	-
28	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
28 >	3.4 >	Historical landfill (EA/NRW records) >	0	0	2	1	-
29	3.5	Historical waste sites	0	0	0	0	-
29	3.6	Licensed waste sites	0	0	0	0	-
29 >	3.7 >	Waste exemptions >	0	0	0	2	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
30	4.1	Recent industrial land uses	0	0	0	-	-
30	4.2	National Geographic Database (NGD) - Current or recent tanks	0	0	0	-	-
30	4.3	Current or recent petrol stations	0	0	0	0	-
30	4.4	Electricity cables	0	0	0	0	-
30	4.5	Gas pipelines	0	0	0	0	-



31	4.6	Sites determined as Contaminated Land	0	0	0	0	-
31	4.7	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
31	4.8	Regulated explosive sites	0	0	0	0	-
31	4.9	Hazardous substance storage/usage	0	0	0	0	-
31	4.10	Historical licensed industrial activities (IPC)	0	0	0	0	-
32	4.11	Licensed industrial activities (Part A(1))	0	0	0	0	-
32	4.12	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
32	4.13	Radioactive Substance Authorisations	0	0	0	0	-
32	4.14	Licensed Discharges to controlled waters	0	0	0	0	-
32	4.15	Pollutant release to surface waters (Red List)	0	0	0	0	-
33	4.16	Pollutant release to public sewer	0	0	0	0	-
33	4.17	List 1 Dangerous Substances	0	0	0	0	-
33	4.18	List 2 Dangerous Substances	0	0	0	0	-
33	4.19	Pollution Incidents (EA/NRW)	0	0	0	0	-
33	4.20	Pollution inventory substances	0	0	0	0	-
34	4.21	Pollution inventory waste transfers	0	0	0	0	-
34	4.22	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology >	On site	0-50m	50-250m	250-500m	500-2000m
35 >	5.1 >	Superficial aquifer >	Identified (within 500m)				
37 >	5.2 >	Bedrock aquifer >	Identified (within 500m)				
39 >	5.3 >	Groundwater vulnerability >	Identified (within 50m)				
40 >	5.4 >	Groundwater vulnerability- soluble rock risk >	Identified (within 0m)				
40 >	5.5 >	Groundwater vulnerability- local information >	Identified (within 0m)				
41 >	5.6 >	Groundwater abstractions >	0	0	0	0	4
43	5.7	Surface water abstractions	0	0	0	0	0
43 >	5.8 >	Potable abstractions >	0	0	0	0	2
44	5.9	Source Protection Zones	0	0	0	0	-
44	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology >	On site	0-50m	50-250m	250-500m	500-2000m

45	6.1	Water Network (OS MasterMap)	0	0	0	-	-
45	6.2	Surface water features	0	0	0	-	-
46 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
46	6.4	WFD Surface water bodies	0	0	0	-	-
46 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
48	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
48	7.2	Historical Flood Events	0	0	0	-	-
48	7.3	Flood Defences	0	0	0	-	-
49	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
49	7.5	Flood Storage Areas	0	0	0	-	-
50	7.6	Flood Zone 2	None (within 50m)				
50	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding					
51	8.1	Surface water flooding	Negligible (within 50m)				
Page	Section	Groundwater flooding >					
52 >	9.1 >	Groundwater flooding >	Negligible (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
53 >	10.1 >	Sites of Special Scientific Interest (SSSI) >	0	0	0	1	2
54 >	10.2 >	Conserved wetland sites (Ramsar sites) >	0	0	0	0	1
54 >	10.3 >	Special Areas of Conservation (SAC) >	0	0	0	1	0
55 >	10.4 >	Special Protection Areas (SPA) >	0	0	0	0	1
55	10.5	National Nature Reserves (NNR)	0	0	0	0	0
55 >	10.6 >	Local Nature Reserves (LNR) >	1	0	0	0	3
56	10.7	Designated Ancient Woodland	0	0	0	0	0
56	10.8	Biosphere Reserves	0	0	0	0	0
56	10.9	Forest Parks	0	0	0	0	0
57	10.10	Marine Conservation Zones	0	0	0	0	0
57 >	10.11 >	Green Belt >	1	0	0	0	0



57	10.12	Proposed Ramsar sites	0	0	0	0	0
57	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
58	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
58	10.15	Nitrate Sensitive Areas	0	0	0	0	0
58	10.16	Nitrate Vulnerable Zones	0	0	0	0	0
59	10.17	SSSI Impact Risk Zones	0	-	-	-	-
60 >	<u>10.18 ></u>	<u>SSSI Units ></u>	0	0	0	2	7
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
64	11.1	World Heritage Sites	0	0	0	-	-
64	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
64	11.3	National Parks	0	0	0	-	-
64	11.4	Listed Buildings	0	0	0	-	-
65	11.5	Conservation Areas	0	0	0	-	-
65	11.6	Scheduled Ancient Monuments	0	0	0	-	-
65	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	<u>Agricultural designations ></u>	On site	0-50m	50-250m	250-500m	500-2000m
66 >	<u>12.1 ></u>	<u>Agricultural Land Classification ></u>	Grade 3 (within 250m)				
67	12.2	Open Access Land	0	0	0	-	-
67	12.3	Tree Felling Licences	0	0	0	-	-
67 >	<u>12.4 ></u>	<u>Environmental Stewardship Schemes ></u>	1	0	0	-	-
67	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	<u>Habitat designations ></u>	On site	0-50m	50-250m	250-500m	500-2000m
68 >	<u>13.1 ></u>	<u>Priority Habitat Inventory ></u>	1	2	2	-	-
69 >	<u>13.2 ></u>	<u>Habitat Networks ></u>	2	2	4	-	-
69 >	<u>13.3 ></u>	<u>Open Mosaic Habitat ></u>	1	0	0	-	-
70	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	<u>Geology 1:10,000 scale ></u>	On site	0-50m	50-250m	250-500m	500-2000m
71 >	<u>14.1 ></u>	<u>10k Availability ></u>	Identified (within 500m)				
73 >	<u>14.2 ></u>	<u>Artificial and made ground (10k) ></u>	0	0	3	2	-



75 >	14.3 >	Superficial geology (10k) >	0	0	6	8	-
76	14.4	Landslip (10k)	0	0	0	0	-
77 >	14.5 >	Bedrock geology (10k) >	1	0	1	2	-
78 >	14.6 >	Bedrock faults and other linear features (10k) >	0	0	1	0	-
Page	Section	Geology 1:50,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
79 >	15.1 >	50k Availability >	Identified (within 500m)				
80 >	15.2 >	Artificial and made ground (50k) >	0	0	2	0	-
81	15.3	Artificial ground permeability (50k)	0	0	-	-	-
82 >	15.4 >	Superficial geology (50k) >	0	0	2	2	-
83	15.5	Superficial permeability (50k)	None (within 50m)				
83	15.6	Landslip (50k)	0	0	0	0	-
83	15.7	Landslip permeability (50k)	None (within 50m)				
84 >	15.8 >	Bedrock geology (50k) >	1	0	0	0	-
85 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
85 >	15.10 >	Bedrock faults and other linear features (50k) >	0	0	1	0	-
Page	Section	Boreholes >	On site	0-50m	50-250m	250-500m	500-2000m
86 >	16.1 >	BGS Boreholes >	0	2	9	-	-
Page	Section	Natural ground subsidence >					
88 >	17.1 >	Shrink swell clays >	Negligible (within 50m)				
89 >	17.2 >	Running sands >	Negligible (within 50m)				
90 >	17.3 >	Compressible deposits >	Negligible (within 50m)				
91 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
92 >	17.5 >	Landslides >	Very low (within 50m)				
93 >	17.6 >	Ground dissolution of soluble rocks >	Very low (within 50m)				
Page	Section	Mining and ground workings >	On site	0-50m	50-250m	250-500m	500-2000m
95 >	18.1 >	BritPits >	0	0	4	4	-
98 >	18.2 >	Surface ground workings >	1	10	19	-	-
99 >	18.3 >	Underground workings >	1	0	0	1	3
99	18.4	Underground mining extents	0	0	0	0	-



100	18.5	Historical Mineral Planning Areas	0	0	0	0	-
100	18.6	Non-coal mining	0	0	0	0	0
100	18.7	JPB mining areas	None (within 0m)				
100	18.8	The Coal Authority non-coal mining	0	0	0	0	-
101	18.9	Researched mining	0	0	0	0	-
101	18.10	Mining record office plans	0	0	0	0	-
101	18.11	BGS mine plans	0	0	0	0	-
101 >	18.12 >	Coal mining >	Identified (within 0m)				
102	18.13	Brine areas	None (within 0m)				
102	18.14	Gypsum areas	None (within 0m)				
102	18.15	Tin mining	None (within 0m)				
102	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes >	On site	0-50m	50-250m	250-500m	500-2000m
103 >	19.1 >	Natural cavities >	0	0	0	1	-
104	19.2	Mining cavities	0	0	0	0	0
104	19.3	Reported recent incidents	0	0	0	0	-
104 >	19.4 >	Historical incidents >	0	0	0	1	-
Page	Section	Radon >					
105 >	20.1 >	Radon >	Less than 1% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
107 >	21.1 >	BGS Estimated Background Soil Chemistry >	2	0	-	-	-
107	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
107	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects >	On site	0-50m	50-250m	250-500m	500-2000m
108	22.1	Underground railways (London)	0	0	0	-	-
108	22.2	Underground railways (Non-London)	0	0	0	-	-
109	22.3	Railway tunnels	0	0	0	-	-
109 >	22.4 >	Historical railway and tunnel features >	0	0	6	-	-
109	22.5	Royal Mail tunnels	0	0	0	-	-



110	22.6	Historical railways	0	0	0	-	-
110	22.7	Railways	0	0	0	-	-
110	22.8	Crossrail 2	0	0	0	0	-
110	22.9	HS2	0	0	0	0	-

Recent aerial photograph



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Capture Date: 19/04/2021

Site Area: 0.29ha



Recent site history - 2018 aerial photograph



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Capture Date: 18/07/2018

Site Area: 0.29ha



Recent site history - 2008 aerial photograph



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Capture Date: 07/05/2008

Site Area: 0.29ha



Recent site history - 2000 aerial photograph



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Capture Date: 07/05/2000

Site Area: 0.29ha



Recent site history - 1999 aerial photograph

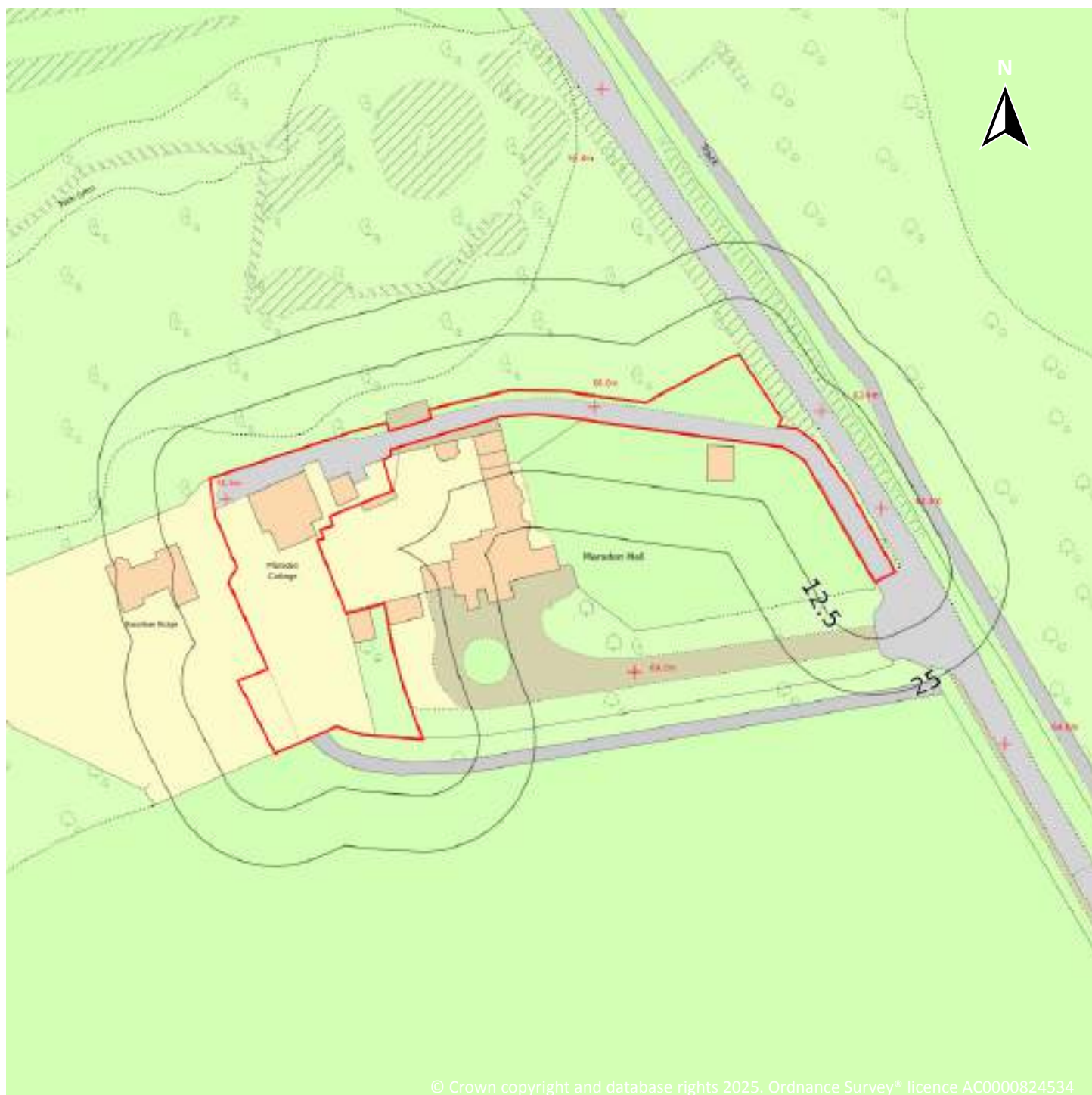


Capture Date: 10/07/1999

Site Area: 0.29ha



OS MasterMap site plan



Site Area: 0.29ha



1 Past land use



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

1.1 Historical industrial land uses

Records within 500m

67

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

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

ID	Location	Land use	Dates present	Group ID
A	On site	Unspecified Workings	1968	1336595



