

Phase I Desk Study

Inglewood, Paignton, Devon



WB03590 R1

Deeley Freed Estates



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WB03590 R1	2 nd October 2017

Project
Inglewood, Paignton, Devon

Client Name
Deeley Freed Estates Limited

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Report Prepared by:	
Nick Edwards BSc (Hons) MSc FGS Graduate Geotechnical/Geoenvironmental Engineer	

Approved for Issue by:		
André Gilleard SiLC CSci CEnv BEng(Hons) Associate Director GeoEnvironmental		

Issuing Office	
X	The Cocoa House, 129 Cumberland Road, Bristol, BS1 6UY Tel: +44 (0)117 929 2244
	GF Suite, Bickleigh House, Park Five Business Centre, Exeter, EX2 7HU Tel: +44 (0)1392 369098
	Unit 17.1, The Leathermarket, 11-13 Weston Street, London, SE1 3ER Tel: +44(0)20 7939 0959

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2.1 - Site Location Plan

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EXECUTIVE SUMMARY

Client	Deeley Freed Estates Limited
Site and Location	Land east of Waddeton Road, Goodrington, Paignton Approximate Grid Reference E288116, N57666.
Proposed Development	It is proposed that the site will be developed into housing.
History of Site and Surroundings	Currently the site comprises fields and has been so throughout its history. The Goodrington area to the north east becomes increasingly developed with housing between the 1930s and 1980s. Fields bound the site to the west, and south.
Anticipated Ground Conditions	Superficial: <ul style="list-style-type: none"> • Head – southwest corner only Solid: <ul style="list-style-type: none"> • Saltern Cove Formation – Mudstone, northern half of the site • Brixham Limestone Formation – southern half of the site
Hydrology & Hydrogeology	A small pond exists in the east of the site. The next nearest surface water is >1km away. The strata under the site are Secondary ‘A’ and Principal Aquifers. The site is not located within a Source Protection Zone. A risk of Superficial Deposits Flooding has been highlighted within 50m of the wider site’s boundary.
Geotechnical Considerations	Foundations – Bedrock is anticipated at shallow depths and should be suitable for conventional strip or pad foundations. An intrusive site investigation should be completed to confirm the soil profile across the site. Suspended Floor Slabs - Suspended floor slabs are likely to be adopted for conventional housing. Buried Concrete - Special measures for the protection of buried concrete may be required. Testing to establish soil chemistry is required to assess this risk. Site Drainage – Soakaway drainage may be feasible in the Brixham Limestone Formation. Testing will be required to confirm. The presence of solution features close to limestone should not be excluded.
Environmental Considerations	Tanks – The desk study highlights the presence of an unspecified tank on site, none were noted on the site walkover Radon Gas – Full radon protection measures are required. Ground Gas – May be present close to the backfilled quarry and from underlying limestone deposits Invasive Species – Japanese Knotweed has not been observed on site, a careful watch should be kept, particularly during the spring for any growth.
Risk Rating	The general geotechnical risk is considered to be low to medium. Caution in this respect arises principally from variable and faulted ground, and the potential for solution features. The general risk of significant chemical contamination is considered low, as it has never previously been developed. Minor residual risks relating to pesticide and herbicide residues from agriculture, and the nearby quarry
Site Investigation Recommendations	<ul style="list-style-type: none"> • Trial pitting with soakaway drainage testing • Window sampling including in situ strength testing • CBR testing • Geotechnical laboratory testing that is recommended includes pH and water soluble sulphate. • Contaminated land testing that is recommended that include a general indicator suit, speciated total petroleum and polyaromatic hydrocarbons.

1.0 INTRODUCTION

1.1 Instruction and Brief

Clarkebond (UK) Limited was commissioned by Deeley Freed Estates Ltd to undertake a Phase I Desk Study on a site to be known as Inglewood, Paignton, Devon.

The development is in outline planning but is to be up to 400 residential dwellings, a two form entry primary school and a public house.

1.2 Scope of Works

The objectives of the investigation were to determine the sub-surface conditions in respect of:

- Preliminary geotechnical advice relating to the anticipated ground conditions
- Preliminary contamination assessment to consider potential significant pollutant linkages arising from the historic land uses on and off site.

1.3 Limitations

This report is provided for the benefit only of the party to whom it is addressed and we do not accept responsibility to any third party for the whole or any part of the contents and we exercise no duty of care in relation to this report to any third party.

This assessment has been based to a large extent on third party data acquired from Third Parties. This data has been taken at face value and has not been subjected to any third party validation.

2.0 PHASE 1 ASSESSMENT

2.1 Site Location and Description

The site is located approximately 3.3km to the south west of Paignton. It has a central National Grid Reference E288116, N57666. A site location plan is presented as Figure 2.1.

The site was visited on 5th September and the following site description completed. The weather at the time was overcast/sunny. Typical photos of the site are included in Appendix A.

- The site is irregular in shape and covers an area of approximately 31.45ha.
- The site is currently comprises 6no. large fields used for mixed arable and pastoral farming.
- The three central fields are surfaced with short, cattle-grazed, stitched grass. The field to the furthest north is densely planted with mixed sapling trees, which is to form a screening area between this and the adjacent development. The second field south is currently planted with wheat. The field to the furthest south is currently planted with kale.
- Mature trees were observed locally on-site within the existing hedge rows
- A small pond is present in the centre-far east of the site. At the time of visiting this was almost dry.

The site is bounded as follows:

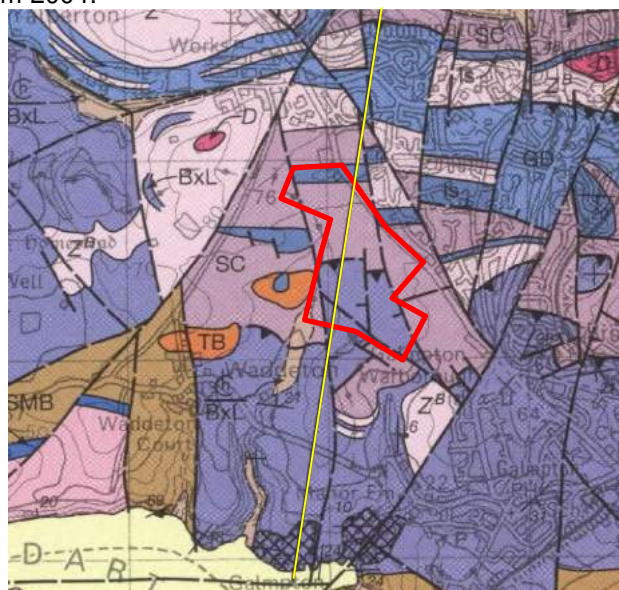
Table 2.1 – Site Surroundings

North	White Rock housing development
East	A3022, beyond which is housing of the Goodrington area of Paignton
South	Fields
West	Fields

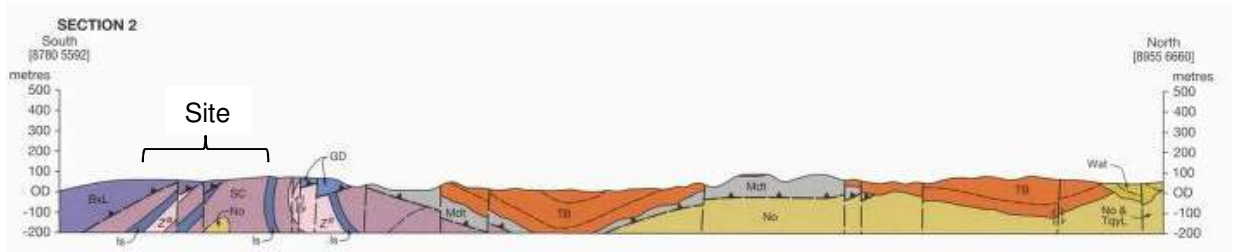
The topography is gently undulating, with high points at the furthest north and south ends of the site, and the central east.

2.2 Geology

The geology of the site is shown on the 1:50,000 scale British Geological Survey (BGS) map, Sheet 350, dating from 2004:



The map gives an indicative cross section (yellow line) through the development site (red line boundary) as follows:



This indicates that the northern end of the site is directly underlain by the Saltern Cove Formation (Mudstone and Limestone) of Devonian age. The southern half of the site is underlain by the Brixham Limestone Formation (Limestone). The maps show superficial Head deposits in the far southwest corner.

The geological maps sheets show the area to be heavily faulted. Two east-west trending thrust faults are shown between the Brixham Limestone and Saltern Cove Formation in the centre of the site. The Saltern Cove Formation is also faulted, with two north-south trending faults shown to be present beneath the western and eastern edges of the site.

2.3 Hydrology and Hydrogeology

A small pond exists in the east corner of the site. There are no other surface water features in the vicinity of the site.

Guidance from the Environment Agency indicates that the Saltern Cove Formation and Brixham Limestone strata are designated as a Secondary (A) Aquifer and Principle Aquifer respectively. As such the groundwater sensitivity is regarded as **medium to high**.

The nearest licensed groundwater abstraction lies 311m north and thus is of low sensitivity.

The site is not located within a Source Protection Zone (SPZ)

2.4 Flood Risk

The site is not located within 250m of any Zone 2 or 3 Floodplain (**River and Coastal**).

The site is located within 50m of an area recorded to be susceptible to **Groundwater flooding** (Superficial deposits flooding).

2.5 Site History

Historical maps of the site area have been obtained via Groundsure, copies of which are included in Appendix B. Pertinent information determined from review of these maps is set out in the following table :

Table 2.2 - Historic Mapping Review

Date	On-site	Off-site
1886-1907	The site is divided in 7nr fields. A small coppice is shown in the centre of the site.	The site is bounded to the northeast by a road. The surrounding area is generally fields. White Rock quarry is shown adjacent north. Quarries and Lime Kilns 500m southwest.
1938-1981	House shown in the north eastern corner. Small pond shown in the east of the site.	Marl Pits to the west of the site. Nurseries and Old Limekiln shown on the west side of Brixham Road. Significant residential expansion of the Goodrington area of Paignton.

Table 2.2 - Historic Mapping Review

Date	On-site	Off-site
1982-1988	No significant change	Further expansion of Goodrington to the west of Brixham Road. Waddeton Industrial Estate and works to the north.
2002-2014	No significant change.	No significant change.

The site has never undergone development through the map history. The surrounding area has localised areas of quarrying and lime kilns. Residential expansion of the Goodrington area of Paignton begins in the 1930s, with significant further expansion during the 1980s.

2.6 Environmental Database

Environmental data reports were commissioned to provide an indication of the site history and surrounding land uses available on the public registers. The reports provide data from a number of service providers including the British Geological Survey, Environment Agency and Natural England. The reports are included in Appendix C.

The location of data point references is provided relative to the site boundary and the search radius extends 1km from it. The data has been examined the datasets and the following table provides a summary of what are considered **significant** data reference points, together with an indication of the potential hazard type.

Table 2.3 - Environmental Data Review

Data Type	Distance from site	Potentially Significant Hazard
Potentially Contaminative Past Usage	On site	Unspecified quarry
Historical Tank Database	On site	Unspecified tank
Historical Energy Features	On site	Gas Governor
Potentially infilled ground	On site 20m NE 27m NE 85m W	Unspecified quarry Unspecified pit Refuse heap Marl pits
Licensed Discharge Consents	On site	White Rock Cottages, sewage discharges
Historic Landfill Sites	135m W	Marl Pit, Waddeton – Inert, Industrial
LA Landfills	917m S	Refuse Tip
Current Industrial Data	On site 17m N 25m NE	Tanks Gas Governor Station Electricity Sub Station
Groundwater Abstraction License	311m N	Historical, Hydraulic Testing, Deeley Freed Estates
Potential for collapsed, compressible, dissolution, landslip, running sand or shrink swell ground stability hazards	On Site	Negligible to Low Risk
Natural Cavities	664m SE 799m N	Sinkhole x 2 Solution Pipe x 5
Radon Affected Areas	On site	Full radon protection measures are required on site.
Other mining records	On site	Site is located within 50m of an area previously mined for Tin and Vein Minerals

2.7 Previous Investigations

Clarkebond have completed ground investigations on the housing development sites to the north of the site, including and beyond White Rock.

The ground conditions encountered were variable and are not considered as a predictor of the ground conditions which may be encountered at this site. The ground conditions encountered comprised shallow depth limestone on the high ground and around White Rock, with shaley mudstones generally on the eastern side of Waddeton Road. There is a fault which runs approximately along Waddeton Road and this provides different ground conditions to the west of the fault.

It is important to note the presence of an active solution feature close to the existing mini round about and there was also evidence of soft ground and potential backfilled solution features around the limestones.

3.0 PRELIMINARY CONCEPTUAL MODEL

The site characterisation attempts to identify potential previous and existing site sources of contamination. The conceptual model links the identified sources likely to cause significant possibility of significant harm via pathways to identified critical receptors. The conceptual model is therefore based on a number of identified source-pathway-receptor scenarios. For land to be classified as contaminated a significant pollutant linkage will need to be identified which will include each component of the conceptual model. The absence or removal of a source or interception of a pathway will 'break' the pollutant linkage.

The conceptual model is characterised by identification of the following:

- **On-site** sources, which may impact **on-site** receptors via plausible pathways.
- **On-site** sources, which may impact **off-site** receptors via plausible pathways.
- **Off-site** sources, which may impact **on-site** receptors via plausible pathways.

In the event of a change of land use, the planning regime will require assessment of the new site development layout within the context of the sources or risk and introducing new exposure pathways. The assessment is also used to determine if the site, once developed, would class as contaminated land under the definition provided by the Part 2A of the Environment Act 1990 as defined in the Environment Protection Act 1995.

The method used for risk evaluation is qualitative based on interpretation of the available geoenvironmental and geotechnical data in order to provide an overall impression of the potential risks present at the site. This is described in terms of two variables as follows:

- **"Probability"** – being the likelihood that a hazard is present on site or in the surroundings.
- **"Consequence"** – being the potential outcome of the hazard.

The combination of these is used to define the risk. Clearly if a hazard is not present there can be no consequence. Similarly hazards that are potentially present will have different degrees of potential consequence. The combination of the presence of a hazard, and the potential severity of outcome of such a hazard within any event, can be used to manage the approach to management of the risk.

The **probability** (likelihood) of an event can be classified on a four point system using the following terms and definitions based on CIRIA C552:

- **Highly likely:** The event appears very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution;
- **Likely:** It is probable that an event will occur, or circumstances are such that the event is not inevitable, but possible in the short term and likely over the long term;
- **Low likelihood:** Circumstances are possible under which an event could occur, but it is not certain even in the long term that an event would occur and it is less likely in the short term;
- **Unlikely:** Circumstances are such that it is improbably the event would occur even in the long term.

The **consequence** (severity) can be classified using a similar system also based on CIRIA C552. The terms and definitions relating to consequence are:

- **Severe:** Short term (acute) risk to human health likely to result in 'significant harm'#. Short-term risk of pollution of sensitive water resources. Catastrophic damage to buildings or property. Short term risk to an ecosystem or organism forming part of that ecosystem#;
- **Medium:** Chronic damage to human health ('significant harm'#), pollution of sensitive water resources, significant change in an ecosystem or organism forming part of that ecosystem#;

- **Mild:** Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services ('significant harm' #). Damage to sensitive buildings, structures or the environment; and
- **Minor:** Harm, not necessarily significant, but that could result in financial loss or expenditure to resolve. Non-permanent human health effects easily prevented by use of personal protective clothing. Easily repairable damage to buildings, structures and services.

#: Defined in Defra Circular on "Contaminated Land", EPA 1990 Part 2a", 01/2006, September 2006.

Once the probability of an event occurring and its consequence have been classified, a risk category can be assigned as Table 3.1.

Table 3.1 Risk Classification System (CIRIA 552)

		Consequence			
		Severe	Medium	Mild	Minor
Probability	Highly likely	Very high	High	Moderate	Moderate/Low
	Likely	High	Moderate	Moderate/Low	Low
	Low likelihood	Moderate	Moderate/Low	Low	Very Low
	Unlikely	Moderate/Low	Low	Very Low	Very Low

Risk Level	Action
Low to Very Low	None
Moderate to Moderate/Low	Undertake appropriate mitigation measures to reduce the risk level by appropriate on-site practice at little additional cost.
High to Very High	Designers should take such risks into account and avoid or reduce risk level to acceptable levels. Additional resources required.