ID	Location	Land use	Dates present	Group ID
A	13m N	Unspecified Old Quarry	1921	1417214
B	15m E	Unspecified Tank	1951	1353965
A	22m N	Unspecified Old Quarry	1921 - 1938	1377772
A	23m N	Unspecified Old Quarry	1951	1421988
A	30m N	Unspecified Disused Quarry	1974 - 1985	1367751
C	40m N	Unspecified Heap	1921	1350224
A	46m N	Unspecified Quarry	1895	1348101
1	53m N	Unspecified Heap	1951	1350225
D	77m N	Railway Sidings	1921	1428846
D	82m N	Railway Sidings	1895	1390326
D	82m N	Railway Sidings	1921	1394161
C	86m N	Cuttings	1938	1327801
D	86m N	Railway Sidings	1938	1398492
E	89m N	Cuttings	1921	1398876
E	92m N	Cuttings	1938 - 1951	1421097
E	92m N	Cuttings	1968	1377504
A	107m N	Unspecified Heaps	1921	1346714
C	108m N	Unspecified Heap	1921	1410294
A	121m N	Unspecified Ground Workings	1985	1419618
A	123m N	Unspecified Ground Workings	1968	1363521
A	123m N	Unspecified Ground Workings	1974	1421507
C	123m N	Unspecified Heap	1951	1397611
A	139m NW	Limestone Quarries	1855	1328227
2	210m E	Filter Beds	1966 - 1983	1404469
F	218m NE	Unspecified Heap	1951	1348791
3	223m N	Clay Pit	1855	1342713
G	231m W	Limestone Quarries	1855	1328228
F	253m NE	Cuttings	1951	1327261



ID	Location	Land use	Dates present	Group ID
4	256m NE	Railway Sidings	1951	1359338
5	261m E	Unspecified Old Quarry	1921	1331552
G	263m W	Limestone Quarries	1855	1328229
G	270m W	Lime Kiln	1855	1343884
F	283m NE	Railway Building	1938	1356818
G	287m W	Unspecified Heap	1968	1350223
D	289m NE	Railway Sidings	1951	1430478
F	303m NE	Railway Building	1938	1356817
7	311m W	Unspecified Pit	1968	1341505
D	314m E	Cuttings	1951	1327921
H	340m E	Unspecified Mine	1966	1334641
H	340m E	Railway Sidings	1966	1381890
9	370m E	Railway Sidings	1951	1415431
10	371m NE	Unspecified Ground Workings	1951	1333015
D	378m E	Railway Building	1938	1356816
I	379m W	Pumping Engine House	1895	1399162
I	386m W	Pumping Engine House	1938 - 1951	1373635
I	387m W	Pumping Engine House	1921	1418560
I	387m W	Pumping Engine House	1921	1358441
J	394m E	Refuse Heap	1966	1329188
11	406m NE	Unspecified Hole	1855	1333888
K	411m W	Unspecified Old Quarry	1855 - 1921	1412993
K	411m W	Unspecified Old Quarry	1938	1426415
12	456m SE	Unspecified Works	1951 - 1966	1398920
L	460m SE	Unspecified Heap	1951	1350457
J	461m E	Railway Station	1921	1335063
J	465m E	Railway Station	1938	1363140
J	466m E	Railway Station	1895 - 1921	1363639



ID	Location	Land use	Dates present	Group ID
M	466m E	Unspecified Old Quarry	1921 - 1938	1381041
M	468m E	Unspecified Quarry	1895	1348171
M	468m E	Unspecified Old Quarry	1921	1405660
J	471m E	Railway Building	1938	1357115
L	471m SE	Unspecified Ground Workings	1966 - 1983	1401508
13	476m E	Unspecified Quarry	1966	1386734
N	481m W	Lime Kiln	1855	1343883
14	486m E	Unspecified Quarries	1951	1399209
N	488m W	Old Lime Kiln	1921 - 1938	1417131
N	493m W	Old Lime Kiln	1921	1383142

This data is sourced from Ordnance Survey® / Groundsure.

1.2 Historical tanks

Records within 500m	5
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Tank features digitised from historical Ordnance Survey® mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

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

ID	Location	Land use	Dates present	Group ID
B	On site	Unspecified Tank	1956 - 1957	230422
B	13m E	Unspecified Tank	1940	212351
C	111m N	Unspecified Tank	1957	232640
C	115m N	Unspecified Tank	1962	219996
C	115m N	Unspecified Tank	1956	233269

This data is sourced from Ordnance Survey® / Groundsure.



1.3 Historical energy features

Records within 500m**3**

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

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

ID	Location	Land use	Dates present	Group ID
F	306m NE	Electricity Substation	1955 - 1956	141151
6	306m N	Electricity Substation	1956 - 1957	139577
8	324m NW	Electricity Substation	1956 - 1957	130059

This data is sourced from Ordnance Survey® / Groundsure.

1.4 Historical petrol stations

Records within 500m**0**

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

This data is sourced from Ordnance Survey® / Groundsure.

1.5 Historical garages

Records within 500m**0**

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

This data is sourced from Ordnance Survey® / Groundsure.



1.6 Historical military land

Records within 500m

0

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

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



2 Past land use - un-grouped



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

2.1 Historical industrial land uses

Records within 500m

80

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

Features are displayed on the Past land use - un-grouped map on [page 21](#) >

ID	Location	Land Use	Date	Group ID
A	On site	Unspecified Workings	1968	1336595
A	13m N	Unspecified Old Quarry	1921	1417214
B	15m E	Unspecified Tank	1951	1353965



ID	Location	Land Use	Date	Group ID
A	22m N	Unspecified Old Quarry	1921	1377772
A	23m N	Unspecified Old Quarry	1951	1421988
A	25m N	Unspecified Old Quarry	1938	1377772
A	30m N	Unspecified Disused Quarry	1985	1367751
A	30m N	Unspecified Disused Quarry	1974	1367751
C	40m N	Unspecified Heap	1921	1350224
A	46m N	Unspecified Quarry	1895	1348101
1	53m N	Unspecified Heap	1951	1350225
D	77m N	Railway Sidings	1921	1428846
D	82m N	Railway Sidings	1921	1394161
D	82m N	Railway Sidings	1895	1390326
C	86m N	Cuttings	1938	1327801
D	86m N	Railway Sidings	1938	1398492
E	89m N	Cuttings	1921	1398876
E	92m N	Cuttings	1938	1421097
E	92m N	Cuttings	1968	1377504
E	92m N	Cuttings	1951	1421097
A	107m N	Unspecified Heaps	1921	1346714
C	108m N	Unspecified Heap	1921	1410294
A	121m N	Unspecified Ground Workings	1985	1419618
A	123m N	Unspecified Ground Workings	1968	1363521
A	123m N	Unspecified Ground Workings	1974	1421507
C	123m N	Unspecified Heap	1951	1397611
A	139m NW	Limestone Quarries	1855	1328227
F	210m E	Filter Beds	1983	1404469
F	210m E	Filter Beds	1966	1404469
G	218m NE	Unspecified Heap	1951	1348791
2	223m N	Clay Pit	1855	1342713



ID	Location	Land Use	Date	Group ID
H	231m W	Limestone Quarries	1855	1328228
G	253m NE	Cuttings	1951	1327261
3	256m NE	Railway Sidings	1951	1359338
4	261m E	Unspecified Old Quarry	1921	1331552
H	263m W	Limestone Quarries	1855	1328229
H	270m W	Lime Kiln	1855	1343884
G	283m NE	Railway Building	1938	1356818
H	287m W	Unspecified Heap	1968	1350223
D	289m NE	Railway Sidings	1951	1430478
G	303m NE	Railway Building	1938	1356817
5	311m W	Unspecified Pit	1968	1341505
D	314m E	Cuttings	1951	1327921
K	340m E	Railway Sidings	1966	1381890
K	340m E	Unspecified Mine	1966	1334641
6	370m E	Railway Sidings	1951	1415431
7	371m NE	Unspecified Ground Workings	1951	1333015
D	378m E	Railway Building	1938	1356816
L	379m W	Pumping Engine House	1895	1399162
L	386m W	Pumping Engine House	1938	1373635
L	387m W	Pumping Engine House	1921	1418560
L	387m W	Pumping Engine House	1921	1358441
L	387m W	Pumping Engine House	1951	1373635
M	394m E	Refuse Heap	1966	1329188
8	406m NE	Unspecified Hole	1855	1333888
N	411m W	Unspecified Old Quarry	1921	1412993
N	411m W	Unspecified Old Quarry	1921	1412993
N	411m W	Unspecified Old Quarry	1855	1412993
N	411m W	Unspecified Old Quarry	1895	1412993



ID	Location	Land Use	Date	Group ID
N	411m W	Unspecified Old Quarry	1938	1426415
O	456m SE	Unspecified Works	1966	1398920
O	456m SE	Unspecified Works	1951	1398920
P	460m SE	Unspecified Heap	1951	1350457
M	461m E	Railway Station	1921	1335063
M	465m E	Railway Station	1938	1363140
K	466m E	Unspecified Old Quarry	1938	1381041
M	466m E	Railway Station	1921	1363639
M	466m E	Railway Station	1895	1363639
K	466m E	Unspecified Old Quarry	1921	1381041
K	468m E	Unspecified Old Quarry	1921	1405660
K	468m E	Unspecified Quarry	1895	1348171
M	471m E	Railway Building	1938	1357115
P	471m SE	Unspecified Ground Workings	1983	1401508
P	471m SE	Unspecified Ground Workings	1966	1401508
9	476m E	Unspecified Quarry	1966	1386734
Q	481m W	Lime Kiln	1855	1343883
10	486m E	Unspecified Quarries	1951	1399209
Q	488m W	Old Lime Kiln	1938	1417131
Q	489m W	Old Lime Kiln	1921	1417131
Q	493m W	Old Lime Kiln	1921	1383142

This data is sourced from Ordnance Survey® / Groundsure.

2.2 Historical tanks

Records within 500m

6

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

Features are displayed on the Past land use - un-grouped map on [page 21](#) >



ID	Location	Land Use	Date	Group ID
B	On site	Unspecified Tank	1956	230422
B	1m S	Unspecified Tank	1957	230422
B	13m E	Unspecified Tank	1940	212351
C	111m N	Unspecified Tank	1957	232640
C	115m N	Unspecified Tank	1956	233269
C	115m N	Unspecified Tank	1962	219996

This data is sourced from Ordnance Survey® / Groundsure.

2.3 Historical energy features

Records within 500m	6
----------------------------	----------

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

Features are displayed on the Past land use - un-grouped map on [page 21 >](#)

ID	Location	Land Use	Date	Group ID
G	306m NE	Electricity Substation	1956	141151
I	306m N	Electricity Substation	1956	139577
I	306m N	Electricity Substation	1957	139577
G	306m NE	Electricity Substation	1955	141151
J	324m NW	Electricity Substation	1957	130059
J	325m NW	Electricity Substation	1956	130059

This data is sourced from Ordnance Survey® / Groundsure.

2.4 Historical petrol stations

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

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

This data is sourced from Ordnance Survey® / Groundsure.



2.5 Historical garages

Records within 500m

0

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

This data is sourced from Ordnance Survey® / Groundsure.



3 Waste and landfill



- Site Outline
- Search buffers in metres (m)
- Active or recent landfill
- Historical landfill (EA/NRW)
- Waste exemptions

3.1 Active or recent landfill

Records within 500m

1

Active or recently closed landfill sites under Environment Agency/Natural Resources Wales regulation. Features are displayed on the Waste and landfill map on [page 27](#) >

ID	Location	Details	
3	249m E	Operator: O' Brien Aggregate Marsden Limited Site Address: O' Brien Aggregate Marsden Limited, Marsden Quarry, Whitburn, Sunderland, Tyne & Wear, SR6 7NG	WML Number: 64063 EPR Reference: 650370 Landfill type: L05: Inert LF Status: Issued IPPC Reference: - EPR Number: EA/EPR/GB3206CB

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



3.2 Historical landfill (BGS records)

Records within 500m	0
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Landfill sites identified on a survey carried out on behalf of the DoE in 1973. These sites may have been closed or operational at this time.