Tables 3.2 to 3.3 provide a summary of the data reference points, together with an indication of the hazard, probability, consequence and thus degree of risk.

The tables indicate that the site and environs are considered as **Low** risk with respect to contamination. Indicators above **low** risk comprise:

- Radon and Carbon Dioxide Gas

Table 3.2 On-Site to On-Site Source - Pathway - Receptor Model

Source		Pathway	Receptor	Probability	Consequence	Potential Risk? & Ref
General	Hazard					
Total soils concentrations (e.g. heavy metals and hydrocarbons as general impact from former site usage) Pesticides and Herbicides	Contamination of groundwater	Migration of leachate through unsaturated zone; Then Migration through saturated zone/groundwater;	Groundwater and/or surface waters, and/or eco-system	Unlikely	Mild	Very Low
	Human health	Ingestion of and dermal contact with soil & household dust; Inhalation of dust (indoor household and outdoor fugitive).	Human beings	Unlikely	Medium	Low
	Vegetation poisoning	Uptake by plant roots	Plants	Unlikely	Mild	Very Low
Natural limestone	Carbon Dioxide Asphyxiation	Preferential flow paths into buildings (e.g. drains, service runs, wall cavities, piles etc.); Inhalation of indoor gases	Human beings	Low Likelihood	Severe	Moderate
Radon Gas from natural soils/rocks (radionuclides)	Damage to lung tissue and/or Carcinogenic effects			Likely	Severe	High

Table 3.3 On-Site to Off-Site Source - Pathway - Receptor Model

Source		Pathway	Receptor	Probability	Consequence	Potential Risk? & Ref
General	Hazard					
Total soils concentrations (e.g. heavy metals and hydrocarbons as general impact from former site usage) Pesticides and Herbicides	Contamination of groundwater	Migration of leachate through unsaturated zone; Then Migration through saturated zone/groundwater;	Groundwater and/or surface waters, and/or eco-system	Unlikely	Mild	Very Low
	Human health	Ingestion of & dermal contact with soil & household dust; Inhalation of dust (indoor household & outdoor fugitive).	Human beings	Likely	Medium	Very Low
	Vegetation poisoning.	Uptake by plant roots	Plants	Unlikely	Mild	Very Low
Natural limestone	Carbon Dioxide Asphyxiation	Preferential flow paths into buildings (e.g. drains, service runs, wall cavities, piles etc.); Inhalation of indoor gases	Human being	Low Likelihood	Severe	Moderate
Radon Gas from natural soils/rocks (radionuclides)	Damage to lung tissue and/or Carcinogenic effects			Likely	Severe	High

4.0 GEOTECHNICAL AND ENVIRONMENTAL CONSIDERATIONS

4.1 Proposed Development

The current development proposals are for up to 400 residential dwellings, a two form entry primary school and public house. Adjacent developments have generally been built as close to grade as possible without major earthworks.

4.2 Anticipated Ground Conditions

The anticipated ground conditions for majority of the site are summarised in the table below and are based on the available geological information and previous investigations undertaken by Clarkebond and others nearby.

Table 4.1 - Anticipated Ground Conditions

Depth (m)	Brief Description
0.0 to 0.5	TOPSOIL, comprising reddish brown slightly sandy CLAY
0.5 to depth	Firm purplish red waxy MUDSTONE (SALTASH FORMATION)
	or
0.5 to depth	Cobbles and boulders of strong grey LIMESTONE (BRIXHAM LIMESTONE FORMATION)

Groundwater is likely to be encountered at depth below the site

4.3 Engineering Considerations

4.3.1 General

From the information detailed herein and from our extensive experience, we consider that the following aspects should be considered (some of which could be **abnormal** development aspects specific to this site). These are subject to confirmation via intrusive investigation, etc (see Section 4.4).

4.3.2 Geotechnical Aspects

Abnormal Aspects

- Potentially shallow rockhead will require breaking out in some services trenches.
- Potential for variable ground and solution features in faulted zones and adjacent to limestones.

Normal Aspects

- The underlying natural soils should be suitable for conventional strip or pad foundations. An intrusive site investigation should be completed to confirm the soil profile across the site.
- Suspended floor slabs are now routinely used and such will provide protection to ground heave.
- Soakaway drainage may be possible in the Brixham Limestone Formation. If considered, soakaway testing should be completed in line with BRE Digest 365: *Soakaway Design*, 2007.
- A number of semi-mature to mature trees have been observed on-site, giving the potential for localised soil desiccation. Natural moisture content and soil plasticity profiles should be defined at critical locations.
- Special measures for the protection of buried concrete may be required. Chemical analysis of the Drift should be completed and the grade of concrete assessed in line with BRE Special Digest 1, *Concrete in Aggressive Ground*, 2005, 3rd Edition.

The general geotechnical risk is considered to be **low to medium**. There is a risk of solution features particularly adjacent to limestone.

4.3.3 Environmental Considerations

Abnormal Aspects

- **Tanks:** An above ground storage tank was highlighted in the desk study on the southwestern boundary, but was not noted on the walkover survey. This should be discussed with the landowners to confirm if any tanks have previously been present..
- **Radon:** The environmental database showed that 10-30% of homes in the site vicinity were above the action level. Therefore, full **radon protection measures** should be used in the construction of new buildings or extensions.

Normal Aspects

- Suspended floor slabs are now routinely used and such should provide sufficient protection to any **ground gases** as **basic radon protection**. Installation of gas/vapour monitoring standpipes and an appropriate gas-monitoring regime should be completed as part of future site investigations.

The general risk of significant contamination is considered to be **low**. The potential impact to the groundwater and local environment should be assessed by appropriate analysis of the soils and groundwater together with a risk assessment based on the site-specific criteria.

4.4 Recommendations for Further Investigation

Based on the desk study completed to date the following broad scope of investigation is recommended.

- Window sampling including in situ strength testing and dynamic probing.
- Trial pitting, with soakaway testing.
- Installation of gas/groundwater monitoring wells and subsequent monitoring.
- In situ CBR testing
- Geotechnical laboratory testing that is recommended includes pH and water soluble sulphate, Atterberg limits, gradings and natural moisture content.
- Contaminated land testing that is recommended includes a general indicator suite, speciated Total Petroleum and Polyaromatic Hydrocarbons.
- WAC tests should be performed for off-site waste classification.
- Groundwater should be tested for similar contaminants.
- Also localised soils to be tested pesticides and herbicides.

4.5 Outline Recommendations for Remediation and Risk Reduction

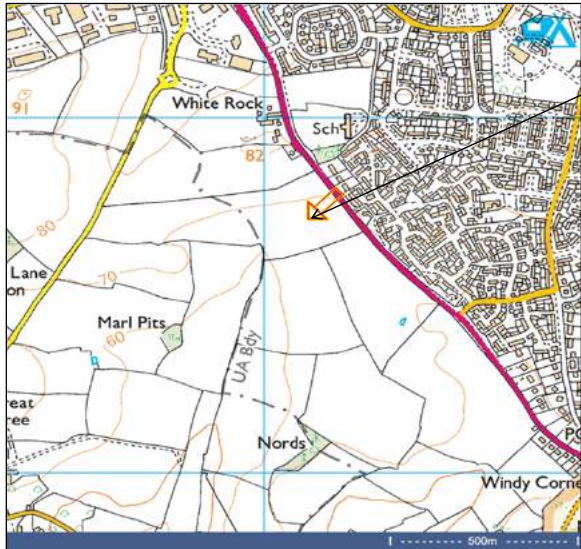
Based on the findings of this report, we envisage that remediation and risk reduction measures that will be required to render remaining risks on the site as acceptable, are as follows:

- All imported topsoils and subsoils should be tested to prove that they do not contain any unacceptable (including naturally occurring) contamination.
- Membranes to ground floor slabs to protect against residual gases and hydrocarbon vapours (although for this site the usual 1200g DPM should suffice), plus passive under-floor venting (say by suspended floor slabs). Such measures should aim to achieve class CS2 protection. Full radon protection is required.

All of the above measures will require validating by an independent party(ies) to prove correct implementation.

FIGURES

2.1 - Site Location Plan



Site Centre (approximate):
 OS X (Eastings) 288116
 OS Y (Northings) 57666

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clarkebond
 MULTIDISCIPLINARY ENGINEERING CONSULTANTS
 The Cocoa House
 129 Cumberland Road
 Bristol BS1 6UY
 Tel: +44 (0) 117 929 2244
 Fax: +44 (0) 117 929 3095
 e-mail: bristol@clarkebond.com
 web: www.clarkebond.com
 Bristol Exeter London

Project:
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Drawn: CS Scale: NTS
 Checked: CW Date: May-17

Title:
 Site Location Plan

Status
 Final Issue
 Figure No. WB03590/R1 Rev. 0
 Figure 2.1

APPENDICES

A – Photofile	(5 A4 Sheets)
B – Historic Maps	(11 A3 Sheets)
C – Environmental Data	(101 A4 Sheets)

A – Photofile

(5 A4 Sheets)



Plate 1 – Northern field looking east showing newly planted area



Plate 2 – Centre of the northern field looking east to the house



Plate 3 – Northern site looking south over the wheat field, showing the undulating topography

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Plate 4 – Looking east towards the western site boundary from the field adjacent west of the site



Plate 5 – Looking east up the hedge line from the southwest corner of the central field



Plate 6 – Looking north from the bottom of the most southwest field



Plate 7 – Southern-most field currently planted with kale

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Plate 8 – Eastern field looking east towards the small pond area



Plate 9 – Eastern field looking north

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Plate 10 – Boundary of the eastern-most field and central field

B – Historic Maps **(11 A3 Sheets)**

Site Details:

White Rock

Client Ref: EMS_373342_500369
Report Ref: EMS-373342_500369
Grid Ref: 288136, 57471

Map Name: County Series

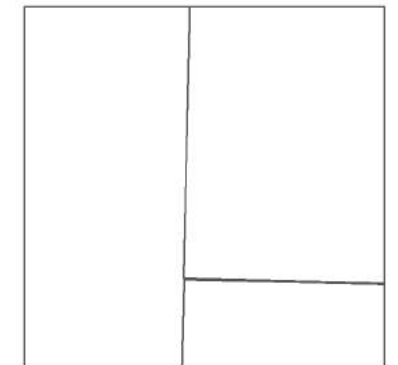
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Scale: 1:10,560

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 Edition 1869
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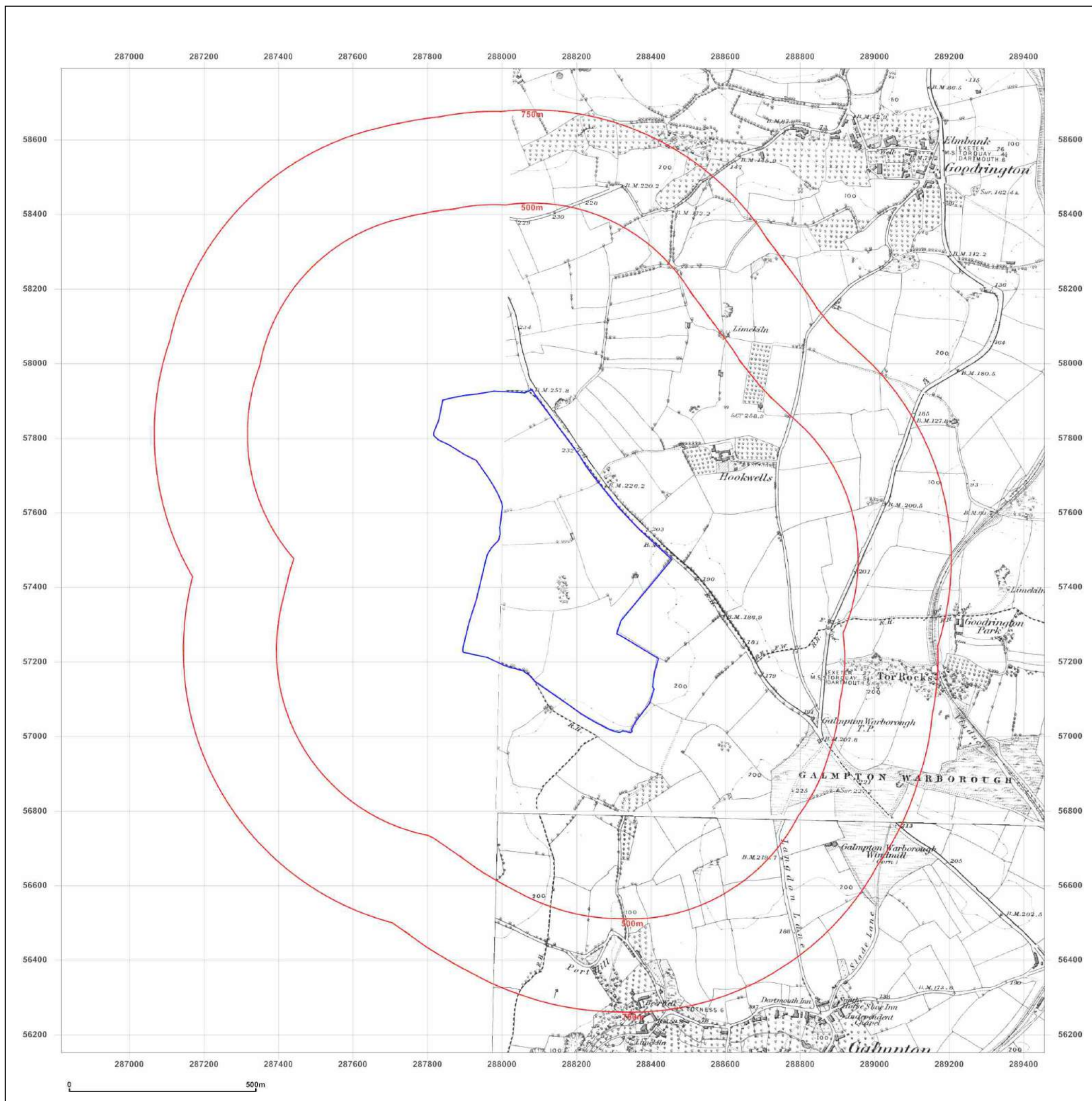


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Site Details:

White Rock

Client Ref: EMS_373342_500369
Report Ref: EMS-373342_500369
Grid Ref: 288136, 57471

Map Name: County Series

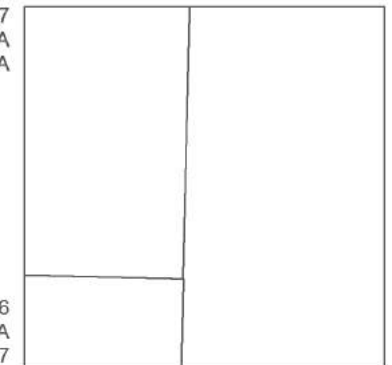
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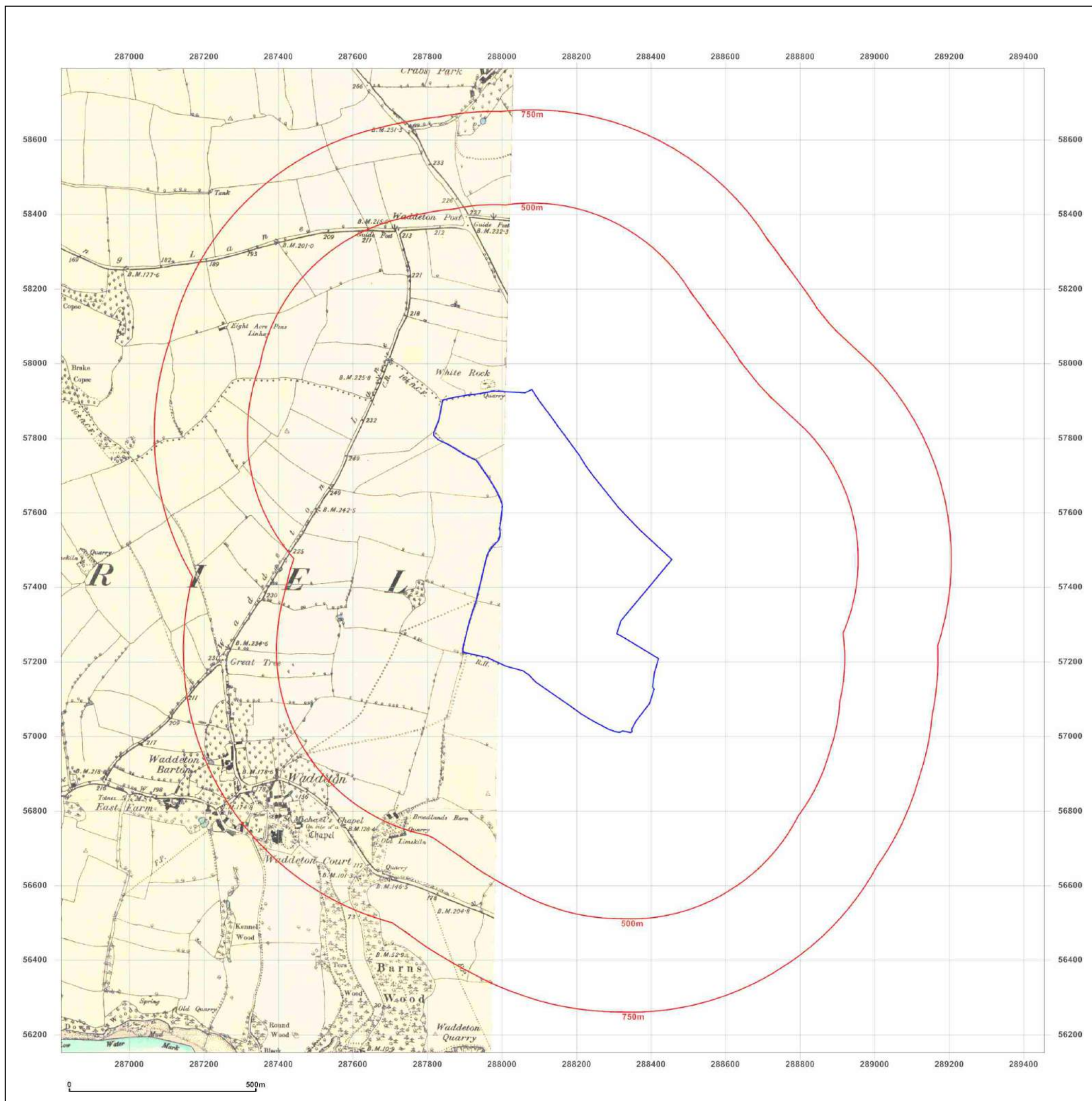


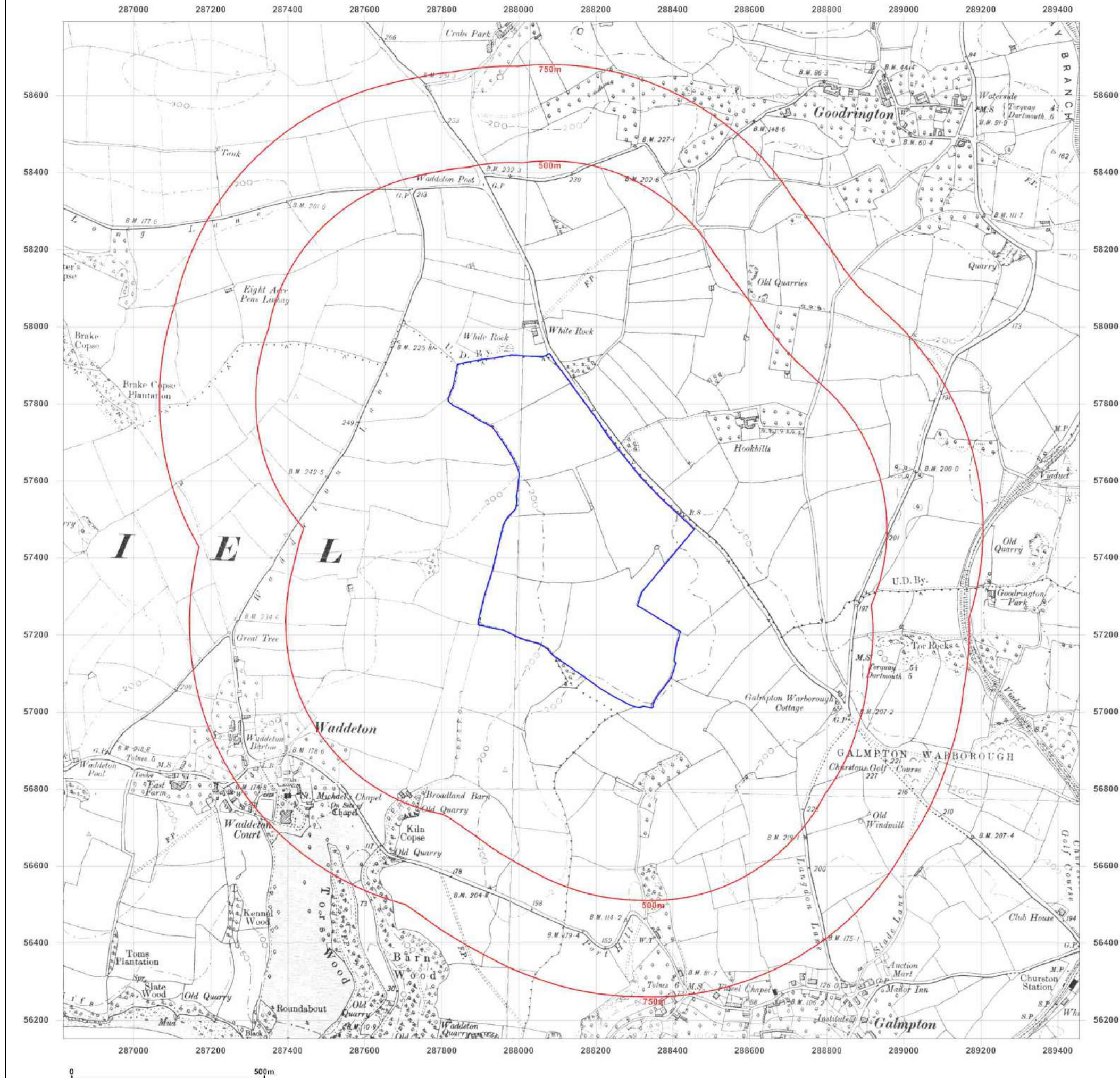
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Site Details:

White Rock

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Report Ref: EMS-373342_500369
Grid Ref: 288136, 57471

Map Name: County Series

Map date: 1904-1907

Scale: 1:10,560

Printed at: 1:10,560



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 Revised 1904
 Edition N/A
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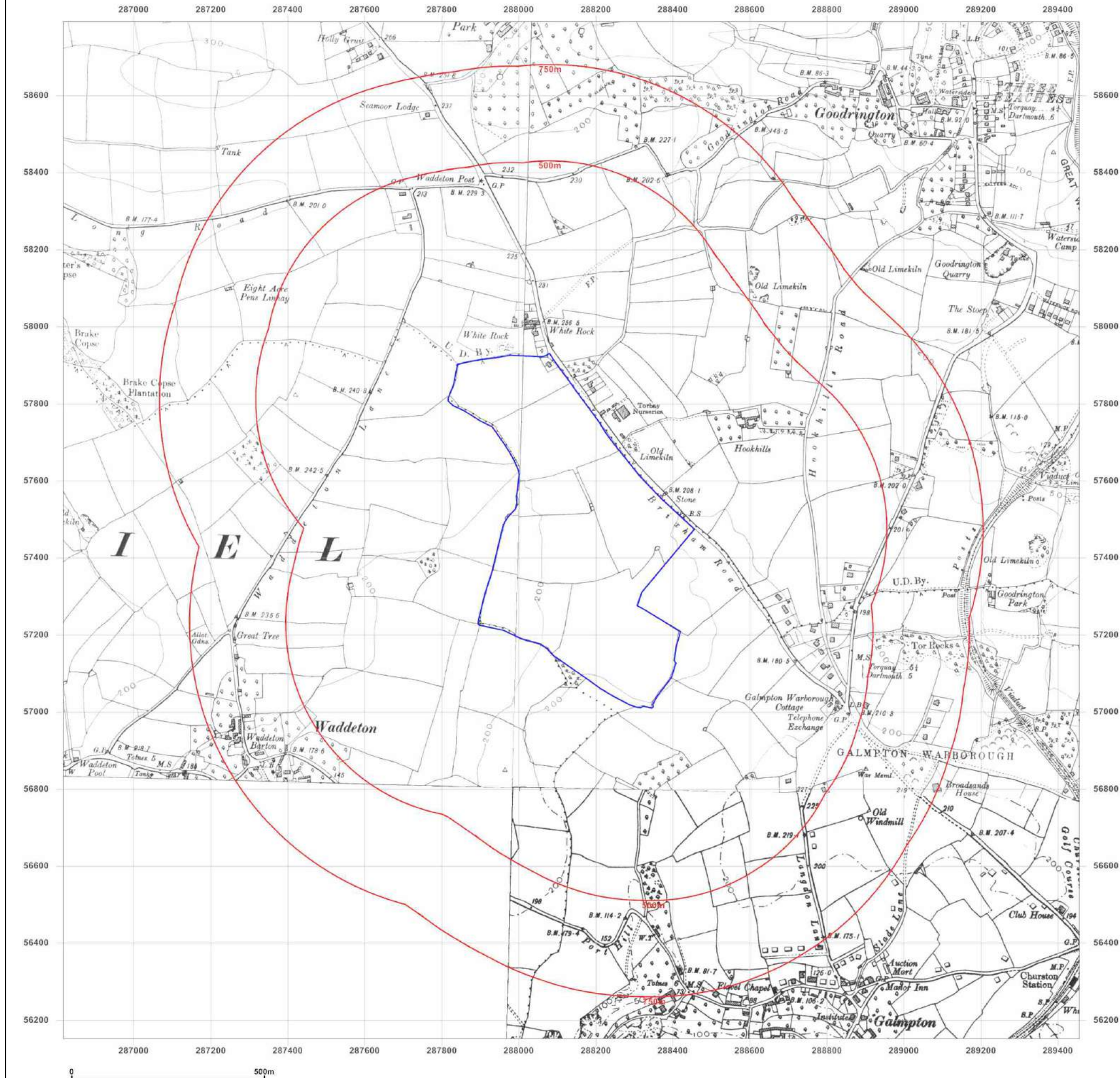
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Site Details:

White Rock

Client Ref: EMS_373342_500369
 Report Ref: EMS-373342_500369
 Grid Ref: 288136, 57471

Map Name: County Series

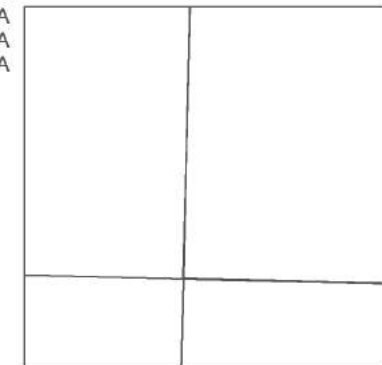
Map date: 1933-1938

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1887
 Revised 1933
 Edition N/A
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Map Name: Provisional

Map date: 1963

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 Edition N/A
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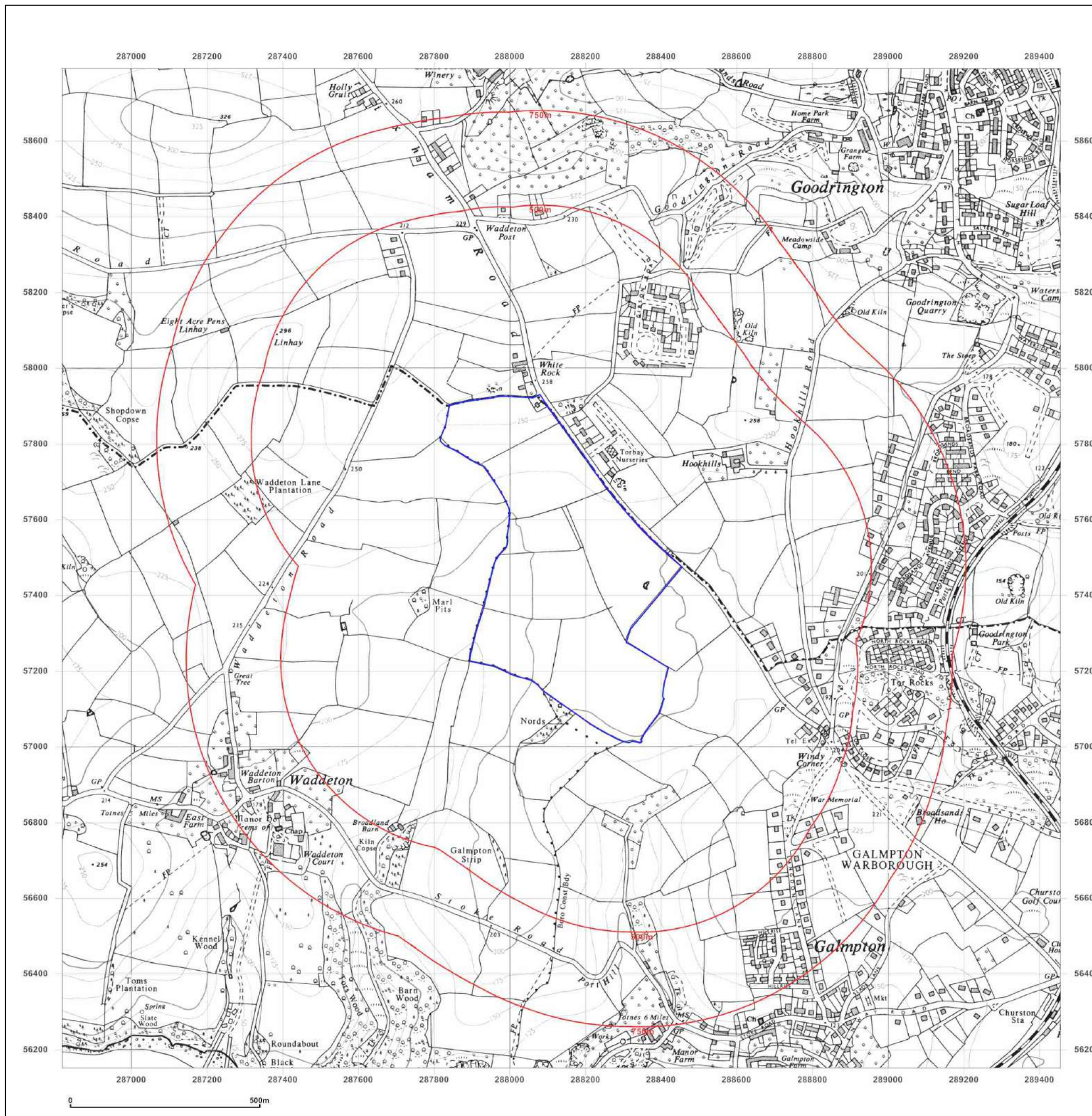


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Site Details:

White Rock

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Report Ref: EMS-373342_500369
Grid Ref: 288136, 57471