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

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

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

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

3.4 Historical landfill (EA/NRW records)

Records within 500m	3
---------------------	---

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

Features are displayed on the Waste and landfill map on [page 27 >](#)

ID	Location	Details		
1	54m N	Site Address: Disused Quarry off Quarry Lane, Marsden, South Tyneside Licence Holder Address: -	Waste Licence: - Site Reference: ST 037 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: - Licence Holder: - First Recorded: - Last Recorded: -
2	105m N	Site Address: Disused Quarry off Quarry Lane, Marsden, South Tyneside Licence Holder Address: -	Waste Licence: - Site Reference: ST 037 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: - Licence Holder: - First Recorded: - Last Recorded: -

ID	Location	Details		
4	253m NE	Site Address: Mineral Railway, Coast Road, Marsden, South Shield, Tyne and Wear Licence Holder Address: Town Hall, South Shields, Tyne and Wear	Waste Licence: Yes Site Reference: ST 013, TW 046 ST Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: YO1/L/SOU001 Licence Issue: 04/01/1979 Licence Surrender: 31/03/1994	Operator: South Tyneside Borough Council Licence Holder: South Tyneside Metropolitan Borough Council First Recorded 01/04/1978 Last Recorded: 08/10/1980

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

3.5 Historical waste sites

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

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

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

3.6 Licensed waste sites

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

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

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

3.7 Waste exemptions

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

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

Features are displayed on the Waste and landfill map on [page 27 >](#)

ID	Location	Site	Reference	Category	Sub-Category	Description
5	301m N	-	WEX301698	Using waste exemption	Not on a farm	Use of waste in construction
6	352m NW	32 Farding Square South Shields South Tyneside Ne34 7az	EPR/BF0002VK /A001	Using waste exemption	Both agricultural and non-agricultural waste	Use of waste in construction

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



4 Current industrial land use

4.1 Recent industrial land uses

Records within 250m

0

Current potentially contaminative industrial sites.

This data is sourced from Ordnance Survey®.

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

Records within 250m

0

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

This data is sourced from Ordnance Survey®.

4.3 Current or recent petrol stations

Records within 500m

0

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.4 Electricity cables

Records within 500m

0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.5 Gas pipelines

Records within 500m

0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.6 Sites determined as Contaminated Land

Records within 500m**0**

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

This data is sourced from Local Authority records.

4.7 Control of Major Accident Hazards (COMAH)

Records within 500m**0**

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

This data is sourced from the Health and Safety Executive.

4.8 Regulated explosive sites

Records within 500m**0**

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

This data is sourced from the Health and Safety Executive.

4.9 Hazardous substance storage/usage

Records within 500m**0**

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

This data is sourced from Local Authority records.

4.10 Historical licensed industrial activities (IPC)

Records within 500m**0**

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

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

4.11 Licensed industrial activities (Part A(1))

Records within 500m**0**

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

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

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

Records within 500m**0**

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

This data is sourced from Local Authority records.

4.13 Radioactive Substance Authorisations

Records within 500m**0**

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

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

4.14 Licensed Discharges to controlled waters

Records within 500m**0**

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

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

4.15 Pollutant release to surface waters (Red List)

Records within 500m**0**

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

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



4.16 Pollutant release to public sewer

Records within 500m**0**

Discharges of Special Category Effluents to the public sewer.

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

4.17 List 1 Dangerous Substances

Records within 500m**0**

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

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

4.18 List 2 Dangerous Substances

Records within 500m**0**

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

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

4.19 Pollution Incidents (EA/NRW)

Records within 500m**0**

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

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

4.20 Pollution inventory substances

Records within 500m**0**

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

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



4.21 Pollution inventory waste transfers

Records within 500m

0

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

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

4.22 Pollution inventory radioactive waste

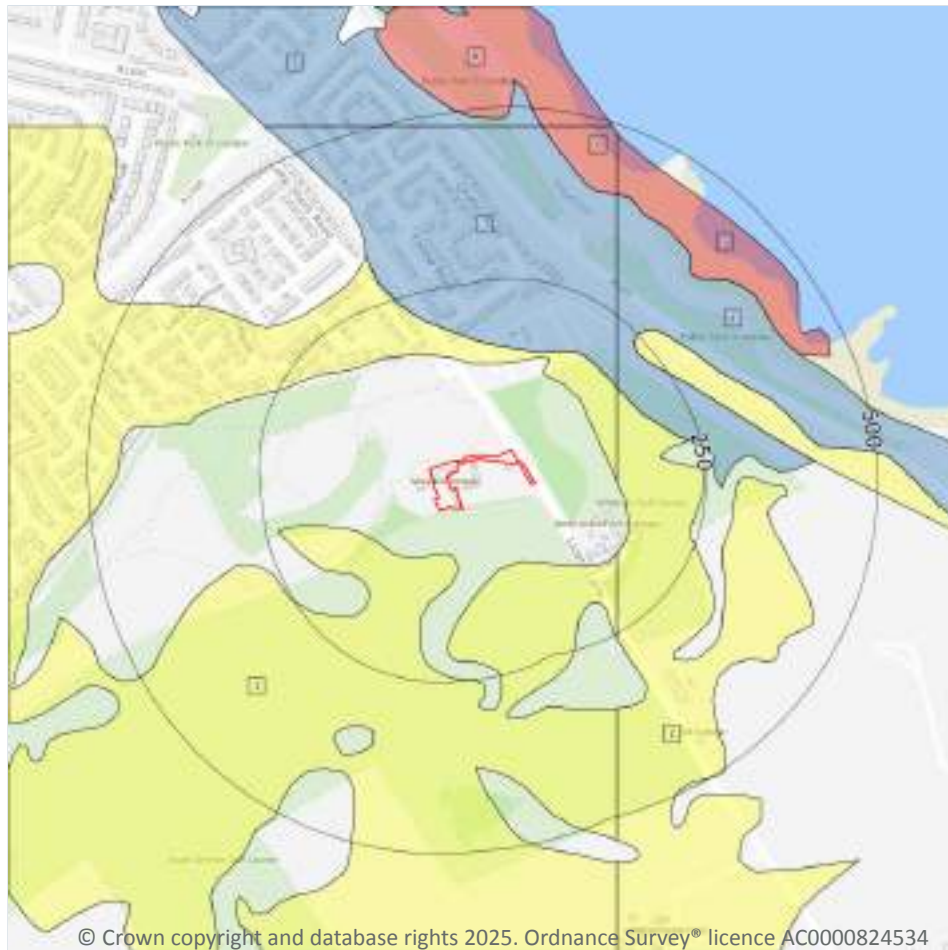
Records within 500m

0

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

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

5 Hydrogeology - Superficial aquifer



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

5.1 Superficial aquifer

Records within 500m

8

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on [page 35 >](#)

ID	Location	Designation	Description
1	63m S	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
2	120m E	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

ID	Location	Designation	Description
3	147m N	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
4	177m NE	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
5	369m NE	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
6	397m N	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
7	473m N	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
8	475m N	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

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



Bedrock aquifer



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

5.2 Bedrock aquifer

Records within 500m

3

Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on [page 37 >](#)

ID	Location	Designation	Description
1	On site	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
2	120m E	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers

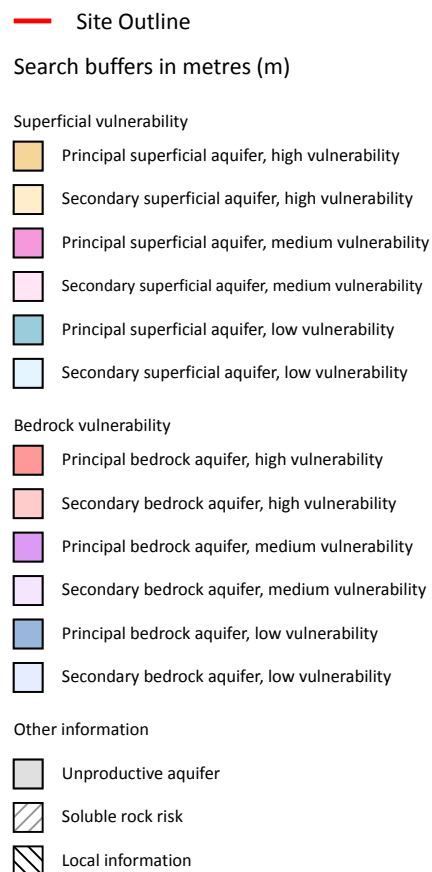
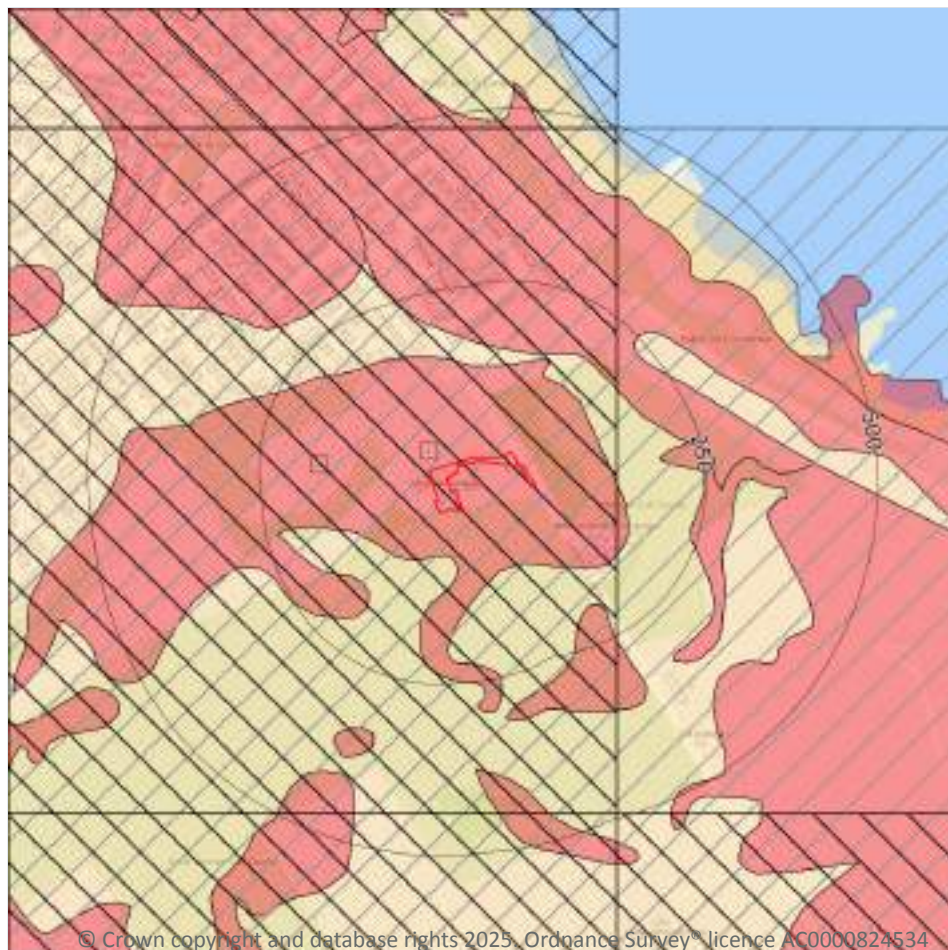


ID	Location	Designation	Description
3	473m N	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers

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



Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m

1

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

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

Features are displayed on the Groundwater vulnerability map on [page 39](#) >



ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Principal bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: <300mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: Low	Vulnerability: High Aquifer type: Principal Flow mechanism: Well connected fractures

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

5.4 Groundwater vulnerability- soluble rock risk

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

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

ID	Maximum soluble risk category	Percentage of grid square covered by maximum risk
A	Significant soluble rocks are likely to be present. Problems unlikely except with considerable surface or subsurface water flow.	100.0%

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

5.5 Groundwater vulnerability- local information

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

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

ID	Summary	Additional information
A	Limited protection of aquifers by superficial deposits	Local studies show that thin superficial deposits offer limited protection to the aquifers beneath

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

Abstractions and Source Protection Zones



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

5.6 Groundwater abstractions

Records within 2000m

4

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

Features are displayed on the Abstractions and Source Protection Zones map on [page 41](#) >

ID	Location	Details	
-	1262m SE	Status: Active Licence No: NE/023/0003/006 Details: Pollution Remediation Direct Source: GROUNDWATERS Point: BOREHOLE AT WHITBURN COASTAL PARK Data Type: Point Name: The Coal Authority Easting: 440876 Northing: 563704	Annual Volume (m ³): 946080 Max Daily Volume (m ³): 2592 Original Application No: NPS/WR/036446 Original Start Date: 24/07/2014 Expiry Date: 31/03/2030 Issue No: 2 Version Start Date: 25/07/2022 Version End Date: -
-	1263m SE	Status: Historical Licence No: NE/023/0003/006 Details: Pollution Remediation Direct Source: GROUNDWATERS Point: BOREHOLE - COAL MEASURES - WHITBURN COASTAL PARK Data Type: Point Name: THE COAL AUTHORITY Easting: 440871 Northing: 563696	Annual Volume (m ³): 946080 Max Daily Volume (m ³): 2592 Original Application No: NPS/WR/004837 Original Start Date: 24/07/2014 Expiry Date: 31/03/2030 Issue No: 1 Version Start Date: 24/07/2014 Version End Date: -
-	1334m SW	Status: Historical Licence No: 1/23/05/001 Details: Potable Water Supply - Direct Direct Source: GROUNDWATERS Point: CLEADON (MAGNESIAN LIMESTONE) Data Type: Point Name: NORTHUMBRIAN WATER Easting: 438720 Northing: 563580	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 07/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 08/04/1968 Version End Date: -
-	1334m SW	Status: Historical Licence No: 1/23/05/001 Details: Potable Water Supply - Direct Direct Source: GROUNDWATERS Point: BOREHOLE - MAGNESIAN LIMESTONE - CLEADON Data Type: Point Name: NORTHUMBRIAN WATER Easting: 438720 Northing: 563580	Annual Volume (m ³): 1241058 Max Daily Volume (m ³): 5773.55 Original Application No: - Original Start Date: 07/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 08/04/1968 Version End Date: -

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



5.7 Surface water abstractions

Records within 2000m

0

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

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

5.8 Potable abstractions

Records within 2000m

2

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

Features are displayed on the Abstractions and Source Protection Zones map on [page 41](#) >

ID	Location	Details	
-	1334m SW	Status: Historical Licence No: 1/23/05/001 Details: Potable Water Supply - Direct Direct Source: GROUNDWATERS Point: CLEADON (MAGNESIAN LIMESTONE) Data Type: Point Name: NORTHUMBRIAN WATER Easting: 438720 Northing: 563580	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 07/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 08/04/1968 Version End Date: -
-	1334m SW	Status: Historical Licence No: 1/23/05/001 Details: Potable Water Supply - Direct Direct Source: GROUNDWATERS Point: BOREHOLE - MAGNESIAN LIMESTONE - CLEADON Data Type: Point Name: NORTHUMBRIAN WATER Easting: 438720 Northing: 563580	Annual Volume (m ³): 1241058 Max Daily Volume (m ³): 5773.55 Original Application No: - Original Start Date: 07/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 08/04/1968 Version End Date: -

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



5.9 Source Protection Zones

Records within 500m

0

Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination.