Map Name: Provisional

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 Revised 1981
 Edition N/A
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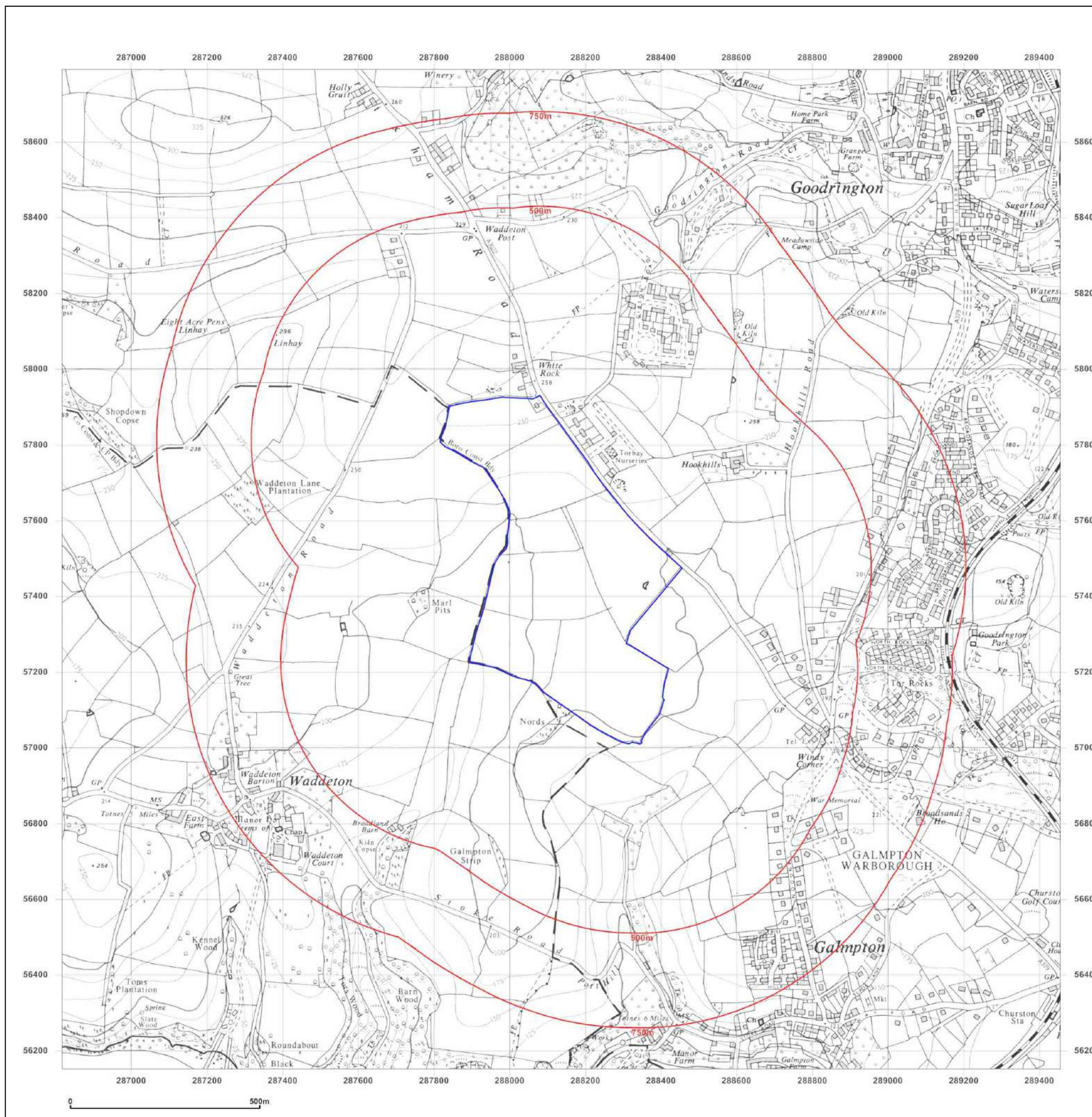


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Site Details:

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Report Ref: EMS-373342_500369
Grid Ref: 288136, 57471

Map Name: National Grid

Map date: 1982

Scale: 1:10,000

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Surveyed 1978
Revised 1982
Edition N/A
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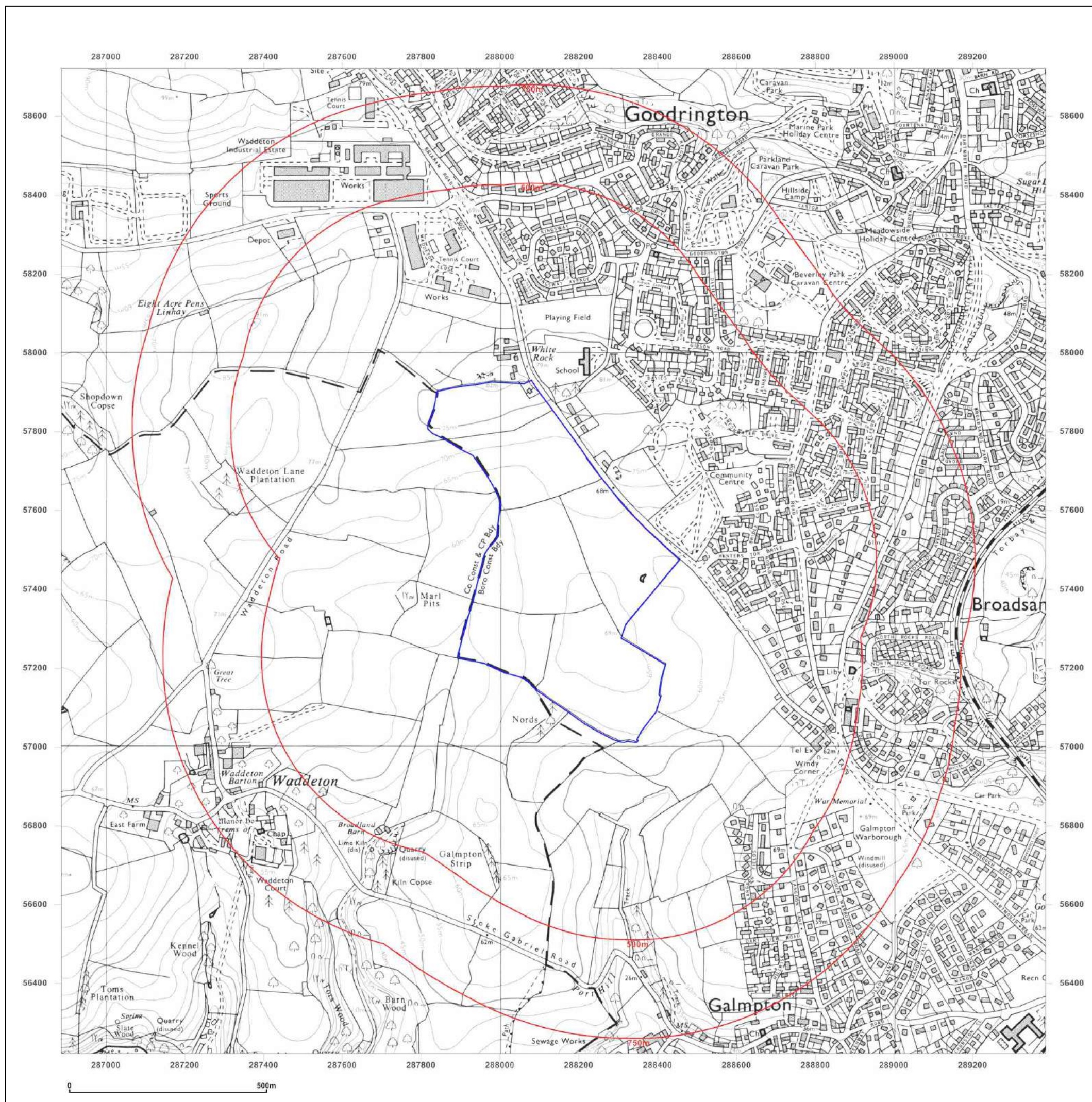


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Site Details:

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Report Ref: EMS-373342_500369
Grid Ref: 288136, 57471

Map Name: National Grid

Map date: 1988

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1978
 Revised 1988
 Edition N/A
 Copyright N/A
 Levelled N/A



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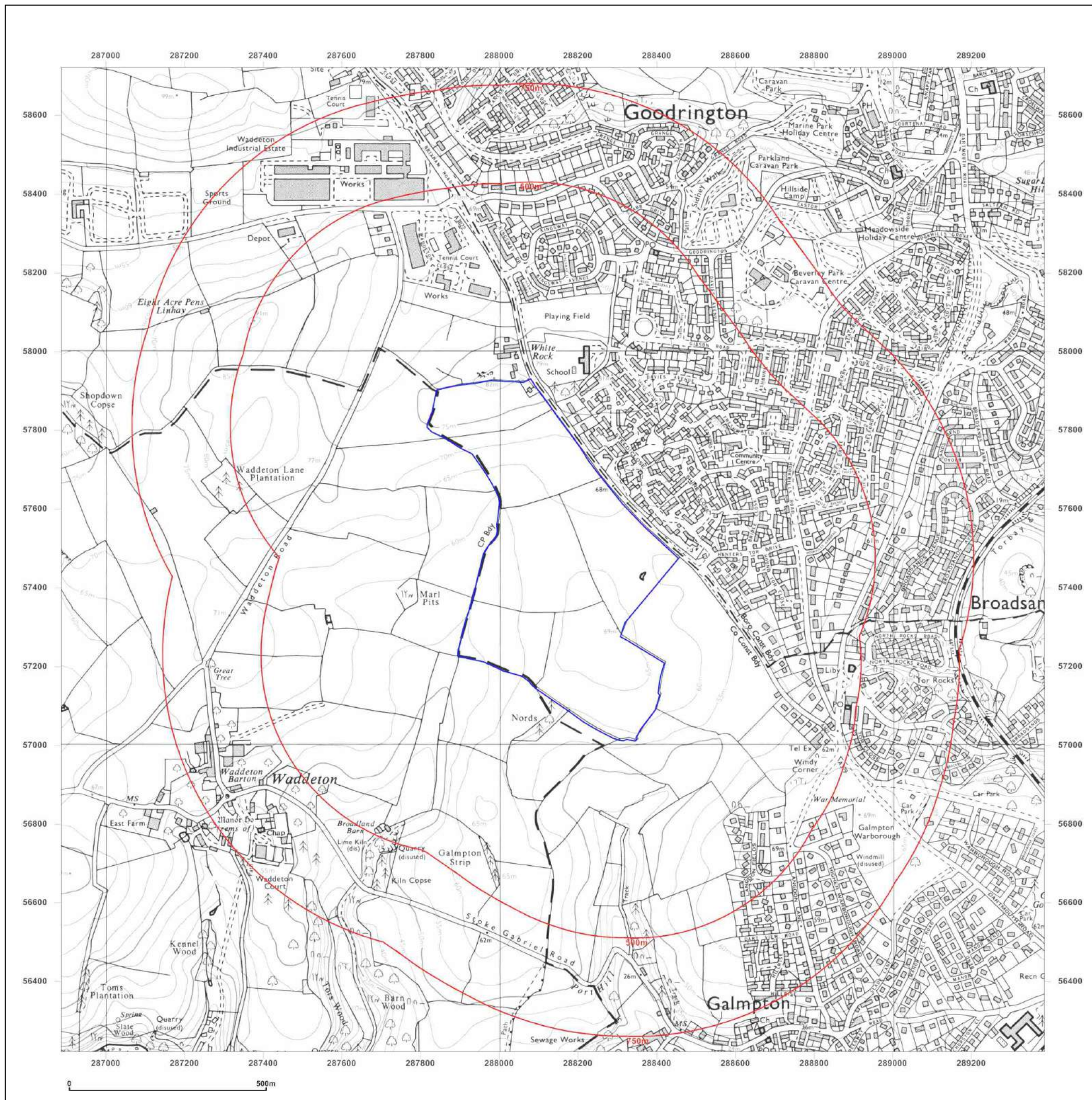


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Site Details:

White Rock

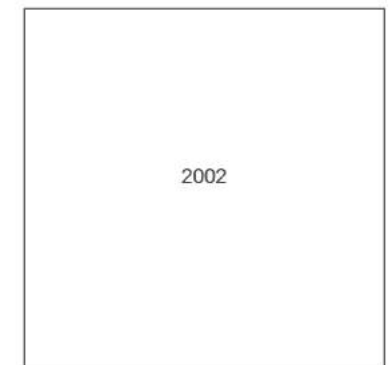
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Report Ref: EMS-373342_500369
Grid Ref: 288136, 57471

Map Name: 1:10,000 Raster

Map date: 2002

Scale: 1:10,000

Printed at: 1:10,000



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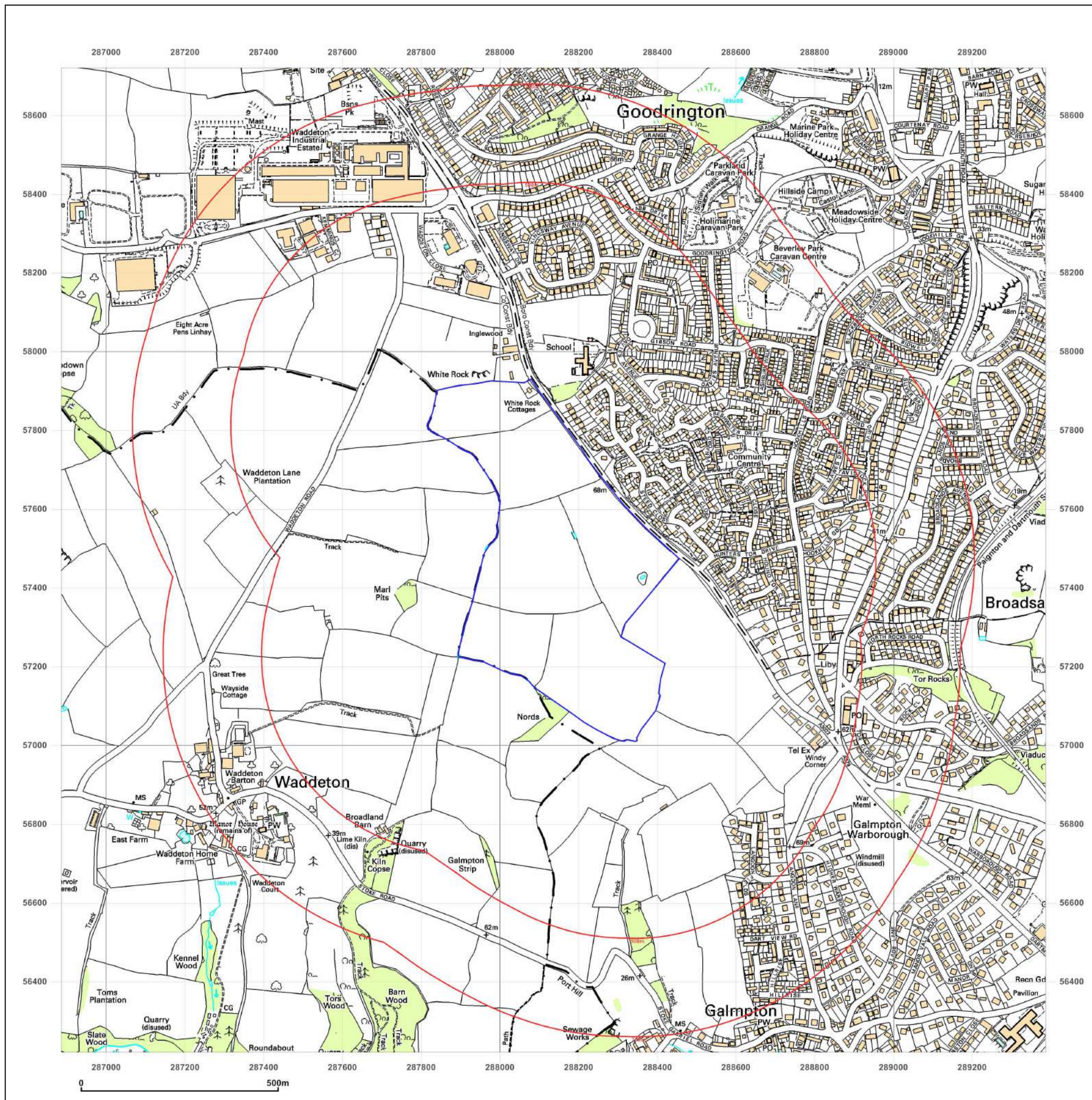


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Site Details:

White Rock

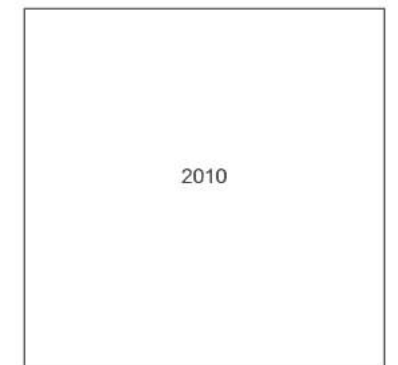
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Grid Ref: 288136, 57471