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

5.10 Source Protection Zones (confined aquifer)

Records within 500m

0

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

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



6 Hydrology



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

6.1 Water Network (OS MasterMap)

Records within 250m

0

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

This data is sourced from the Ordnance Survey®.

6.2 Surface water features

Records within 250m

0

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

This data is sourced from the Ordnance Survey®.

6.3 WFD Surface water body catchments

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

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

Features are displayed on the Hydrology map on [page 45 >](#)

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	On site	Coastal Catchment	Not part of a river WB catchment	364	Tyne Lower and Estuary	Tyne

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

6.4 WFD Surface water bodies

Records identified	0
---------------------------	----------

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

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

6.5 WFD Groundwater bodies

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

Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.

Features are displayed on the Hydrology map on [page 45 >](#)

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
A	On site	Wear Magnesian Limestone	GB40301G703900 ↗	Poor	Poor	Good	2019



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



7 River and coastal flooding

7.1 Risk of flooding from rivers and the sea

Records within 50m

0

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

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

7.2 Historical Flood Events

Records within 250m

0

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

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

7.3 Flood Defences

Records within 250m

0

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

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



7.4 Areas Benefiting from Flood Defences

Records within 250m

0

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

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

7.5 Flood Storage Areas

Records within 250m

0

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

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



River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m

0

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

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

7.7 Flood Zone 3

Records within 50m

0

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

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



8 Surface water flooding

8.1 Surface water flooding

Highest risk on site

Negligible

Highest risk within 50m

Negligible

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

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

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

This data is sourced from Ambiental Risk Analytics.



9 Groundwater flooding



- Site Outline
- Search buffers in metres (m)
- High
 - Moderate - High
 - Moderate
 - Low
 - Negligible

9.1 Groundwater flooding

Highest risk on site

Negligible

Highest risk within 50m

Negligible

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

Features are displayed on the Groundwater flooding map on [page 52 >](#)

This data is sourced from Ambiantal Risk Analytics.

10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- Sites of Special Scientific Interest (SSSI)
- × Conserved wetland sites (Ramsar sites)
- + Special Areas of Conservation (SAC)
- Special Protection Areas (SPA)
- + Local Nature Reserves (LNR)
- Green Belt

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

3

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

Features are displayed on the Environmental designations map on [page 53](#) >

ID	Location	Name	Data source
3	323m NE	Durham Coast SSSI	Natural England



ID	Location	Name	Data source
6	1174m NW	Harton Down Hill SSSI	Natural England
B	1411m SW	Cleadon Hill SSSI	Natural England

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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m

1

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

Features are displayed on the Environmental designations map on [page 53](#) >

ID	Location	Site	Details
A	848m N	Name: Northumbria Coast Site status: Listed Data source: Natural England	Overview: The Northumbria Coast Ramsar site comprises several discrete sections of rocky foreshore between Spittal, in the north of Northumberland, and an area just south of Blackhall Rocks in County Durham. These stretches of coast regularly support nationally important numbers of purple sandpiper and high concentrations of turnstone. The Ramsar site also includes an area of sandy beach at Low Newton, which supports an nationally important breeding colony of little tern, and parts of three artificial pier structures which form important roost sites for purple sandpiper. Ramsar criteria: Ramsar criterion 6 The site supports internationally important wintering populations of ruddy turnstone <i>Arenaria interpres</i> and purple sandpiper <i>Calidris maritima</i> .

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m

1

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

Features are displayed on the Environmental designations map on [page 53](#) >



ID	Location	Name	Features of interest	Habitat description	Data source
4	323m NE	Durham Coast	Vegetated sea cliffs; Dune grassland	Coastal sand dunes, Sand beaches, Machair; Marine areas, Sea inlets; Shingle, Sea cliffs, Islets; Humid grassland, Mesophile grassland	Natural England

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

10.4 Special Protection Areas (SPA)

Records within 2000m	1
-----------------------------	----------

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

Features are displayed on the Environmental designations map on [page 53 >](#)

ID	Location	Name	Species of interest	Habitat description	Data source
A	848m N	Northumbria Coast	Purple sandpiper; Ruddy turnstone; Arctic tern; Little tern	Marine areas, Sea inlets; Shingle, Sea cliffs, Islets; Coastal sand dunes, Sand beaches, Machair	Natural England

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

10.5 National Nature Reserves (NNR)

Records within 2000m	0
-----------------------------	----------

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

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

10.6 Local Nature Reserves (LNR)

Records within 2000m	4
-----------------------------	----------

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

Features are displayed on the Environmental designations map on [page 53 >](#)

ID	Location	Name	Data source
1	On site	Marsden Old Quarry	Natural England
5	971m NW	Harton Down Hill	Natural England
B	1411m SW	Cleadon Hills	Natural England
-	1615m SE	Whitburn Point	Natural England

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

10.7 Designated Ancient Woodland

Records within 2000m **0**

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

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

10.8 Biosphere Reserves

Records within 2000m **0**

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

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

10.9 Forest Parks

Records within 2000m **0**

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

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m

0

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

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

10.11 Green Belt

Records within 2000m

1

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

Features are displayed on the Environmental designations map on [page 53](#) >

ID	Location	Name	Local Authority name
2	On site	Tyne and Wear Green Belt	South Tyneside

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

10.12 Proposed Ramsar sites

Records within 2000m

0

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

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m

0

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

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



10.14 Potential Special Protection Areas (pSPA)

Records within 2000m

0

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

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m

0

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

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

Records within 2000m

0

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

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

SSSI Impact Zones and Units



- Site Outline
- Search buffers in metres (m)
- SSSI Impact Risk Zones
- SSSI Units
- Not recorded
- Favourable
- Unfavourable - Recovering
- Unfavourable - No change
- Unfavourable - Declining
- Partially destroyed
- Destroyed

10.17 SSSI Impact Risk Zones

Records on site

0

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

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m

9

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

Features are displayed on the SSSI Impact Zones and Units map on [page 59](#) >

ID: A
 Location: 323m NE
 SSSI name: Durham Coast
 Unit name: Velvet Beds-Lizard Point: Cliff
 Broad habitat: Neutral Grassland - Lowland
 Condition: Favourable
 Reportable features:

Feature name	Feature condition	Date of assessment
Aggregations of breeding birds - Cormorant, <i>Phalacrocorax carbo sinensis</i>	Favourable	01/08/2013
Aggregations of breeding birds - Fulmar, <i>Fulmarus glacialis</i>	Favourable	01/08/2013
Aggregations of breeding birds - Kittiwake, <i>Rissa tridactyla</i>	Favourable	01/08/2013
EC - Marine Permian	Favourable	11/03/2025
H1230 Vegetated sea cliffs of the Atlantic and Baltic coasts	Favourable	01/08/2013
IA - Coastal Geomorphology	Favourable	11/03/2025
Lowland calcareous grassland (CG2)	Favourable	01/08/2013
Lowland neutral grassland (MG5)	Favourable	01/08/2013

ID: A
 Location: 334m NE
 SSSI name: Durham Coast
 Unit name: Velvet Beds-Lizards Point: Rocky Shore
 Broad habitat: Littoral Rock
 Condition: Favourable
 Reportable features:

Feature name	Feature condition	Date of assessment
Aggregations of non-breeding birds - Sanderling, <i>Calidris alba</i>	Favourable	29/11/2010
EC - Marine Permian	Favourable	11/03/2025



Feature name	Feature condition	Date of assessment
IA - Coastal Geomorphology	Favourable	11/03/2025

ID: 1
 Location: 672m N
 SSSI name: Durham Coast
 Unit name: Trow Point-Velvet Beds: Cliff
 Broad habitat: Neutral Grassland - Lowland
 Condition: Favourable
 Reportable features:

Feature name	Feature condition	Date of assessment
EC - Marine Permian	Favourable	11/03/2025
H1230 Vegetated sea cliffs of the Atlantic and Baltic coasts	Favourable	31/07/2013
IA - Coastal Geomorphology	Favourable	11/03/2025
Lowland calcareous grassland (CG2)	Favourable	31/07/2013
Lowland neutral grassland (MG5)	Favourable	31/07/2013

ID: 2
 Location: 712m N
 SSSI name: Durham Coast
 Unit name: Trow Point-Velvet Beds: Rocky Shore
 Broad habitat: Littoral Rock
 Condition: Favourable
 Reportable features:

Feature name	Feature condition	Date of assessment
Aggregations of non-breeding birds - Purple sandpiper, Calidris maritima	Favourable	29/11/2010
Aggregations of non-breeding birds - Sanderling, Calidris alba	Favourable	29/11/2010
EC - Marine Permian	Favourable	11/03/2025
IA - Coastal Geomorphology	Favourable	11/03/2025



ID: 3
 Location: 1108m E
 SSSI name: Durham Coast
 Unit name: Lizard Point-Souter Point: Cliff
 Broad habitat: Neutral Grassland - Lowland
 Condition: Favourable
 Reportable features:

Feature name	Feature condition	Date of assessment
EC - Marine Permian	Favourable	11/03/2025
H1230 Vegetated sea cliffs of the Atlantic and Baltic coasts	Favourable	06/08/2013
Lowland calcareous grassland (CG2)	Favourable	06/08/2013
Lowland neutral grassland (MG5)	Favourable	06/08/2013

ID: 4
 Location: 1117m E
 SSSI name: Durham Coast
 Unit name: Lizard Point-Souter Point: Rocky Shore
 Broad habitat: Littoral Rock
 Condition: Favourable
 Reportable features:

Feature name	Feature condition	Date of assessment
Aggregations of non-breeding birds - Purple sandpiper, Calidris maritima	Favourable	29/11/2010
Aggregations of non-breeding birds - Sanderling, Calidris alba	Favourable	29/11/2010
EC - Marine Permian	Favourable	11/03/2025

ID: 5
 Location: 1174m NW
 SSSI name: Harton Down Hill
 Unit name: Harton Down Hill
 Broad habitat: Calcareous Grassland - Lowland
 Condition: Unfavourable - Declining
 Reportable features:

Feature name	Feature condition	Date of assessment
Lowland calcareous grassland (CG2)	Unfavourable - No change	10/09/2024
Lowland calcareous grassland (CG8)	Unfavourable - Declining	10/09/2024



ID: 6
Location: 1411m SW
SSSI name: Cleadon Hill
Unit name: 1
Broad habitat: Calcareous Grassland - Lowland
Condition: Unfavourable - Declining
Reportable features:

Feature name	Feature condition	Date of assessment
Lowland calcareous grassland (CG3-5)	Unfavourable - Declining	30/10/2024
Lowland calcareous grassland (CG8)	Unfavourable - Declining	11/11/2024

ID: -
Location: 1922m NW
SSSI name: Durham Coast
Unit name: Trow Point-Velvet Beds: Rocky Shore
Broad habitat: Littoral Rock
Condition: Favourable
Reportable features:

Feature name	Feature condition	Date of assessment
Aggregations of non-breeding birds - Purple sandpiper, <i>Calidris maritima</i>	Favourable	29/11/2010
Aggregations of non-breeding birds - Sanderling, <i>Calidris alba</i>	Favourable	29/11/2010
EC - Marine Permian	Favourable	11/03/2025
IA - Coastal Geomorphology	Favourable	11/03/2025

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



11 Visual and cultural designations

11.1 World Heritage Sites

Records within 250m

0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m

0

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

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

11.3 National Parks

Records within 250m

0

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

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

11.4 Listed Buildings

Records within 250m

0

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



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

11.5 Conservation Areas

Records within 250m

0

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

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

11.6 Scheduled Ancient Monuments

Records within 250m

0

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

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

11.7 Registered Parks and Gardens

Records within 250m

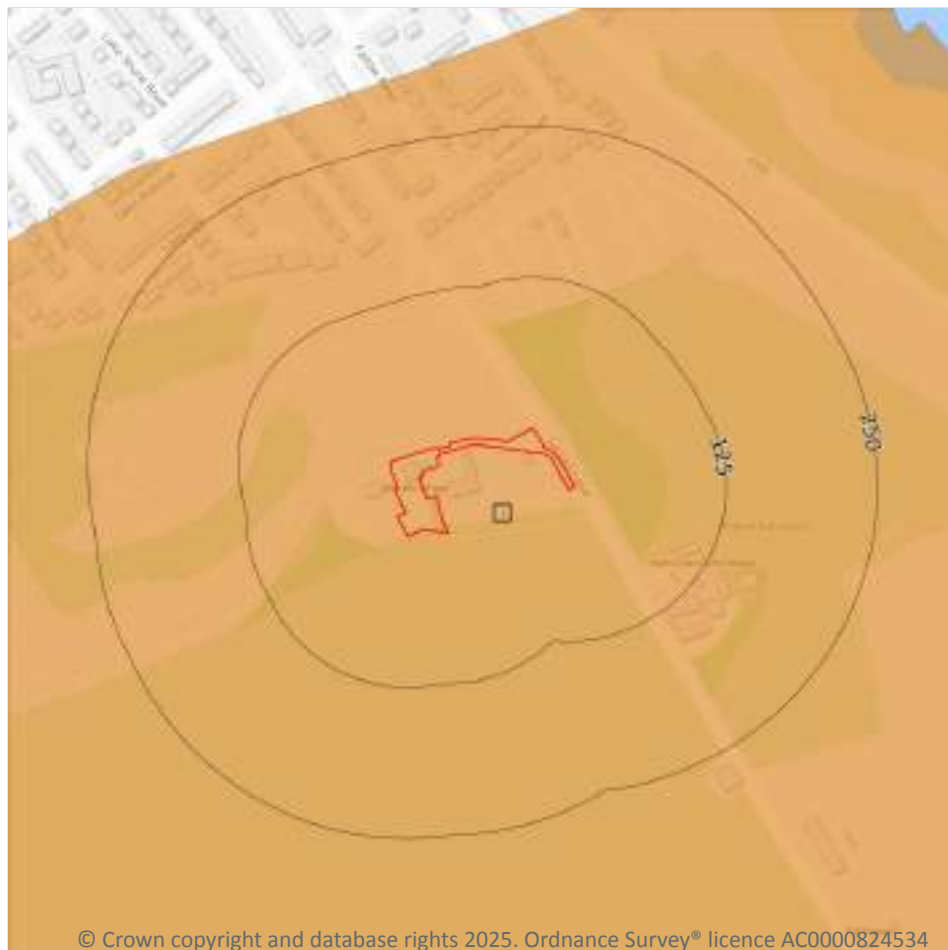
0

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

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



12 Agricultural designations



- Site Outline
- Search buffers in metres (m)
- Grade 1 - excellent quality
- Grade 2 - very good quality
- Grade 3 - good to moderate quality
- Grade 3a - good quality
- Grade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Non-agricultural land
- Urban land
- Exclusion land
- Tree felling licences
- Open Access land

12.1 Agricultural Land Classification

Records within 250m

1

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

Features are displayed on the Agricultural designations map on [page 66](#) >

ID	Location	Classification	Description
1	On site	Grade 3	Good to moderate quality agricultural land. Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.

This data is sourced from Natural England.



12.2 Open Access Land

Records within 250m**0**

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

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

12.3 Tree Felling Licences

Records within 250m**0**

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

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m**1**

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

Location	Reference	Scheme	Start Date	End date
On site	AG00644032	Higher Level Stewardship	01/11/2014	31/10/2024

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

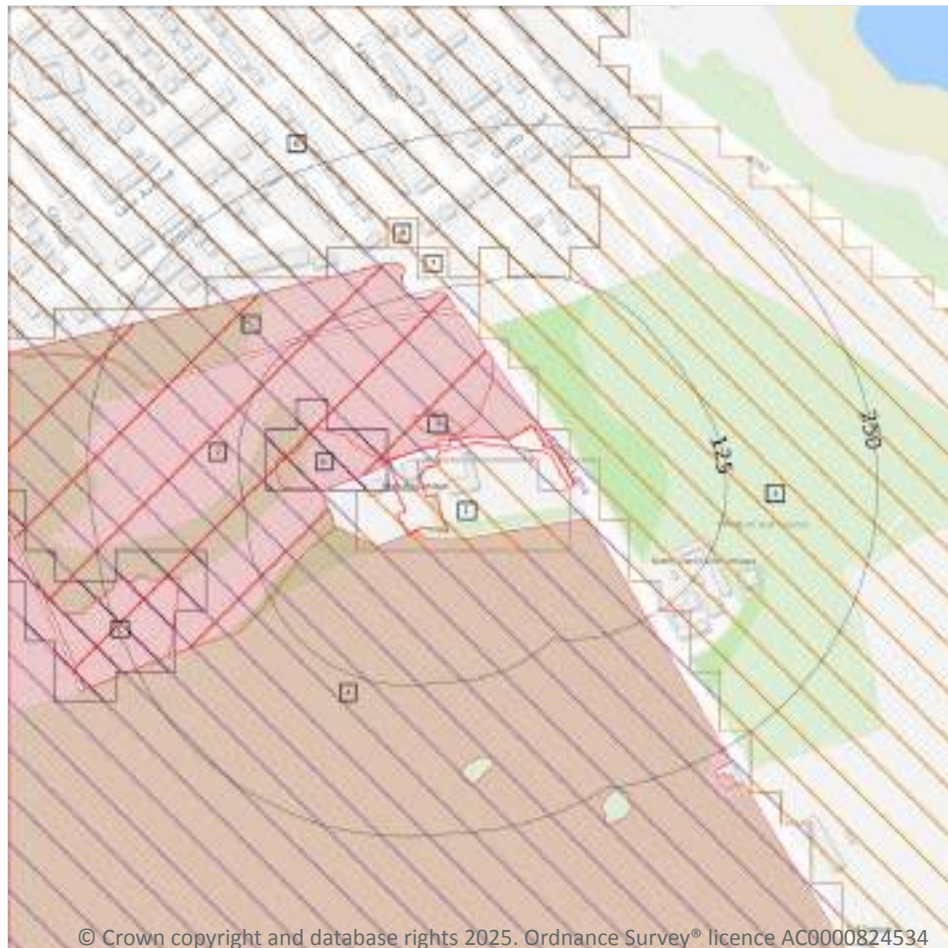
Records within 250m**0**

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

This data is sourced from Natural England.



13 Habitat designations



- Site Outline**
- Search buffers in metres (m)**
- Priority Habitat Inventory
 - Open Mosaic Habitat
 - Limestone Pavement Orders
- Habitat Networks**
- Primary Habitat
 - Restorable Habitat
 - Associated Habitats
 - Habitat Restoration-Creation
 - Network Enhancement Zone 1
 - Network Enhancement Zone 2

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13.1 Priority Habitat Inventory

Records within 250m

5

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

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

ID	Location	Main Habitat	Other habitats
A	On site	No main habitat but additional habitats present	Additional: LCGRA (FEP 50%); GQSIG (FEP 50%)
4	5m N	No main habitat but additional habitats present	Additional: LCGRA (FEP 50%); GQSIG (FEP 50%)
B	5m W	Lowland calcareous grassland	Main habitat: LCGRA (FEP + HLS)
5	106m N	No main habitat but additional habitats present	Additional: LCGRA (FEP 50%); GQSIG (FEP 50%)



ID	Location	Main Habitat	Other habitats
C	187m W	Lowland calcareous grassland	Main habitat: LCGRA (FEP + HLS)

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m	8
----------------------------	----------

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

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

ID	Location	Type	Habitat
1	On site	Network Enhancement Zone 1	Not specified
A	On site	Restorable Habitat	Not specified
B	2m W	Primary Habitat	Lowland calcareous grassland
3	3m NE	Network Enhancement Zone 1	Not specified
6	123m N	Network Enhancement Zone 2	Not specified
7	132m N	Network Enhancement Zone 1	Not specified
C	161m W	Primary Habitat	Lowland calcareous grassland
8	162m N	Network Enhancement Zone 1	Not specified

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m	1
----------------------------	----------

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

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



ID	Location	Site reference	Identification confidence	Primary source	Secondary source	Tertiary source
2	On site	BRITPITS ref: 11951; Hld_ref: EAHLD0625 7	Low	British Geological Survey BRITPITS database	Environment Agency Historic Landfill Sites	UK Perspectives Aerial Photography

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m	0
----------------------------	----------

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

This data is sourced from Natural England.

14 Geology 1:10,000 scale - Availability



- Site Outline**
- Search buffers in metres (m)
- Full coverage
 - Partial coverage
 - No coverage

14.1 10k Availability

Records within 500m

4

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

Features are displayed on the Geology 1:10,000 scale - Availability map on [page 71](#) >

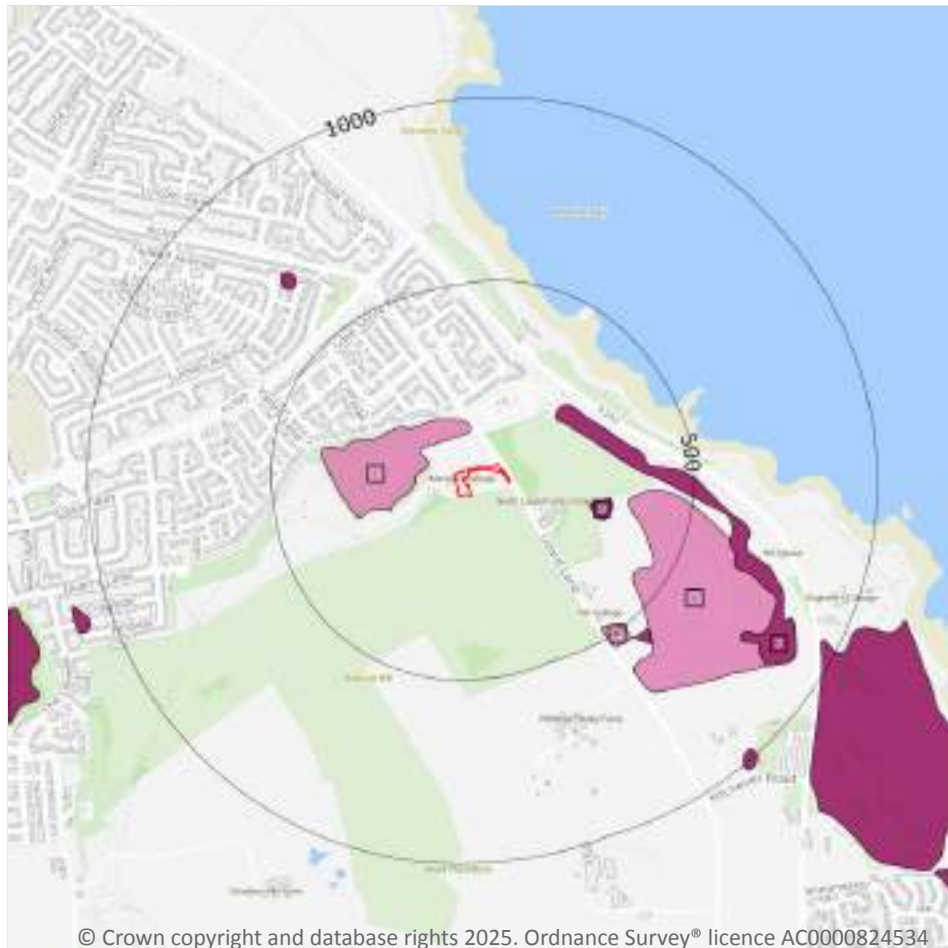
ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	No coverage	NZ36SE
2	120m E	Full	Full	Full	No coverage	NZ46SW
3	473m N	Full	Full	Full	Full	NZ36NE
4	497m N	No coverage	Full	Full	No coverage	NZ46NW



This data is sourced from the British Geological Survey.