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000



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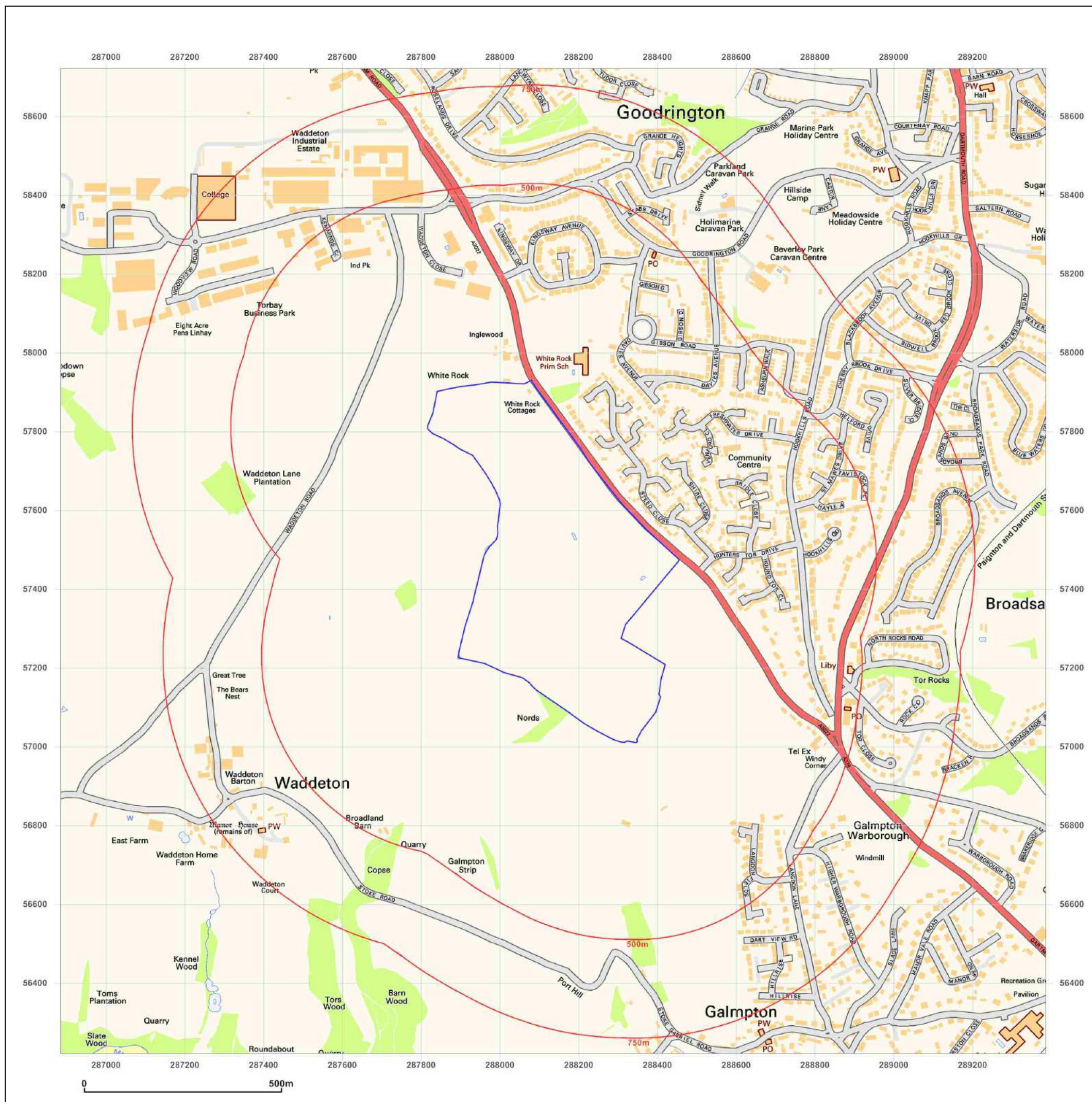


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Site Details:

White Rock

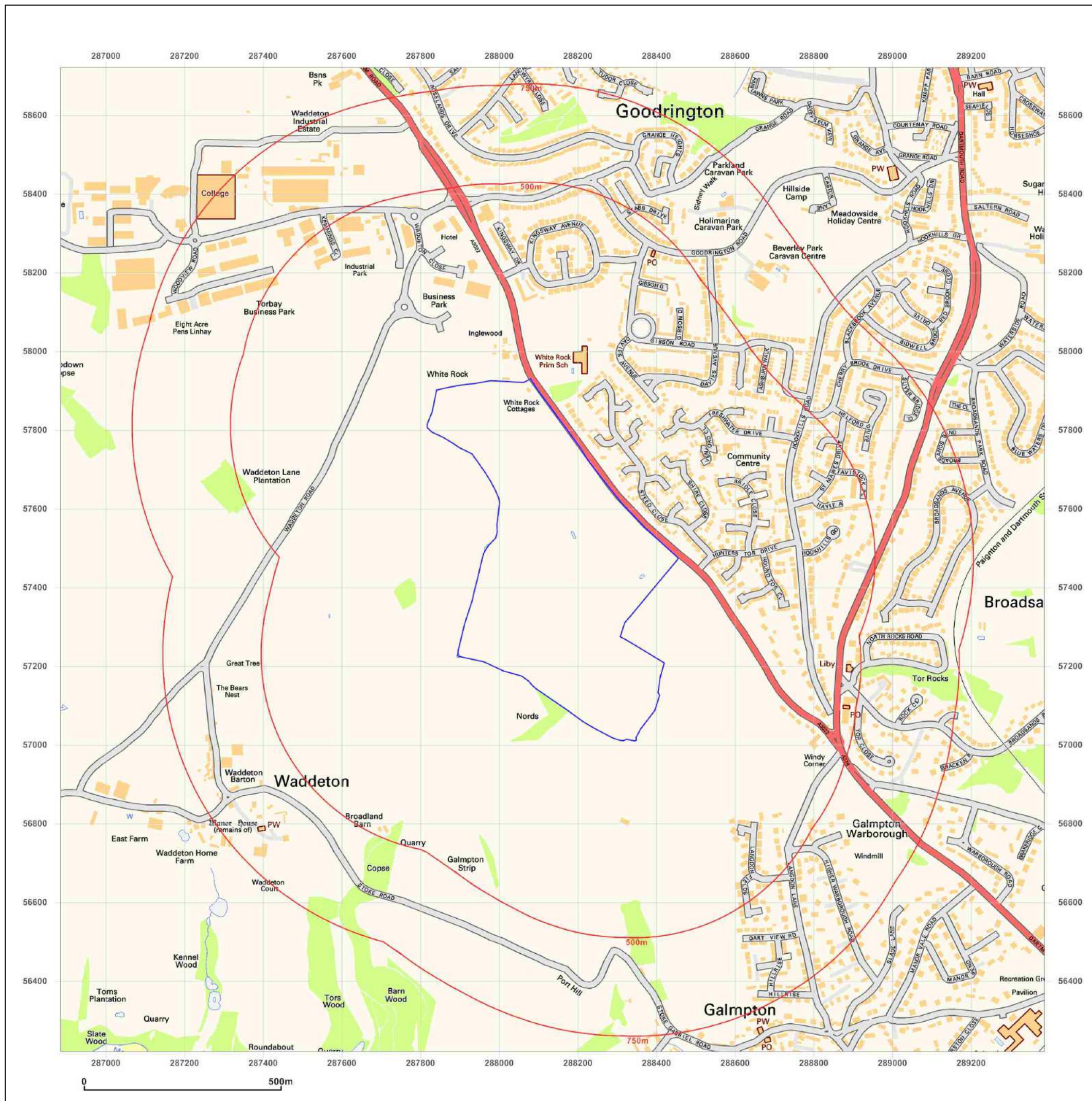
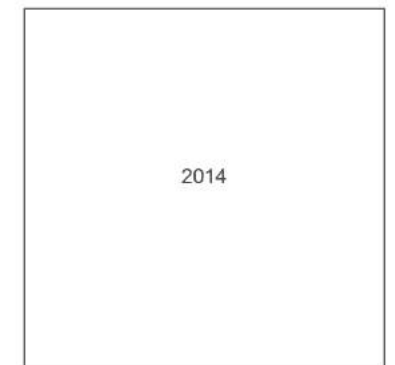
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Report Ref: EMS-373342_500369
Grid Ref: 288136, 57471

Map Name: National Grid

Map date: 2014

Scale: 1:10,000

Printed at: 1:10,000



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C – Environmental Data (101 A4 Sheets)

Groundsure Geo Insight

Address: White Rock,
Date: 19 Jul 2016
Reference: EMS-373342_500370
Client: Clarkebond UK Limited



Aerial Photograph Capture date: 22-May-2010
Grid Reference: 288142,057468
Site Size: 31.45ha



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Overview of Findings

The Groundsure Geo Insight provides high quality geo-environmental information that allows geo-environmental professionals and their clients to make informed decisions and be forewarned of potential ground instability problems that may affect the ground investigation, foundation design and possibly remediation options that could lead to possible additional costs.

The report is based on the BGS 1:50,000 Digital Geological Map of Great Britain, BGS Geosure data; BRITPITS database; Shallow Mining data and Borehole Records, Coal Authority data including brine extraction areas, PBA non-coal mining and natural cavities database, Johnson Poole and Bloomer mining data and Groundsure's unique database including historical surface ground and underground workings.

For further details on each dataset, please refer to each individual section in the report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Section 1:Geology

1.1 Artificial Ground	1.1.1 Is there any Artificial Ground/ Made Ground present beneath the study site?	No
	1.1.2 Are there any records relating to permeability of artificial ground within the study site* boundary?	No
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?	Yes
	1.2.2 Are there any records relating to permeability of superficial geology within the study site boundary?	Yes
	1.2.3 Are there any records of landslip within 500m of the study site boundary?	No
	1.2.4 Are there any records relating to permeability of landslips within the study site boundary?	No
1.3 Bedrock, Solid Geology & Faults	1.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
	1.3.2 Are there any records relating to permeability of bedrock within the study site boundary?	Yes
	1.3.3 Are there any records of faults within 500m of the study site boundary?	Yes
1.4 Radon data	1.4.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The property is in a Radon Affected Area, as between 10 and 30% of properties are above the Action Level
	1.4.2 Is the property in an area where Radon Protection Measures are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	Full radon protective measures are necessary

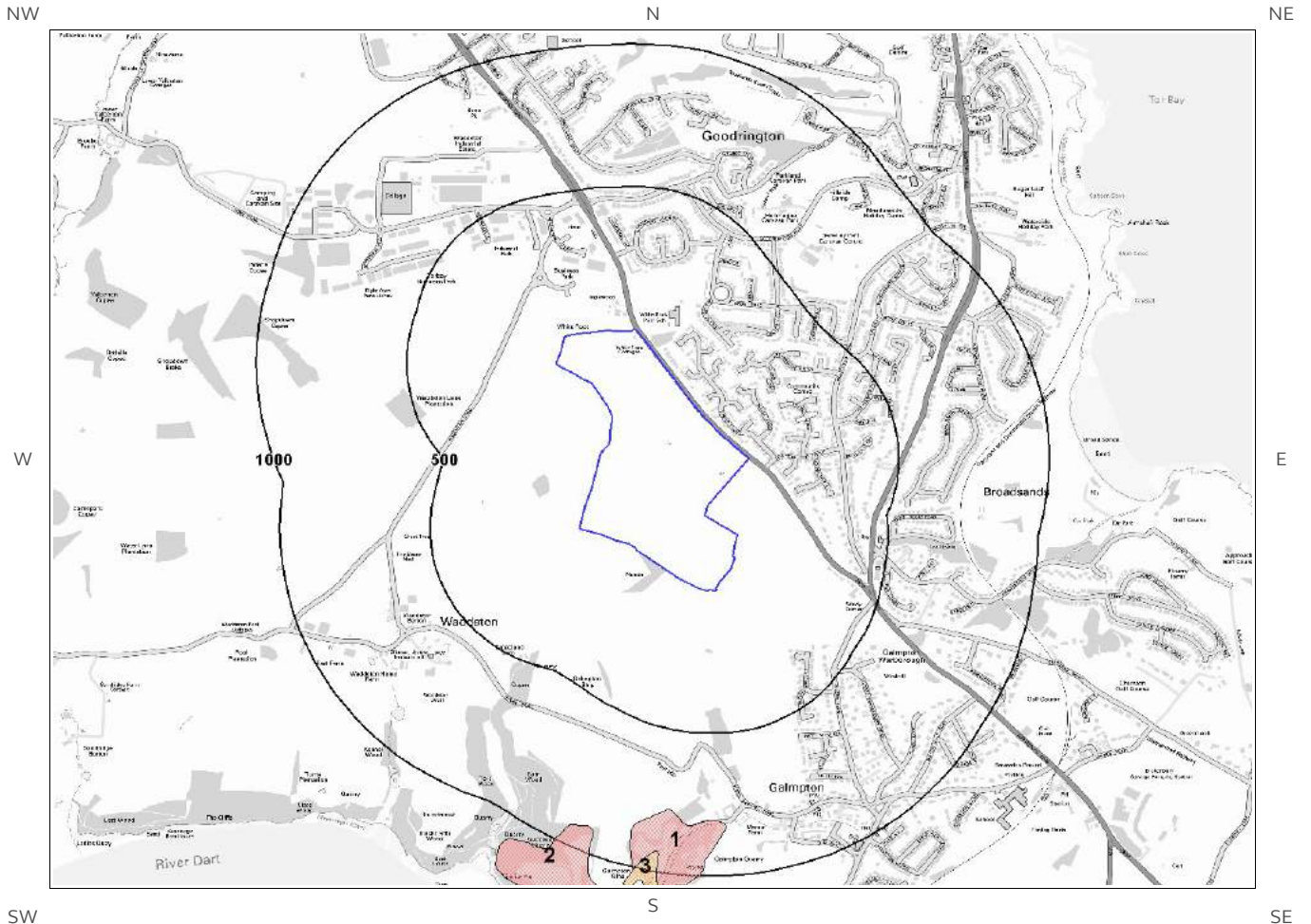
Section 2:Ground Workings	On-site	0-50m	51-250	251-500	501-1000
2.1 Historical Surface Ground Working Features from Small Scale Mapping	0	5	0	Not Searched	Not Searched
2.2 Historical Underground Workings from Small Scale Mapping	0	0	0	0	0
2.3 Current Ground Workings	0	0	0	0	7

Section 3: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
3.1 Historical Mining	0	0	0	0	0
3.2 Coal Mining	0	0	0	0	0
3.3 Johnson Poole and Bloomer Mining Area	0	0	0	0	0
3.4 Non-Coal Mining	2	0	0	2	1
3.5 Non-Coal Mining Cavities	0	0	0	0	1
3.6 Natural Cavities	0	0	0	0	12
3.7 Brine Extraction	0	0	0	0	0
3.8 Gypsum Extraction	0	0	0	0	0
3.9 Tin Mining	1	0	0	0	1
3.10 Clay Mining	0	0	0	0	0
Section 4: Natural Ground Subsidence					
	On-site				
4.1 Shrink Swell Clay	Very Low				
4.2 Landslides	Low				
4.3 Ground Dissolution of Soluble Rocks	Low				
4.4 Compressible Deposits	Negligible				
4.5 Collapsible Deposits	Very Low				
4.6 Running Sand	Very Low				
Section 5: Borehole Records					
	On-site	0-50m	51-250		
5 BGS Recorded Boreholes	0	0	0		
Section 6: Estimated Background Soil Chemistry					
	On-site	0-50m	51-250		
6 Records of Background Soil Chemistry	27	10	53		
Section 7: Railways and Tunnels					
	On-site	0-50m	51-250	251-500	
7.1 Tunnels	0	0	0	Not Searched	
7.2 Historical Railway and Tunnel Features	0	0	0	Not Searched	
7.3 Historical Railways	0	0	0	Not Searched	
7.4 Active Railways	0	0	0	Not Searched	

Section 7:Railways and Tunnels	On-site	0-50m	51-250	251-500
7.5 Railway Projects	0	0	0	0

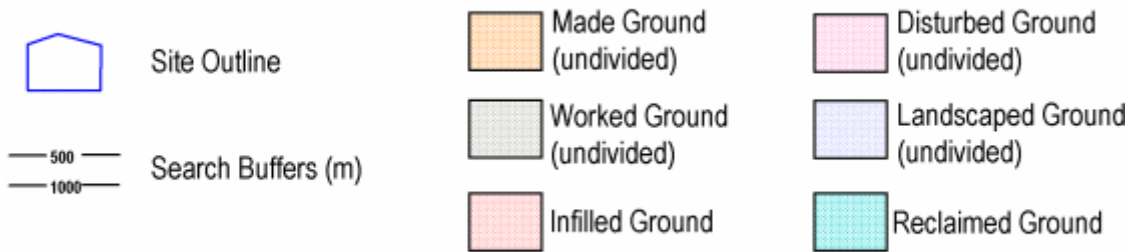
1 Geology

1.1 Artificial Ground Map



Artificial Ground Legend

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1 Geology

1.1 Artificial Ground

1.1.1 Artificial/ Made Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No:350

Are there any records of Artificial/Made Ground within 500m of the study site boundary? No