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



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

14.2 Artificial and made ground (10k)

Records within 500m

5

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

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on [page 73](#) >

ID	Location	LEX Code	Description	Rock description
1	74m W	WGR-VOID	Worked Ground (Undivided)	Void
2	202m NE	MGR-ARTDP	Made Ground (Undivided)	Artificial deposit
3	225m E	MGR-ARTDP	Made Ground (Undivided)	Artificial deposit
4	326m E	WGR-VOID	Worked Ground (Undivided)	Void

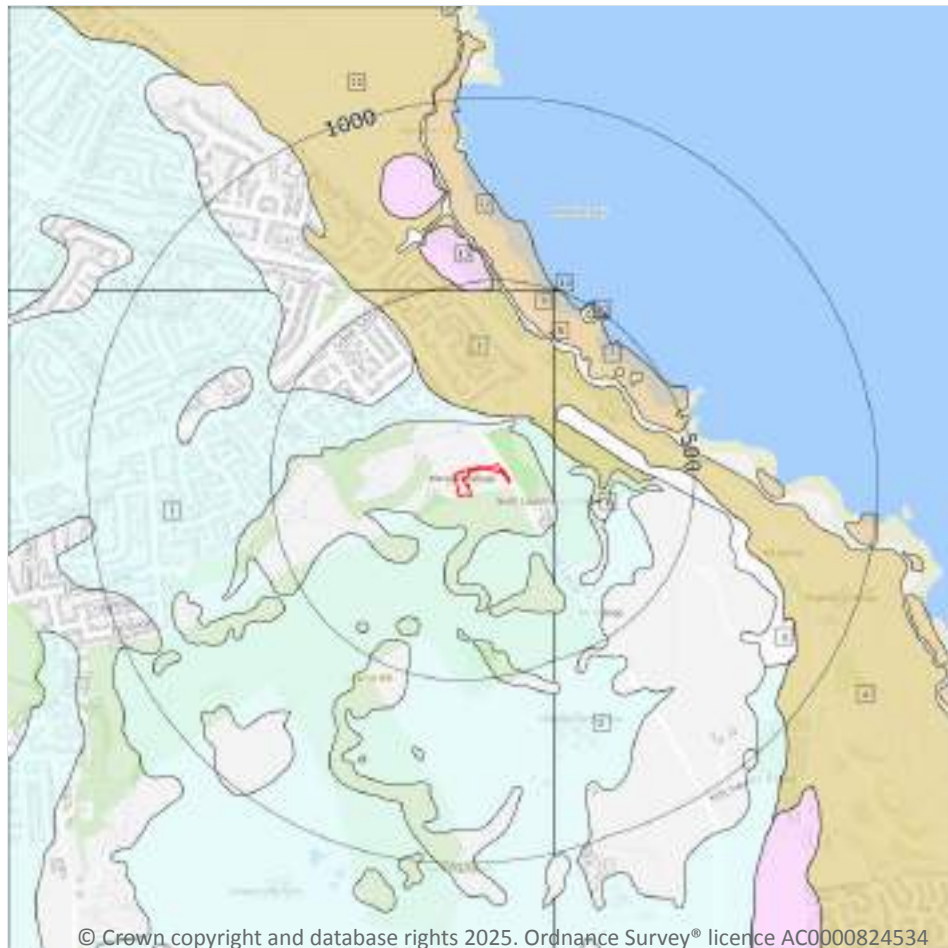


ID	Location	LEX Code	Description	Rock description
A	468m SE	WGR-VOID	Worked Ground (Undivided)	Void

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (10k)

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

14.3 Superficial geology (10k)

Records within 500m

14

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

Features are displayed on the Geology 1:10,000 scale - Superficial map on [page 75 >](#)

ID	Location	LEX Code	Description	Rock description
1	81m S	TILLD-DMTN	Till, Devensian-Diamicton	Diamicton
2	120m E	TILLD-DMTN	Till, Devensian-Diamicton	Diamicton
3	131m N	PELC-C	Pelaw Clay Member-Clay	Clay
4	156m NE	PELC-C	Pelaw Clay Member-Clay	Clay



ID	Location	LEX Code	Description	Rock description
5	202m NE	SUPNM-UNKNOWN	Superficial Theme Not Mapped [For Digital Map Use Only]- Unknown/unclassified Entry	Unknown/unclassified entry
6	225m E	SUPNM-UNKNOWN	Superficial Theme Not Mapped [For Digital Map Use Only]- Unknown/unclassified Entry	Unknown/unclassified entry
7	347m NE	BCHD-XSV	Beach Deposits-Sand And Gravel	Sand and gravel
8	373m NE	BCHD-XSV	Beach Deposits-Sand And Gravel	Sand and gravel
9	375m N	BCHD-XSV	Beach Deposits-Sand And Gravel	Sand and gravel
10	471m NE	PELC-C	Pelaw Clay Member-Clay	Clay
11	473m N	PELC-C	Pelaw Clay Member-Clay	Clay
12	473m N	BCHD-XSV	Beach Deposits-Sand And Gravel	Sand and gravel
13	475m N	GFDUD-XSV	Glaciofluvial Deposits, Devensian-Sand And Gravel	Sand and gravel
14	497m N	BCHD-XSV	Beach Deposits-Sand And Gravel	Sand and gravel

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

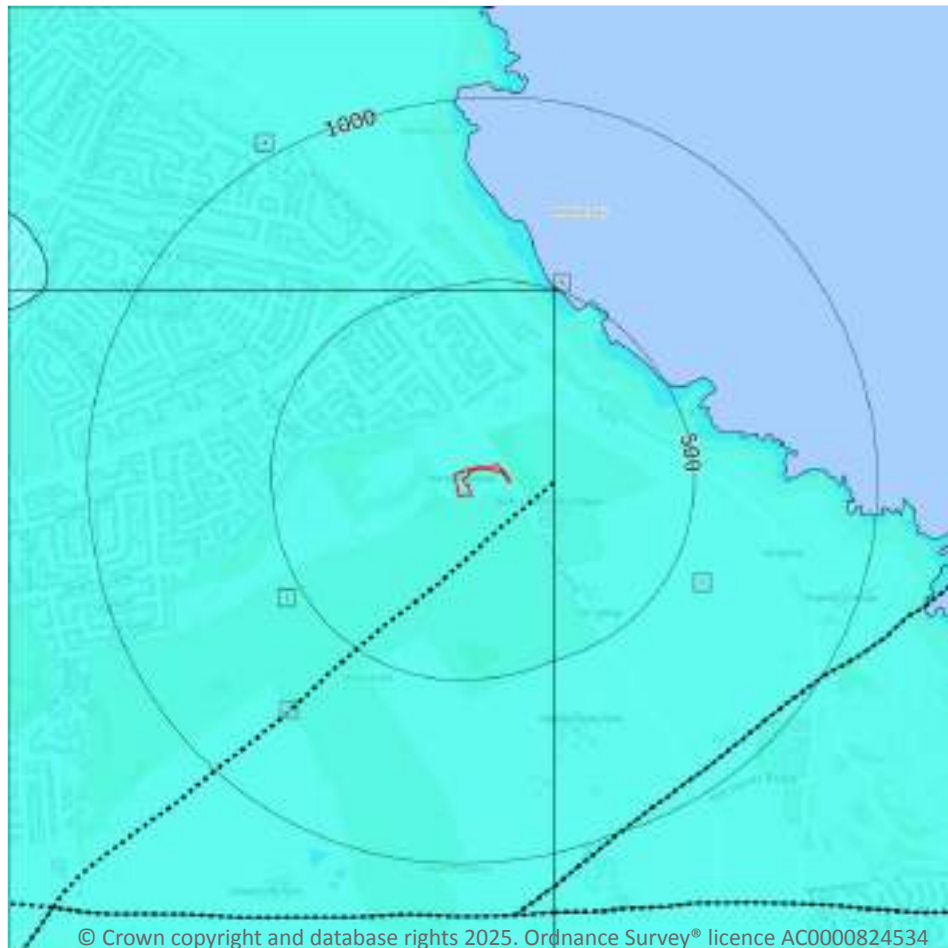
Records within 500m	0
----------------------------	----------

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

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

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

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

14.5 Bedrock geology (10k)

Records within 500m

4

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

Features are displayed on the Geology 1:10,000 scale - Bedrock map on [page 77 >](#)

ID	Location	LEX Code	Description	Rock age
1	On site	ROD-DOLO	Roker Formation-Dolostone	Not Defined
3	120m E	ROD-DOLO	Roker Formation-Dolostone	Not Defined
4	473m N	ROD-DOLO	Roker Formation-Dolostone	Not Defined
5	497m N	ROD-DOLO	Roker Formation-Dolostone	Not Defined

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m

1

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

Features are displayed on the Geology 1:10,000 scale - Bedrock map on [page 77 >](#)

ID	Location	Category	Description
2	78m SE	FAULT	Fault, inferred, displacement unknown

This data is sourced from the British Geological Survey.



15 Geology 1:50,000 scale - Availability



15.1 50k Availability

Records within 500m

1

An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:50,000 scale - Availability map on [page 79](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	EW021_sunderland_v4

This data is sourced from the British Geological Survey.

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



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

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15.2 Artificial and made ground (50k)

Records within 500m

2

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

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on [page 80](#) >

ID	Location	LEX Code	Description	Rock description
1	69m NW	MGR-ARTDP	Made Ground	Artificial deposit
2	231m NE	MGR-ARTDP	Made Ground	Artificial deposit

This data is sourced from the British Geological Survey.



15.3 Artificial ground permeability (50k)

Records within 50m

0

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

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Superficial



- Site Outline
- Search buffers in metres (m)
- Landslip (50k)
- Superficial geology (50k)
Please see table for more details.

15.4 Superficial geology (50k)

Records within 500m

4

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

Features are displayed on the Geology 1:50,000 scale - Superficial map on [page 82](#) >

ID	Location	LEX Code	Description	Rock description
1	63m S	TILLD-DMTN	Till, Devensian	Diamicton
2	147m N	PELC-C	Pelaw Clay Member	Clay
3	369m NE	BCHD-XSV	Beach deposits	Sand and gravel
4	484m N	GFDUD-XSV	Glaciofluvial deposits, Devensian	Sand and gravel



This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m

0

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

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m

0

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

This data is sourced from the British Geological Survey.

15.7 Landslip permeability (50k)

Records within 50m

0

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

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

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

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

15.8 Bedrock geology (50k)

Records within 500m

1

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

Features are displayed on the Geology 1:50,000 scale - Bedrock map on [page 84](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	ROD-DOLO	Roker Formation-Dolostone	Not Defined

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m

1

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

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

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m

1

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

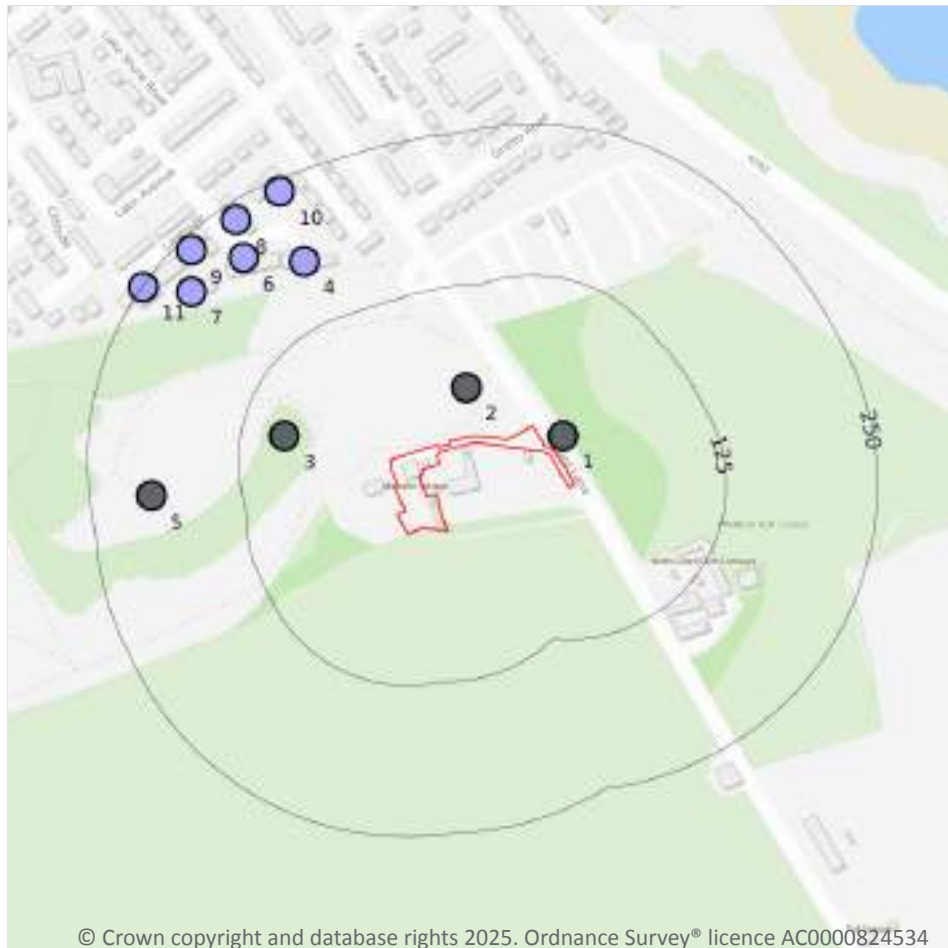
Features are displayed on the Geology 1:50,000 scale - Bedrock map on [page 84](#) >

ID	Location	Category	Description
2	71m SE	FAULT	Fault, inferred, displacement unknown

This data is sourced from the British Geological Survey.



16 Boreholes



— Site Outline
Search buffers in metres (m)

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

16.1 BGS Boreholes

Records within 250m

11

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

Features are displayed on the Boreholes map on [page 86](#) >

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	15m NE	439870 564520	NEAR MARSDEN HALL IN ROAD ENTRY	-	Y	N/A
2	41m N	439790 564560	MARSDEN HALL QUARRY	-	Y	N/A
3	89m W	439640 564520	MARSDEN HALL QUARRY	-	Y	N/A

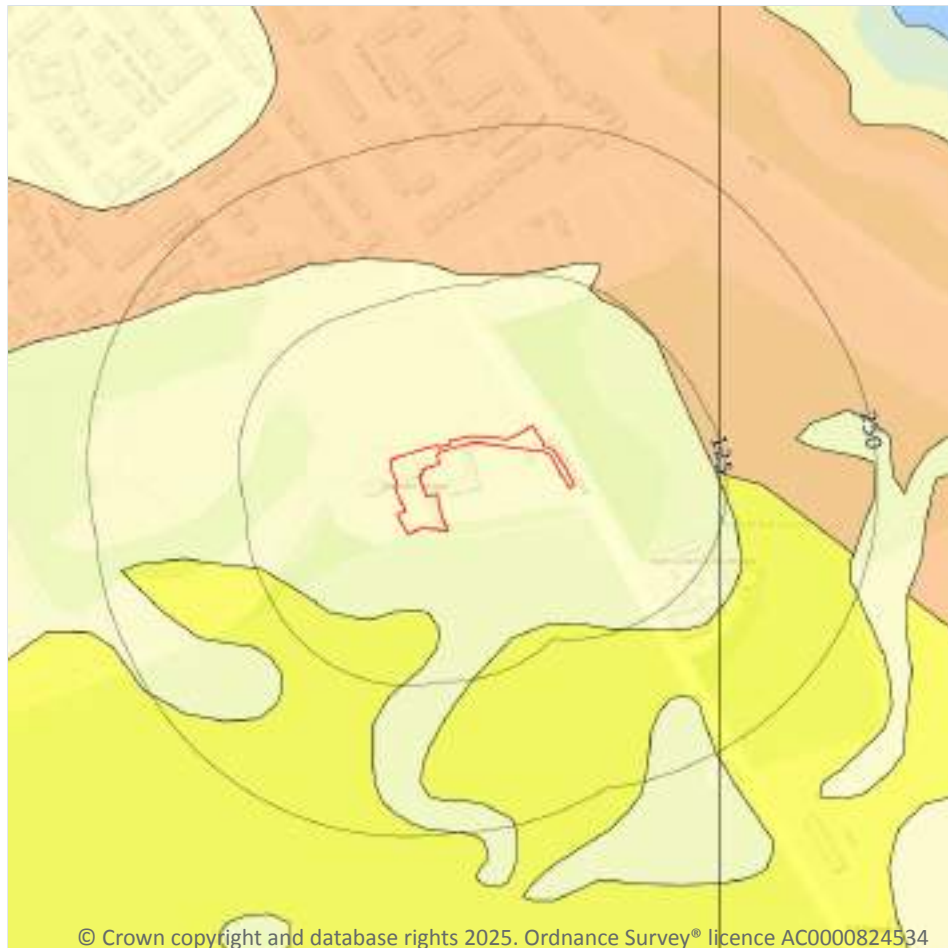


ID	Location	Grid reference	Name	Length	Confidential	Web link
4	179m NW	439656 564664	HOUSING DEVELOPMENT, LAKE AVENUE, MARSDEN, SOUTH SHIELDS. BH7	5.0	N	17685666 ↗
5	199m W	439530 564470	MARSDEN HALL QUARRY	-	Y	N/A
6	207m NW	439606 564667	HOUSING DEVELOPMENT, LAKE AVENUE, MARSDEN, SOUTH SHIELDS. BH6	4.5	N	17685665 ↗
7	215m NW	439563 564639	HOUSING DEVELOPMENT, LAKE AVENUE, MARSDEN, SOUTH SHIELDS. BH5	4.5	N	17685664 ↗
8	236m NW	439600 564698	HOUSING DEVELOPMENT, LAKE AVENUE, MARSDEN, SOUTH SHIELDS. BH2	4.0	N	17685661 ↗
9	239m NW	439563 564673	HOUSING DEVELOPMENT, LAKE AVENUE, MARSDEN, SOUTH SHIELDS. BH3	4.0	N	17685662 ↗
10	240m N	439636 564722	HOUSING DEVELOPMENT, LAKE AVENUE, MARSDEN, SOUTH SHIELDS. BH1	4.2	N	17685660 ↗
11	249m NW	439523 564643	HOUSING DEVELOPMENT, LAKE AVENUE, MARSDEN, SOUTH SHIELDS. BH4	4.0	N	17685663 ↗

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



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

17.1 Shrink swell clays

Records within 50m

1

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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 88 >](#)

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



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

17.2 Running sands

Records within 50m

1

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

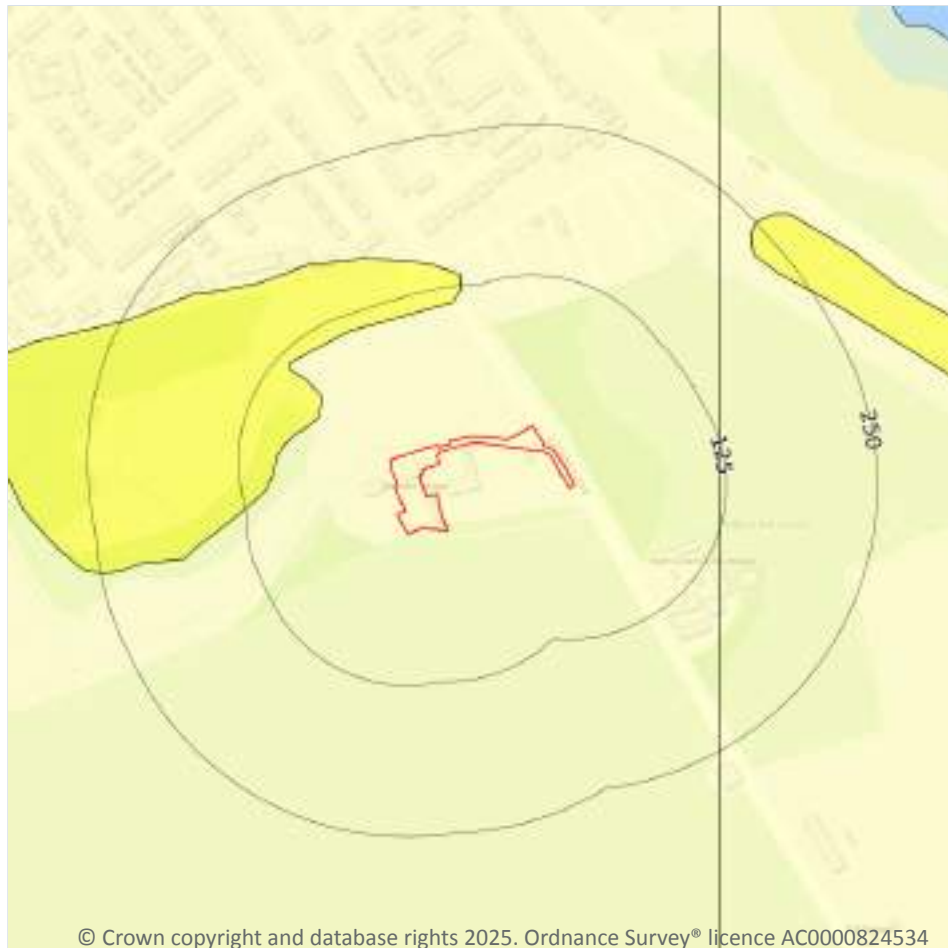
Features are displayed on the Natural ground subsidence - Running sands map on [page 89](#) >

Location	Hazard rating	Details
On site	Negligible	Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



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

17.3 Compressible deposits

Records within 50m

1

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

Features are displayed on the Natural ground subsidence - Compressible deposits map on [page 90](#) >

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Collapsible deposits



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

17.4 Collapsible deposits

Records within 50m

1

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

Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 91](#) >

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Landslides



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

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17.5 Landslides

Records within 50m

1

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

Features are displayed on the Natural ground subsidence - Landslides map on [page 92](#) >

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Ground dissolution of soluble rocks



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

17.6 Ground dissolution of soluble rocks

Records within 50m

1

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

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on [page 93](#)

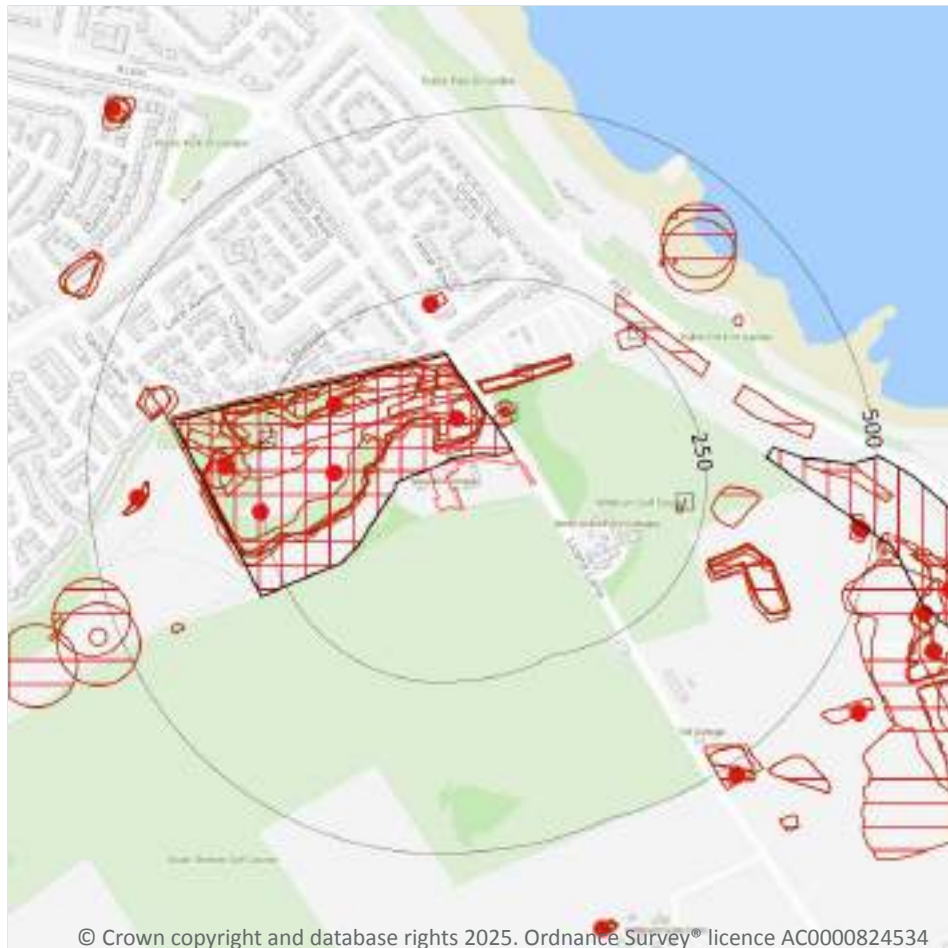
Location	Hazard rating	Details
On site	Very low	Soluble rocks are present within the ground. Few dissolution features are likely to be present. Potential for difficult ground conditions or localised subsidence are at a level where they need not be considered.



This data is sourced from the British Geological Survey.



18 Mining and ground workings



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

18.1 BritPits

Records within 500m

8

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

Features are displayed on the Mining and ground workings map on [page 95 >](#)

ID	Location	Details	Description
C	59m N	Name: Marsden Hall Quarries Address: Marsden, SOUTH SHIELDS, Co. Durham Commodity: Dolomite Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
A	139m W	Name: Marsden Hall Quarries Address: Marsden, SOUTH SHIELDS, Co. Durham Commodity: Dolomite Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
A	169m NW	Name: Marsden Hall Quarries Address: Marsden, SOUTH SHIELDS, Co. Durham Commodity: Dolomite Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
G	230m N	Name: Marsden Clay Pit Address: Marsden, SOUTH SHIELDS, Co. Durham Commodity: Clay & Shale Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.



ID	Location	Details	Description
2	254m W	Name: Marsden Hall Quarries Address: Marsden, SOUTH SHIELDS, Co. Durham Commodity: Dolomite Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
H	299m W	Name: Marsden Hall Quarries Address: Marsden Hall, Marsden, SOUTH SHIELDS, Tyne and Wear Commodity: Dolomite Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
L	429m W	Name: Farding Lake Address: Marsden, SOUTH SHIELDS, Tyne and Wear Commodity: Dolomite Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
N	482m E	Name: Lizards Limestone Quarries Address: Marsden, SOUTH SHIELDS, Tyne and Wear Commodity: Dolomite Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.

This data is sourced from the British Geological Survey.



18.2 Surface ground workings

Records within 250m

30

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

Features are displayed on the Mining and ground workings map on [page 95 >](#)

ID	Location	Land Use	Year of mapping	Mapping scale
A	On site	Unspecified Workings	1968	1:10560
A	13m N	Unspecified Old Quarry	1921	1:10560
A	22m N	Unspecified Old Quarry	1921	1:10560
A	23m N	Unspecified Old Quarry	1951	1:10560
A	25m N	Unspecified Old Quarry	1938	1:10560
A	30m N	Unspecified Disused Quarry	1974	1:10000
A	30m N	Unspecified Disused Quarry	1985	1:10000
B	34m N	Reservoir	1921	1:10560
C	40m N	Unspecified Heap	1921	1:10560
A	46m N	Unspecified Quarry	1895	1:10560
B	48m N	Reservoir	1921	1:10560
B	52m N	Reservoir	1938	1:10560
B	53m N	Unspecified Heap	1951	1:10560
C	86m N	Cuttings	1938	1:10560
D	89m N	Cuttings	1921	1:10560
D	92m N	Cuttings	1938	1:10560
D	92m N	Cuttings	1951	1:10560
D	92m N	Cuttings	1968	1:10560
A	107m N	Unspecified Heaps	1921	1:10560
C	108m N	Unspecified Heap	1921	1:10560
A	121m N	Unspecified Ground Workings	1985	1:10000
A	123m N	Unspecified Ground Workings	1974	1:10000
A	123m N	Unspecified Ground Workings	1968	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
C	123m N	Unspecified Heap	1951	1:10560
A	139m NW	Limestone Quarries	1855	1:10560
E	210m E	Filter Beds	1983	1:10000
E	210m E	Filter Beds	1966	1:10560
F	218m NE	Unspecified Heap	1951	1:10560
G	223m N	Clay Pit	1855	1:10560
1	231m W	Limestone Quarries	1855	1:10560

This data is sourced from Ordnance Survey®/Groundsure.