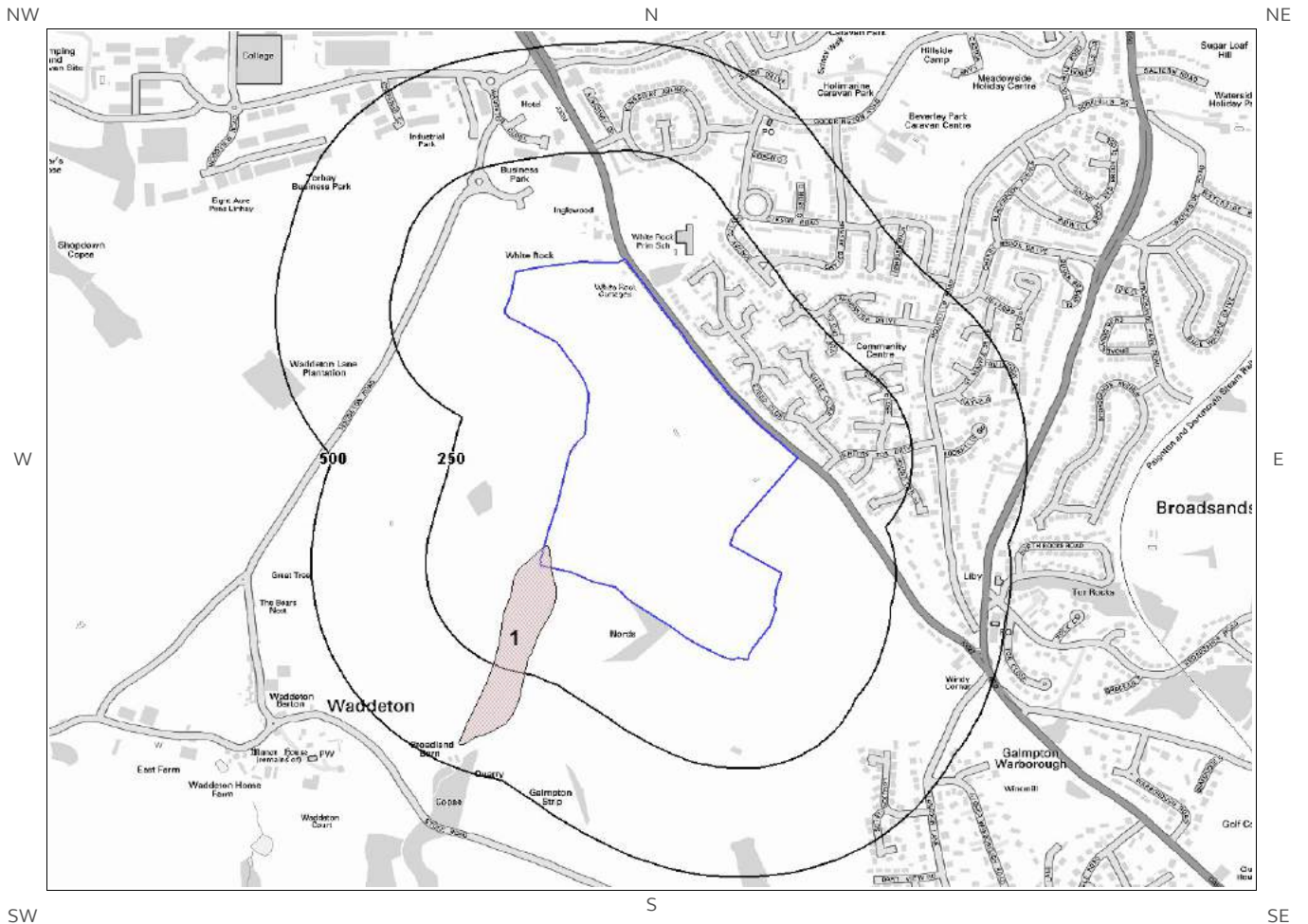
Database searched and no data found.

1.1.2 Permeability of Artificial Ground

Are there any records relating to permeability of artificial ground within the study site boundary? No

Database searched and no data found.

1.2 Superficial Deposits and Landslips Map

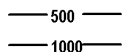


Superficial Deposits and Landslips Legend

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Site Outline



Search Buffers (m)

1.2 Superficial Deposits and Landslips

1.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary? Yes

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	HEAD	HEAD	CLAY, SILT, SAND AND GRAVEL [UNLITHIFIED DEPOSITS CODING SCHEME]

1.2.2 Permeability of Superficial Ground

Are there any records relating to permeability of superficial ground within the study site boundary? Yes

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Mixed	High	Very Low

1.2.3 Landslip

Are there any records of Landslip within 500m of the study site boundary? No

Database searched and no data found.

This Geology shows the main components as discrete layers, these are: Artificial / Made Ground, Superficial / Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

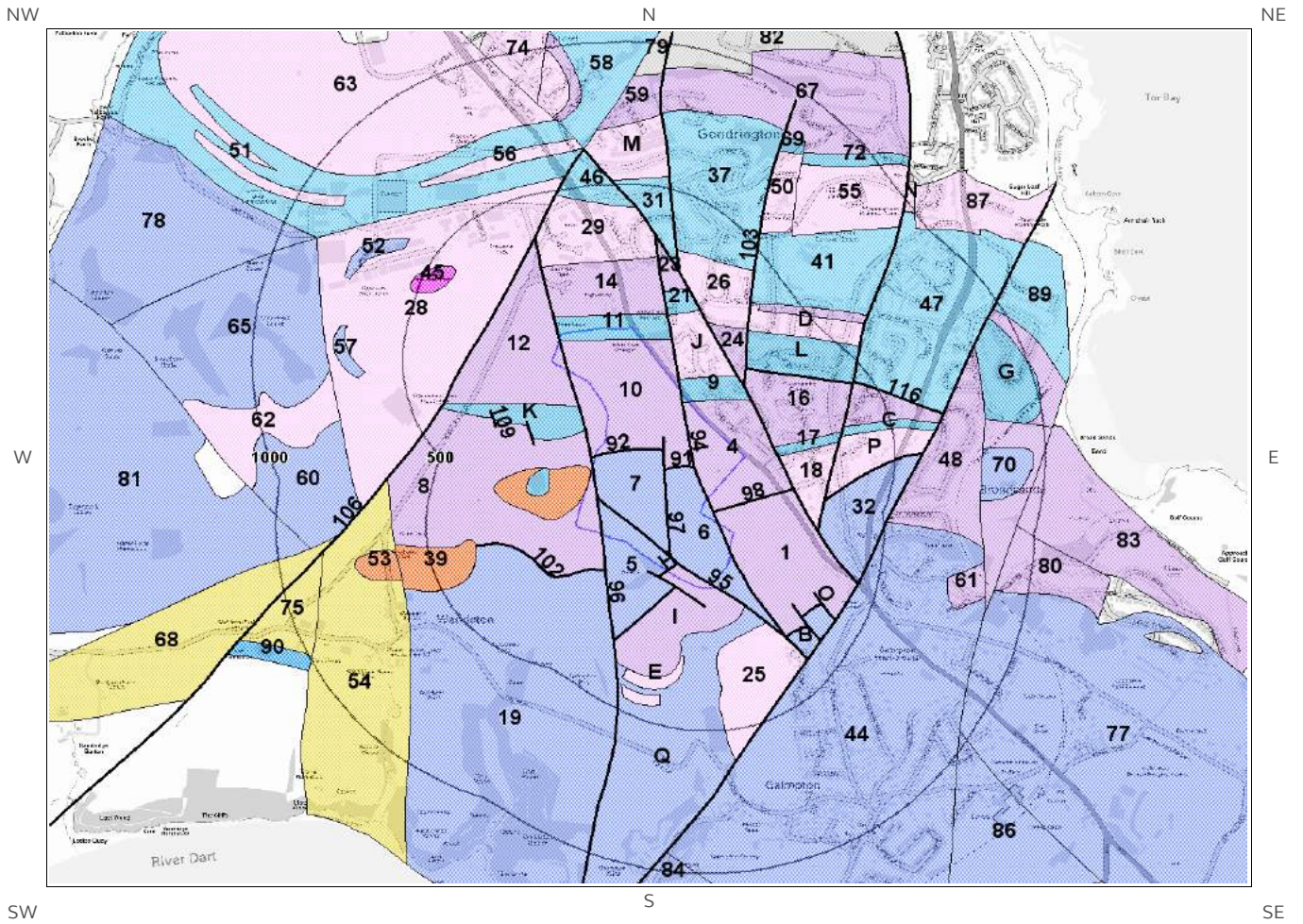
1.2.4 Landslip Permeability

Are there any records relating to permeability of landslips within the study site* boundary? No

Database searched and no data found.


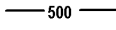

* This includes an automatically generated 50m buffer zone around the site

1.3 Bedrock and Faults Map



Bedrock and Faults Legend

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-  Site Outline
-  500 Search Buffers (m)
-  1000 Search Buffers (m)

1.3 Bedrock, Solid Geology & Faults

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No:350

1.3.1 Bedrock/ Solid Geology

Records of Bedrock/ Solid Geology within 500m of the study site boundary:

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
1	0.0	On Site	SACO-MDLM	Saltern Cove Formation - Mudstone And Limestone, Interbedded	Famennian / Frasnian
2A	0.0	On Site	TOBR-BRSS	Torbay Breccia Formation - Breccia And Sandstone, Interbedded	No Details
3I	0.0	On Site	SACO-MDLM	Saltern Cove Formation - Mudstone And Limestone, Interbedded	Famennian / Frasnian
4	0.0	On Site	SACO-MDLM	Saltern Cove Formation - Mudstone And Limestone, Interbedded	Famennian / Frasnian
5	0.0	On Site	BRXL-LMST	Brixham Limestone Formation - Limestone	Frasnian / Eifelian
6	0.0	On Site	BRXL-LMST	Brixham Limestone Formation - Limestone	Frasnian / Eifelian
7	0.0	On Site	BRXL-LMST	Brixham Limestone Formation - Limestone	Frasnian / Eifelian
8	0.0	On Site	SACO-MDLM	Saltern Cove Formation - Mudstone And Limestone, Interbedded	Famennian / Frasnian
9	0.0	On Site	SACO-LMST	Saltern Cove Formation - Limestone	Famennian / Frasnian
10	0.0	On Site	SACO-MDLM	Saltern Cove Formation - Mudstone And Limestone, Interbedded	Famennian / Frasnian
11	0.0	On Site	SACO-LMST	Saltern Cove Formation - Limestone	Famennian / Frasnian
12	0.0	On Site	SACO-MDLM	Saltern Cove Formation - Mudstone And Limestone, Interbedded	Famennian / Frasnian
13J	21.0	NE	AVS-TUF	Ashprington Volcanic Formation - Tuff	Frasnian / Eifelian
14	42.0	N	SACO-MDLM	Saltern Cove Formation - Mudstone And Limestone, Interbedded	Famennian / Frasnian
15K	69.0	W	SACO-LMST	Saltern Cove Formation - Limestone	Famennian / Frasnian
16	99.0	E	SACO-MDLM	Saltern Cove Formation - Mudstone And Limestone, Interbedded	Famennian / Frasnian
17	99.0	E	SACO-LMST	Saltern Cove Formation - Limestone	Famennian / Frasnian
18	110.0	E	AVS-TUF	Ashprington Volcanic Formation - Tuff	Frasnian / Eifelian
19	118.0	S	BRXL-LMST	Brixham Limestone Formation - Limestone	Frasnian / Eifelian
20A	120.0	W	SACO-LMST	Saltern Cove Formation - Limestone	Famennian / Frasnian
21	121.0	NE	SACO-LMST	Saltern Cove Formation - Limestone	Famennian / Frasnian
22Q	123.0	SE	BRXL-LMST	Brixham Limestone Formation - Limestone	Frasnian / Eifelian
23	162.0	NE	SACO-MDLM	Saltern Cove Formation - Mudstone And Limestone, Interbedded	Famennian / Frasnian
24	177.0	NE	SACO-MDLM	Saltern Cove Formation - Mudstone And Limestone, Interbedded	Famennian / Frasnian
25	192.0	SE	AVS-TUF	Ashprington Volcanic Formation - Tuff	Frasnian / Eifelian
26	210.0	NE	AVS-TUF	Ashprington Volcanic Formation - Tuff	Frasnian / Eifelian
27L	220.0	NE	SACO-LMST	Saltern Cove Formation - Limestone	Famennian / Frasnian

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
28	229.0	NW	AVS-TUF	Ashprington Volcanic Formation - Tuff	Frasnian / Eifelian
29	233.0	N	AVS-TUF	Ashprington Volcanic Formation - Tuff	Frasnian / Eifelian
30E	245.0	S	AVS-TUF	Ashprington Volcanic Formation - Tuff	Frasnian / Eifelian
31	251.0	NE	GDRN-LMST	Goodrington Member - Limestone	Givetian
32	278.0	E	BRXL-LMST	Brixham Limestone Formation - Limestone	Frasnian / Eifelian
33P	293.0	E	AVS-TUF	Ashprington Volcanic Formation - Tuff	Frasnian / Eifelian
34B	299.0	SE	BRXL-LMST	Brixham Limestone Formation - Limestone	Frasnian / Eifelian
35D	304.0	NE	AVS-TUF	Ashprington Volcanic Formation - Tuff	Frasnian / Eifelian
36B	306.0	SE	BRXL-LMST	Brixham Limestone Formation - Limestone	Frasnian / Eifelian
37	307.0	NE	GDRN-LMST	Goodrington Member - Limestone	Givetian
38C	328.0	E	SACO-LMST	Saltern Cove Formation - Limestone	Famennian / Frasnian
39	342.0	W	TOBR-BRSS	Torbay Breccia Formation - Breccia And Sandstone, Interbedded	No Details
40C	345.0	E	SACO-MDLM	Saltern Cove Formation - Mudstone And Limestone, Interbedded	Famennian / Frasnian
41	372.0	NE	GDRN-LMST	Goodrington Member - Limestone	Givetian
42D	374.0	NE	SACO-MDLM	Saltern Cove Formation - Mudstone And Limestone, Interbedded	Famennian / Frasnian
43E	397.0	S	AVS-TUF	Ashprington Volcanic Formation - Tuff	Frasnian / Eifelian
44	402.0	SE	BRXL-LMST	Brixham Limestone Formation - Limestone	Frasnian / Eifelian
45	409.0	NW	UIIDC-MCGB	Unnamed Igneous Intrusion, Devonian To Carboniferous - Microgabbro	No Details
46	420.0	N	GDRN-LMST	Goodrington Member - Limestone	Givetian
47	447.0	NE	GDRN-LMST	Goodrington Member - Limestone	Givetian

1.3.2 Permeability of Bedrock Ground

Are there any records relating to permeability of bedrock ground within the study site* boundary? **Yes**

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Fracture	High	Low
0.0	On Site	Fracture	Very High	High
0.0	On Site	Mixed	High	Moderate
0.0	On Site	Fracture	Very High	High
0.0	On Site	Fracture	High	Low
0.0	On Site	Fracture	Very High	High
21.0	NE	Fracture	Low	Low

* This includes an automatically generated 50m buffer zone around the site

1.3.3 Faults

Are there any records of Faults within 500m of the study site boundary?