18.3 Underground workings

Records within 1000m

5

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

Features are displayed on the Mining and ground workings map on [page 95 >](#)

ID	Location	Land Use	Year of mapping	Mapping scale
A	On site	Unspecified Workings	1968	1:10560
6	340m E	Unspecified Mine	1966	1:10560
-	947m SE	Colliery	1951	1:10560
-	971m SE	Colliery	1895	1:10560
-	976m SE	Colliery	1921	1:10560

This data is sourced from Ordnance Survey®/Groundsure.

18.4 Underground mining extents

Records within 500m

0

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

This data is sourced from Groundsure.



18.5 Historical Mineral Planning Areas

Records within 500m

0

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

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m

0

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

This data is sourced from the British Geological Survey.

18.7 JPB mining areas

Records on site

0

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

This data is sourced from Johnson Poole and Bloomer.

18.8 The Coal Authority non-coal mining

Records within 500m

0

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

This data is sourced from The Coal Authority.



18.9 Researched mining

Records within 500m

0

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

This data is sourced from Groundsure.

18.10 Mining record office plans

Records within 500m

0

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

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m

0

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

This data is sourced from Groundsure.

18.12 Coal mining

Records on site

1

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

Location	Details
On site	The site is located within a coal mining area as defined by the Coal Authority. A Consultants Coal Mining Report is recommended to further assess coal mining issues at the site. This can be ordered directly through Groundsure or your preferred search provider.

This data is sourced from the Coal Authority.



18.13 Brine areas

Records on site	0
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The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

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

18.14 Gypsum areas

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

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

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

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

18.16 Clay mining

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

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

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

19 Ground cavities and sinkholes



- Site Outline
- Search buffers in metres (m)
- Natural cavities (Area)
- Natural cavities (Point)
- Mining cavities
- Reported recent incidents
- Historical incidents

19.1 Natural cavities

Records within 500m

1

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

Features are displayed on the Ground cavities and sinkholes map on [page 103](#) >

ID	Location	Details
1	377m N	Type: Sea Cave x 4 Superficial Geology: None Bedrock Geology: Upper Magnesian Limestone

This data is sourced from Stantec UK Ltd.



19.2 Mining cavities

Records within 1000m**0**

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

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m**0**

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

This data is sourced from Groundsure.

19.4 Historical incidents

Records within 500m**1**

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

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

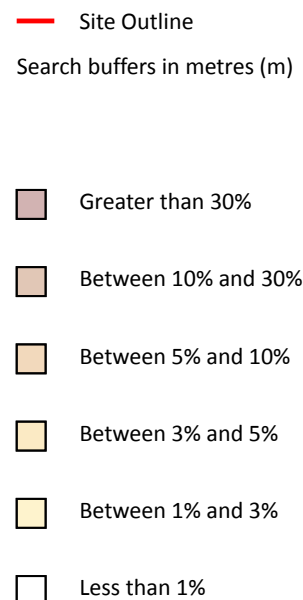
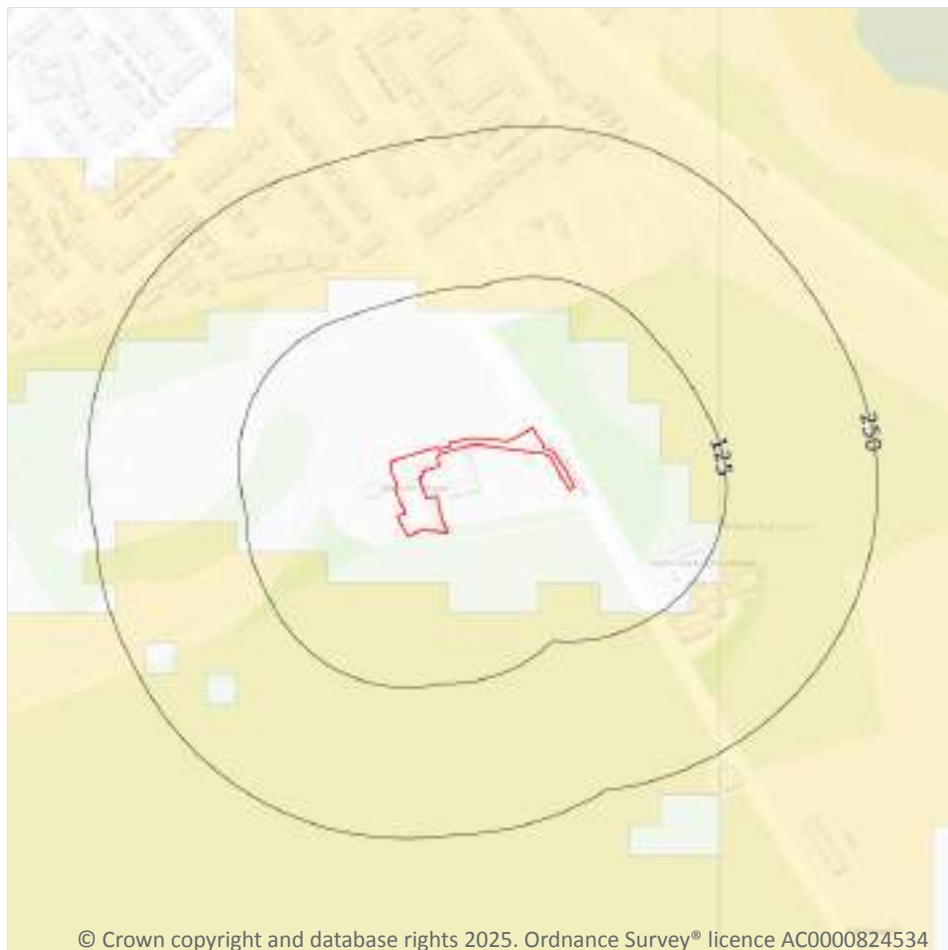
Features are displayed on the Ground cavities and sinkholes map on [page 103 >](#)

ID	Location	Type	Date of mapping
2	406m NE	Unspecified Hole	1855

This data is sourced from Groundsure.



20 Radon



20.1 Radon

Records on site

1

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

Features are displayed on the Radon map on [page 105 >](#)

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



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



21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m

2

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

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m

0

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

This data is sourced from the British Geological Survey.

21.3 BGS Measured Urban Soil Chemistry

Records within 50m

0

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

This data is sourced from the British Geological Survey.



22 Railway infrastructure and projects



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

22.1 Underground railways (London)

Records within 250m

0

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

This data is sourced from publicly available information by Groundsure.

22.2 Underground railways (Non-London)

Records within 250m

0

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



This data is sourced from publicly available information by Groundsure.

22.3 Railway tunnels

Records within 250m

0

Railway tunnels taken from contemporary Ordnance Survey® mapping.

This data is sourced from the Ordnance Survey®.

22.4 Historical railway and tunnel features

Records within 250m

6

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

Features are displayed on the Railway infrastructure and projects map on [page 108](#) >

Location	Land Use	Year of mapping	Mapping scale
77m N	Railway Sidings	1921	10560
82m N	Railway Sidings	1921	10560
82m N	Railway Sidings	1895	10560
86m N	Railway Sidings	1938	10560
87m N	Railway Sidings	1896	2500
89m N	Railway Sidings	1915	2500

This data is sourced from Ordnance Survey®/Groundsure.

22.5 Royal Mail tunnels

Records within 250m

0

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

This data is sourced from Groundsure/the Postal Museum.



22.6 Historical railways

Records within 250m

0

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

This data is sourced from OpenStreetMap.

22.7 Railways

Records within 250m

0

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

This data is sourced from Ordnance Survey® and OpenStreetMap.

22.8 Crossrail 2

Records within 500m

0

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

This data is sourced from publicly available information by Groundsure.

22.9 HS2

Records within 500m

0

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

This data is sourced from HS2 Ltd.



Data providers

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

Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: www.groundsure.com/terms-and-conditions-april-2023/ ↗.



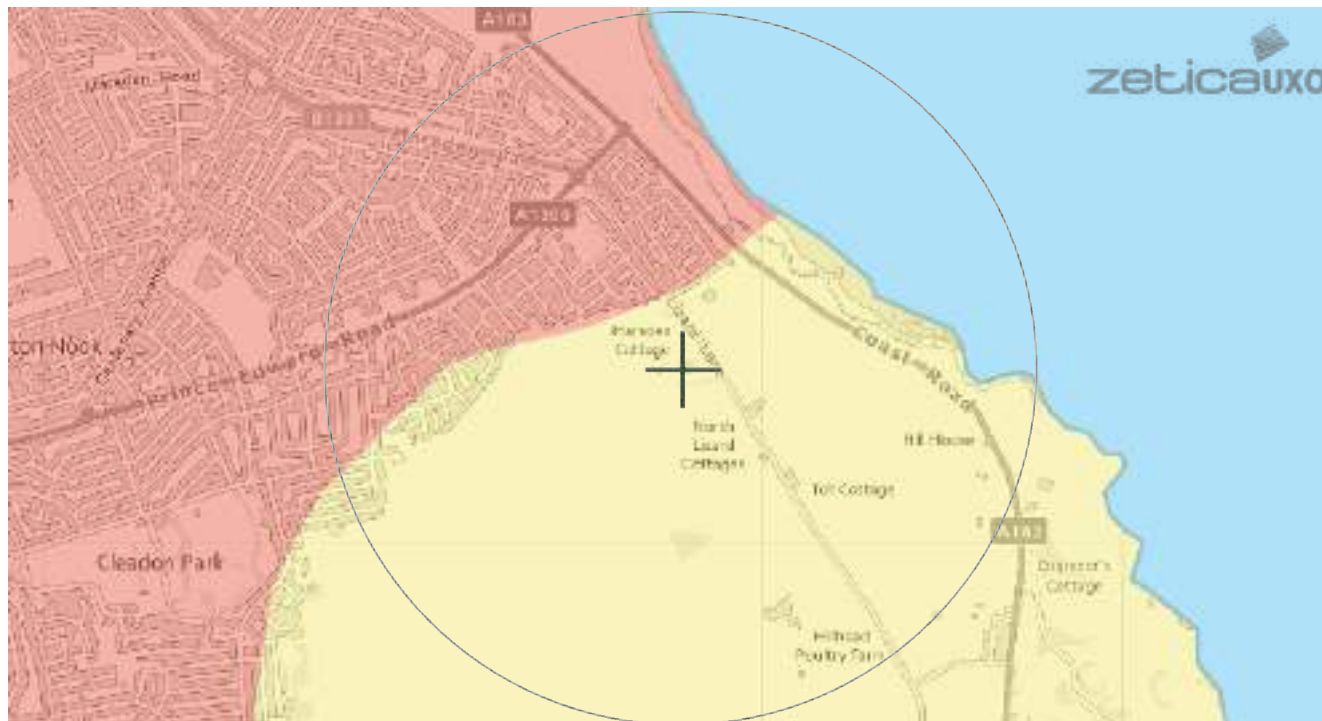
APPENDIX 5 – UXO RISK MAPPING

UNEXPLODED BOMB RISK MAP



SITE LOCATION

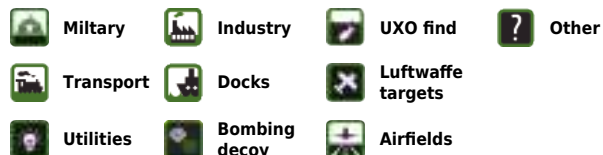
Location: NE34 7AD,
Map Centre: 439744,564490



This map principally indicates a hazard from Unexploded Bombs (UXB) due to WWII bombardment. Other sources of Unexploded Ordnance (UXO) may be present. It should be noted that this map does not represent UXO risk and should not be reported as such when reproduced.

LEGEND

- High:** Areas indicated as having a bombing density of 50 bombs per 1000acre or higher.
- Moderate:** Areas indicated as having a bombing density of 15 to 49 bombs per 1000acre.
- Low:** Areas indicated as having 15 bombs per 1000acre or less.



How to use your Unexploded Bomb (UXB) risk map?

This map indicates the potential for UXBs to be present because of World War Two (WWII) bombing. It can be incorporated into a technical report, such as a Phase 1 Desk Study, or similar document as an indication of the potential for UXO encounter on a Site. Other sources of UXO may also be indicated, although note that these are not comprehensive and more detailed research is required to confirm their presence.

What if my Site is in a moderate or high density area?

We typically recommend that a detailed UXO desk study and risk assessment is undertaken for sites in an area with a moderate or high bombing density. Additionally, if your site is in close proximity to a strategic target, military establishment, airfield or bombing decoy, then [additional detailed research](#) is recommended.

If my site is in a low risk area, do I need to do anything?

If both the map and other research confirm that there is a low potential for UXO to be present on your site, then, subject to your own comfort and risk tolerance, works can proceed with no special precautions.

If you are unsure whether other sources of UXO may be present, you can request one of our [pre-desk study assessments \(PDSA\)](#) by emailing a site boundary and location to pdsa@zetica.com.

You should never plan site work or undertake a risk assessment using these maps alone. More detail is required, to include an assessment of the likelihood of a source of UXO hazard from other military activity not reflected on these maps.

If I have any questions, who do I contact?

tel: [+44 \(0\) 1993 886682](tel:+441993886682) email: uxo@zetica.com web: www.zeticauxo.com

The information in this UXB risk map is derived from a range of sources and should be used with the [accompanying notes on our website](#).

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