Yes

ID	Distance (m)	Direction	Category Description	Feature Description
91	0.0	On Site	FAULT	Reverse or thrust fault, inferred, barbs on hanging wall side, throw in metres
92	0.0	On Site	FAULT	Reverse or thrust fault, inferred, barbs on hanging wall side, throw in metres
93H	0.0	On Site	FAULT	Fault, inferred, displacement unknown
94	0.0	On Site	FAULT	Fault, inferred, displacement unknown
95	0.0	On Site	FAULT	Fault, inferred, displacement unknown
96	0.0	On Site	FAULT	Fault, inferred, displacement unknown
97	0.0	On Site	FAULT	Fault, inferred, displacement unknown
98	24.0	NE	FAULT	Fault, inferred, displacement unknown
99H	29.0	SW	FAULT	Fault, inferred, displacement unknown
100I	31.0	SW	FAULT	Fault, inferred, displacement unknown
101J	99.0	E	FAULT	Fault, inferred, displacement unknown
102	118.0	S	FAULT	Reverse or thrust fault, inferred, barbs on hanging wall side, throw in metres
103	177.0	NE	FAULT	Fault, inferred, displacement unknown
104K	207.0	W	FAULT	Fault, inferred, displacement unknown
105L	220.0	NE	FAULT	Fault, inferred, displacement unknown
106	229.0	NW	FAULT	Fault, inferred, displacement unknown
107M	251.0	NE	FAULT	Fault, inferred, displacement unknown
108B	253.0	SE	FAULT	Fault, inferred, displacement unknown
109	267.0	SW	FAULT	Fault, inferred, displacement unknown
110N	278.0	E	FAULT	Fault, inferred, displacement unknown
111B	299.0	SE	FAULT	Reverse or thrust fault, inferred, barbs on hanging wall side, throw in metres
112O	302.0	E	FAULT	Fault, inferred, displacement unknown
113O	306.0	SE	FAULT	Reverse or thrust fault, inferred, barbs on hanging wall side, throw in metres
114P	307.0	SE	FAULT	Reverse or thrust fault, inferred, barbs on hanging wall side, throw in metres
115Q	402.0	SE	FAULT	Fault, inferred, displacement unknown
116	447.0	NE	FAULT	Fault, inferred, displacement unknown

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

This Geology shows the main components as discrete layers, these are: Bedrock/ Solid Geology and linear features such as Faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

1.4 Radon Data

1.4.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is in a Radon Affected Area, as between 10 and 30% of properties are above the Action Level

1.4.2 Radon Protection

Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? Full radon protective measures are necessary

2 Ground Workings

2.1 Historical Surface Ground Working Features derived from Historical Mapping

This dataset is based on Groundsure's unique Historical Land Use Database derived from 1:10,560 and 1:10,000 scale historical mapping.

Are there any Historical Surface Ground Working Features within 250m of the study site boundary? Yes

The following Historical Surface Ground Working Features are provided by Groundsure:

ID	Distance (m)	Direction	NGR	Use	Date
1A	20.0	NE	288289 57690	Unspecified Pit	1981
2A	20.0	NE	288289 57690	Unspecified Pit	1963
3B	25.0	NE	288158 57891	Unspecified Pit	1963
4B	25.0	NE	288158 57891	Unspecified Pit	1981
5A	27.0	NE	288299 57694	Refuse Heap	1982

2.2 Historical Underground Working Features derived from Historical Mapping

This data is derived from the Groundsure unique Historical Land Use Database. It contains data derived from 1:10,000 and 1:10,560 historical Ordnance Survey Mapping and includes some natural topographical features (Shake Holes for example) as well as manmade features that may have implications for ground stability. Underground and mining features have been identified from surface features such as shafts. The distance that these extend underground is not shown.

Are there any Historical Underground Working Features within 1000m of the study site boundary? No

Database searched and no data found.

2.3 Current Ground Workings

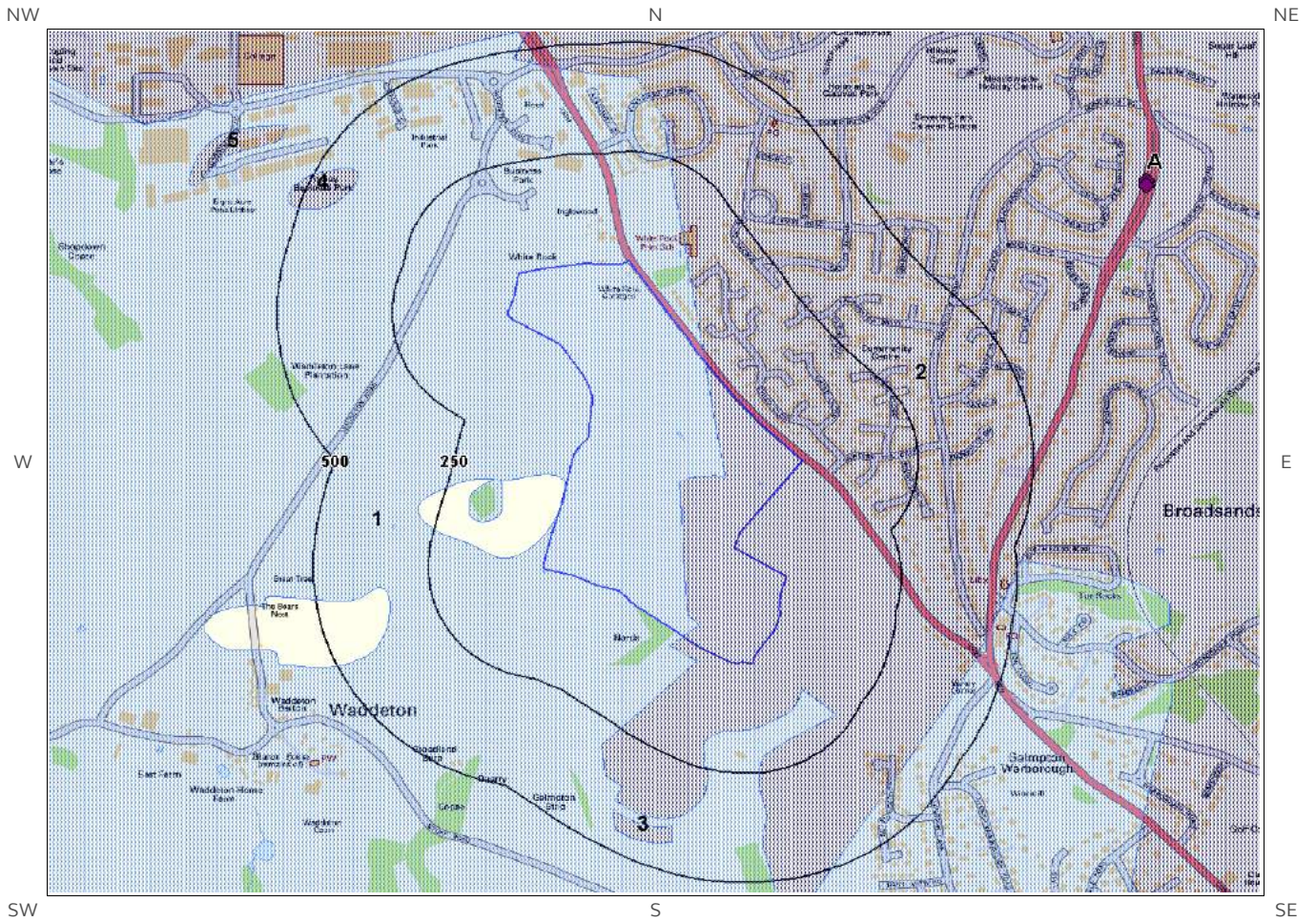
This dataset is derived from the BGS BRITPITS database covering active; inactive mines; quarries; oil wells; gas wells and mineral wharves; and rail deposits throughout the British Isles.

Are there any BGS Current Ground Workings within 1000m of the study site boundary? Yes

The following Current Ground Workings information is provided by British Geological Survey:

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
6	501.0	S	287721 56757	Limestone	Waddeton Court	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
7	551.0	NE	288604 58143	Limestone	Goodrington	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	621.0	S	287687 56641	Limestone	Waddeton Court	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	891.0	E	289345 57430	Limestone	Broadsands	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	933.0	S	288250 56080	Limestone	Galmpton	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	941.0	S	288120 56090	Limestone	Galmpton	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	991.0	W	286886 57464	Limestone	Waddeton Barton	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

3 Mining, Extraction & Natural Cavities Map



Mining, Extraction and Natural Cavities Legend

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3 Mining, Extraction & Natural Cavities

3.1 Historical Mining

This dataset is derived from Groundsure unique Historical Land-use Database that are indicative of mining or extraction activities.

Are there any Historical Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

3.2 Coal Mining

This dataset provides information as to whether the study site lies within a known coal mining affected area as defined by the coal authority.

Are there any Coal Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

3.3 Johnson Poole and Bloomer

This dataset provides information as to whether the study site lies within an area where JPB hold information relating to mining.

Are there any JPB Mining areas within 1000m of the study site boundary? No

The following information provided by JPB is not represented on mapping: Database searched and no data found.

3.4 Non-Coal Mining

This dataset provides information as to whether the study site lies within an area which may have been subject to non-coal historic mining.

Are there any Non-Coal Mining areas within 1000m of the study site boundary? Yes

The following non-coal mining information is provided by the BGS:

ID	Distance (m)	Direction	Name	Commodity	Assessment of likelihood
1	0.0	On Site	Not available	Vein Mineral	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered

ID	Distance (m)	Direction	Name	Commodity	Assessment of likelihood
2	0.0	On Site	Not available	Vein Mineral	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered
3	397.0	S	Not available	Vein Mineral	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered
4	409.0	NW	Not available	Vein Mineral	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered
5	602.0	NW	Not available	Vein Mineral	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered

3.5 Non-Coal Mining Cavities

This dataset provides information from the Peter Brett Associates (PBA) mining cavities database (compiled for the national study entitled “Review of mining instability in Great Britain, 1990” PBA has also continued adding to this database) on mineral extraction by mining.

Are there any Non-Coal Mining cavities within 1000m of the study site boundary? Yes

The following Non-Coal Mining Cavities information provided by Peter Brett Associates:

ID	Distance (m)	Direction	NGR	Address	Superficial Deposits	Bedrock Deposits	Extracted Mineral
Not shown	913.0	S	288400 056100	'Galmpton', Galmpton, Devon	-	Brixham Limestone Formation, Ashprington Volcanic Formation	Magnetite, Marcasite, Siderite, Ironstone

3.6 Natural Cavities

This dataset provides information based on Peter Brett Associates natural cavities database.

Are there any Natural Cavities within 1000m of the study site boundary? Yes

The following Natural Cavities information provided by Peter Brett Associates:

ID	Distance (m)	Direction	NGR	Superficial Deposits	Bedrock Deposits	Cavity Type and Number
Not shown	664.0	SE	288700 56450	-	Middle & Upper Devonian	Sinkhole x 2
Not shown	799.0	N	287750 58700	-	Ashprington Volcanic Formation, Brixham Limestone Formation	Solution Pipe x 5

ID	Distance (m)	Direction	NGR	Superficial Deposits	Bedrock Deposits	Cavity Type and Number
Not shown	857.0	N	287700 58750	-	Ashprington Volcanic Formation, Brixham Limestone Formation	Solution Widened Joint or Fissure x 1
Not shown	865.0	N	287770 58770	-	Ashprington Volcanic Formation, Brixham Limestone Formation	Solution Widened Joint or Fissure x 1
Not shown	867.0	NW	287500 58700	-	Ashprington Volcanic Formation, Brixham Limestone Formation	Solution Pipe x 1
Not shown	873.0	N	287720 58770	-	Ashprington Volcanic Formation, Brixham Limestone Formation	Solution Widened Joint or Fissure x 1
Not shown	912.0	N	287860 58830	-	Ashprington Volcanic Formation, Brixham Limestone Formation, Salter Cove Formation	Solution Widened Joint or Fissure x 1
Not shown	932.0	N	287860 58850	-	Brixham Limestone Formation	Solution Pipe x 15
Not shown	933.0	N	287850 58850	-	Ashprington Volcanic Formation, Brixham Limestone Formation, Salter Cove Formation	Solution Pipe x 3
Not shown	936.0	S	288100 56100	-	Middle & Upper Devonian	Vadose Cave x 1
17A	972.0	NE	289200 58100	-	Middle & Upper Devonian	Sinkhole x 10
18A	979.0	NE	289200 58110	-	Middle & Upper Devonian	Vadose Cave x 5

3.7 Brine Extraction

This data provides information from the Coal Authority issued on behalf of the Cheshire Brine Subsidence Compensation Board.

Are there any Brine Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

3.8 Gypsum Extraction

This dataset provides information on Gypsum extraction from British Gypsum records.

Are there any Gypsum Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

3.9 Tin Mining

This dataset provides information on tin mining areas and is derived from tin mining records. This search is based upon postcode information to a sector level.

Are there any Tin Mining areas within 1000m of the study site boundary? Yes

The following Tin Mining information provided by Groundsure is not represented on Mapping:

Distance (m)	Direction	Details
0.0	On Site	This site is within a postcode where tin mining is reported to have occurred. This may or may not mean that this site has been affected by tin mining. For further information you may wish to consider obtaining a Tin Mining report. This can be ordered from Mining Searches UK at http://www.miningsearchesuk.com/ , or by writing to Mining Searches UK. Highburrow Lane, Wilson Way, Pool Industrial Estate, Redruth, Cornwall. TR15 3RN Tel: 01209 218861
968.0	W	This site is within a postcode where tin mining is reported to have occurred. This may or may not mean that this site has been affected by tin mining. For further information you may wish to consider obtaining a Tin Mining report. This can be ordered from Mining Searches UK at http://www.miningsearchesuk.com/ , or by writing to Mining Searches UK. Highburrow Lane, Wilson Way, Pool Industrial Estate, Redruth, Cornwall. TR15 3RN Tel: 01209 218861

3.10 Clay Mining

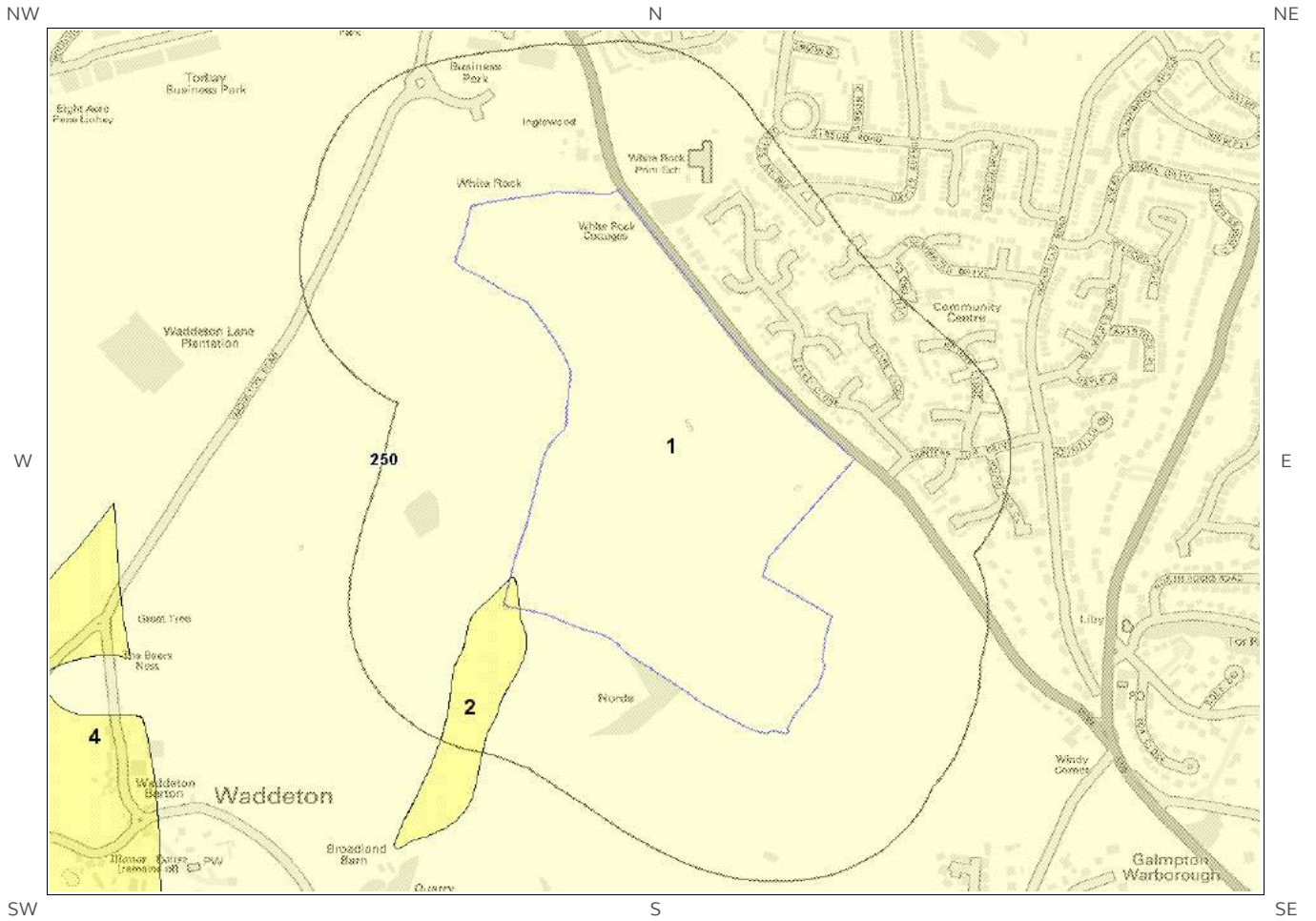
This dataset provides information on Kaolin and Ball Clay mining from relevant mining records.

Are there any Clay Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

4 Natural Ground Subsidence

4.1 Shrink-Swell Clay Map

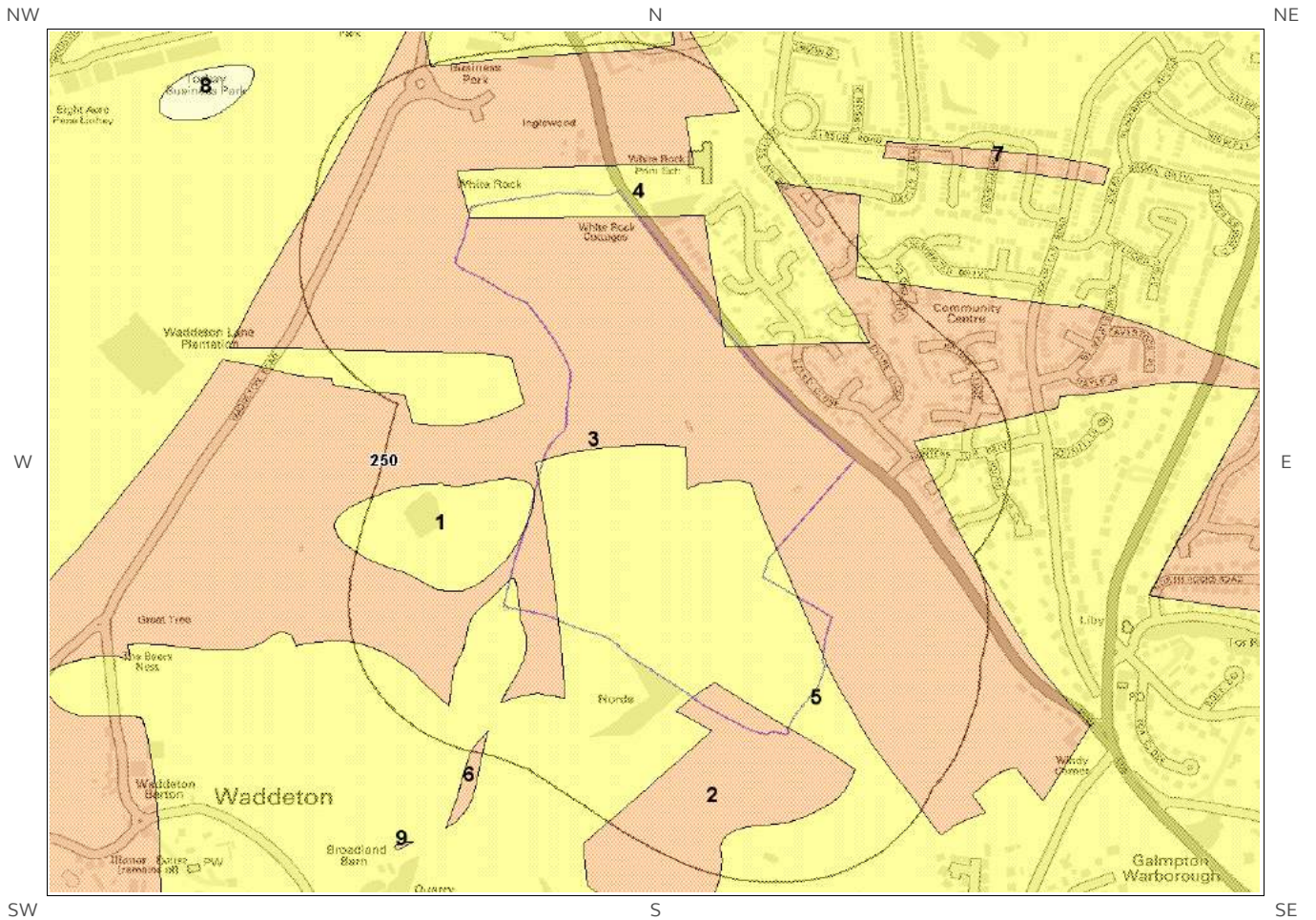


Shrink Swell Clay Legend

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4.2 Landslides Map

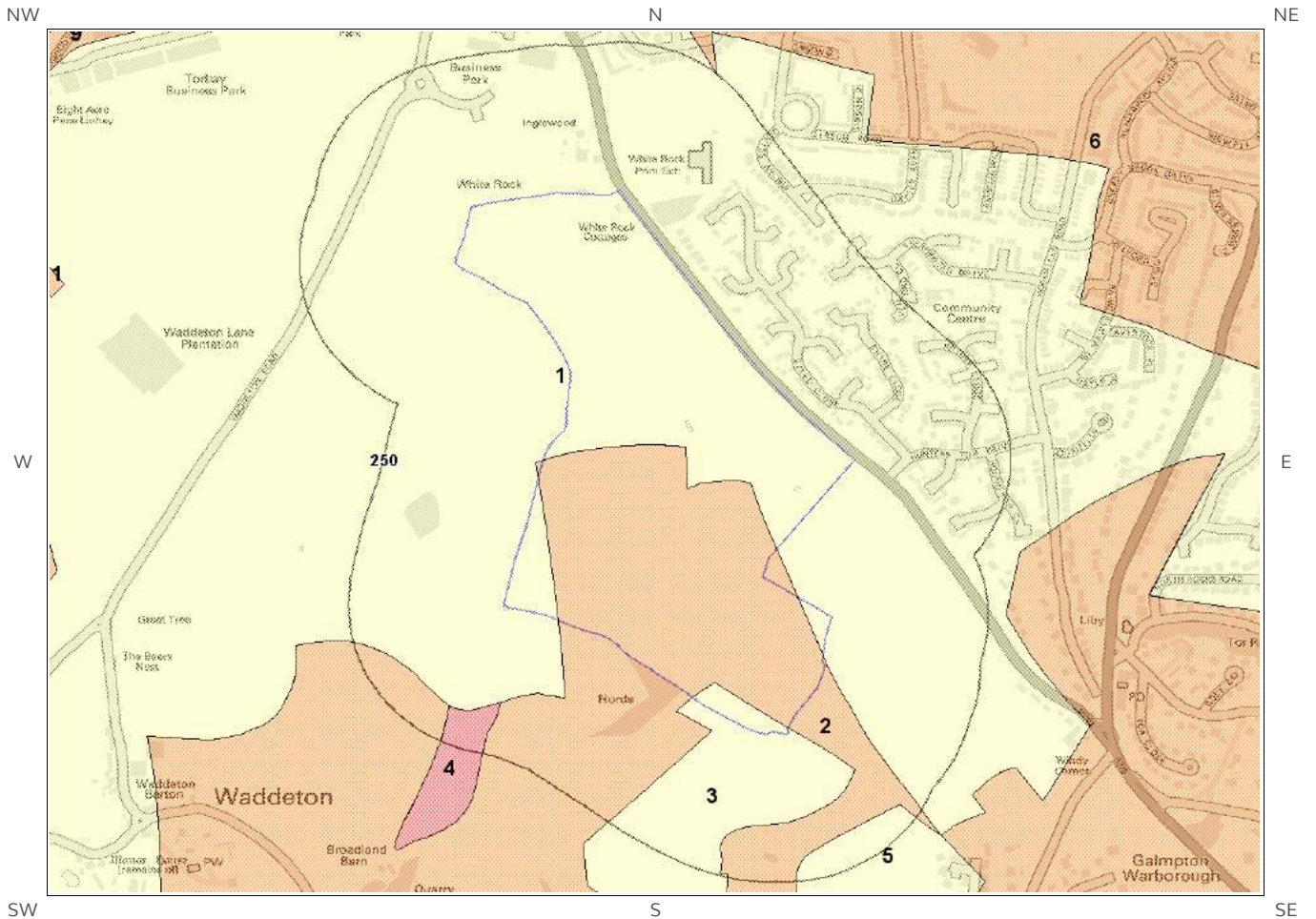


Landslides Legend

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4.3 Ground Dissolution Soluble Rocks Map

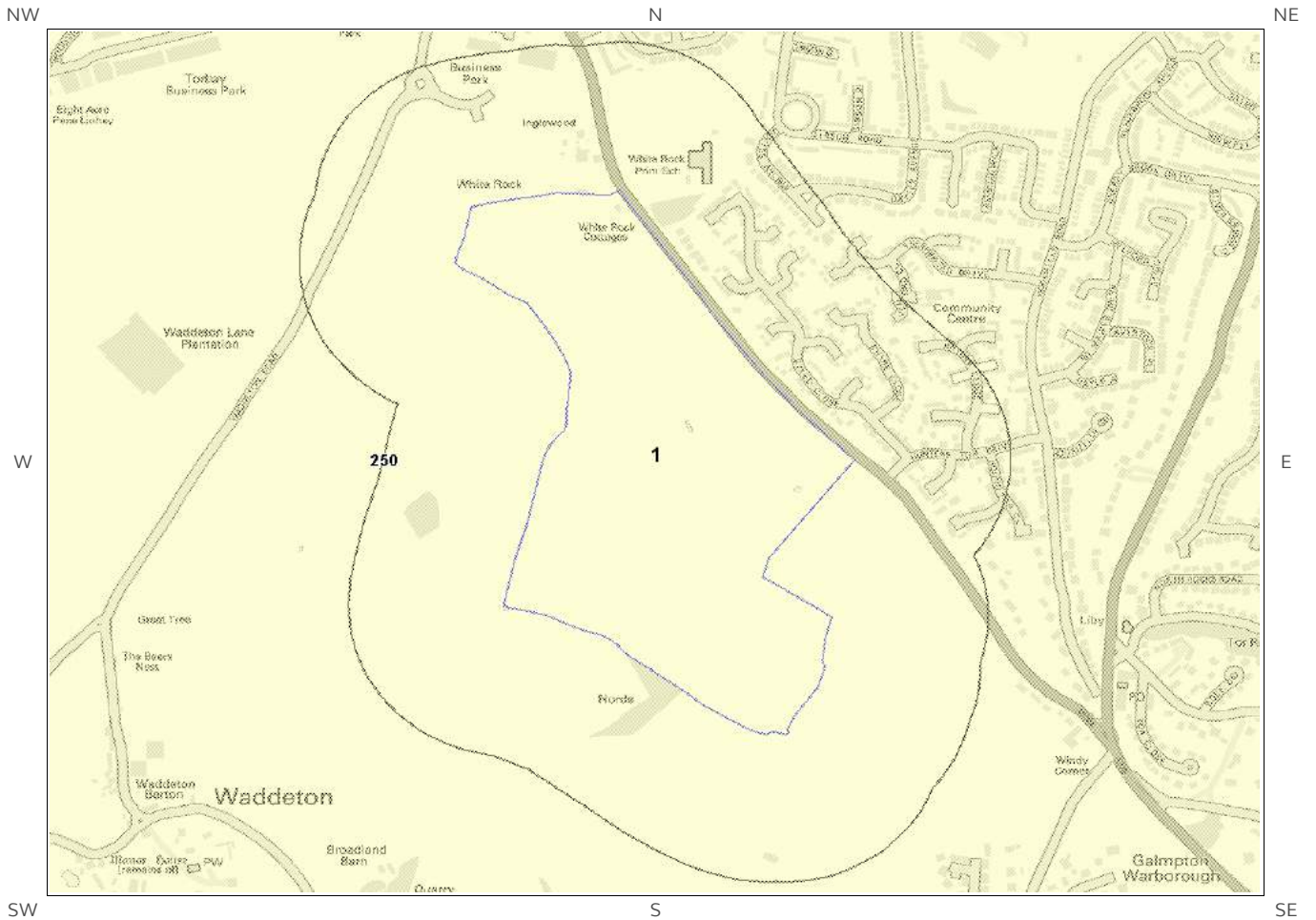


Ground Dissolution Soluble Rocks Legend

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4.4 Compressible Deposits Map

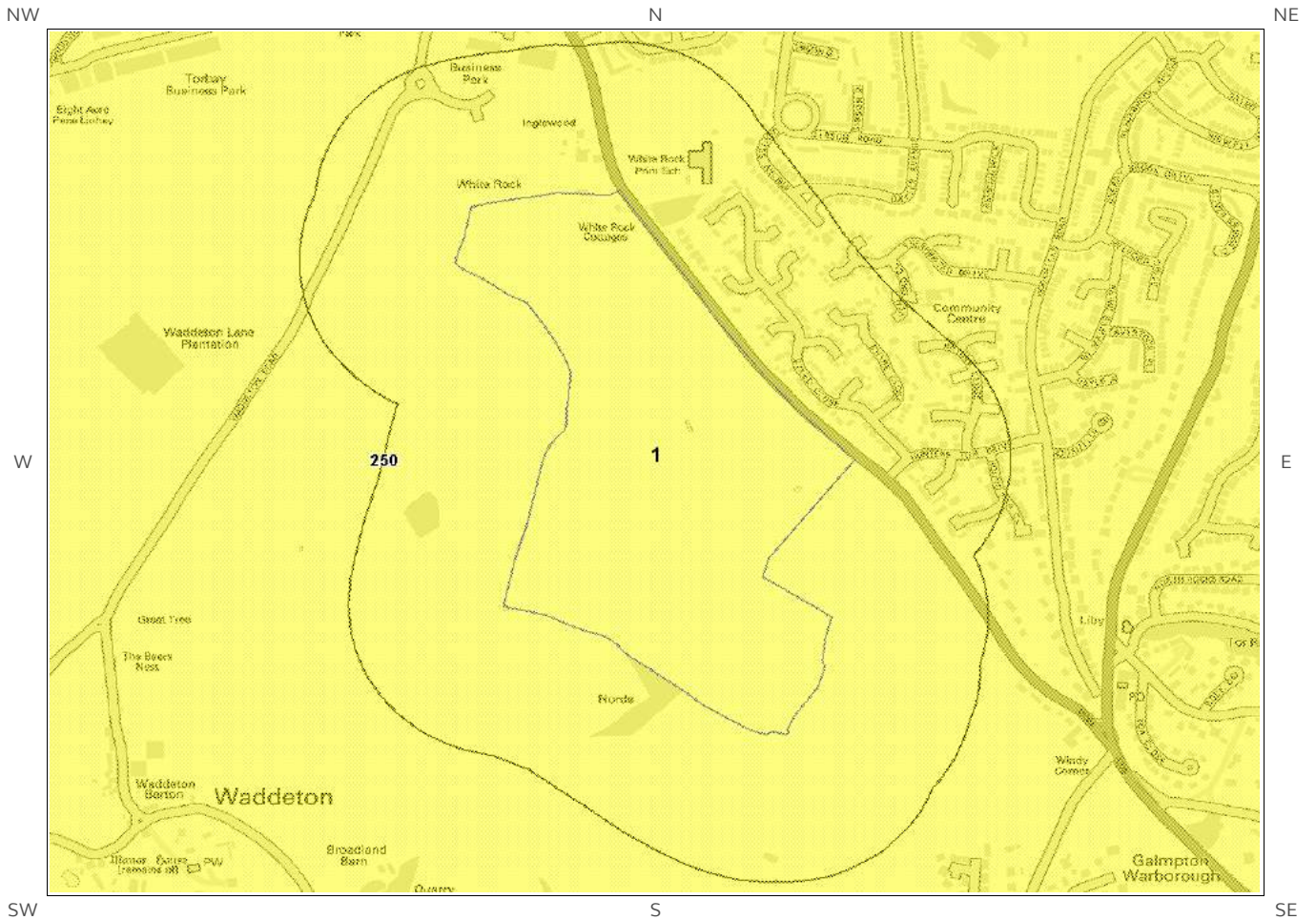


Compressible Deposits Legend

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4.5 Collapsible Deposits Map

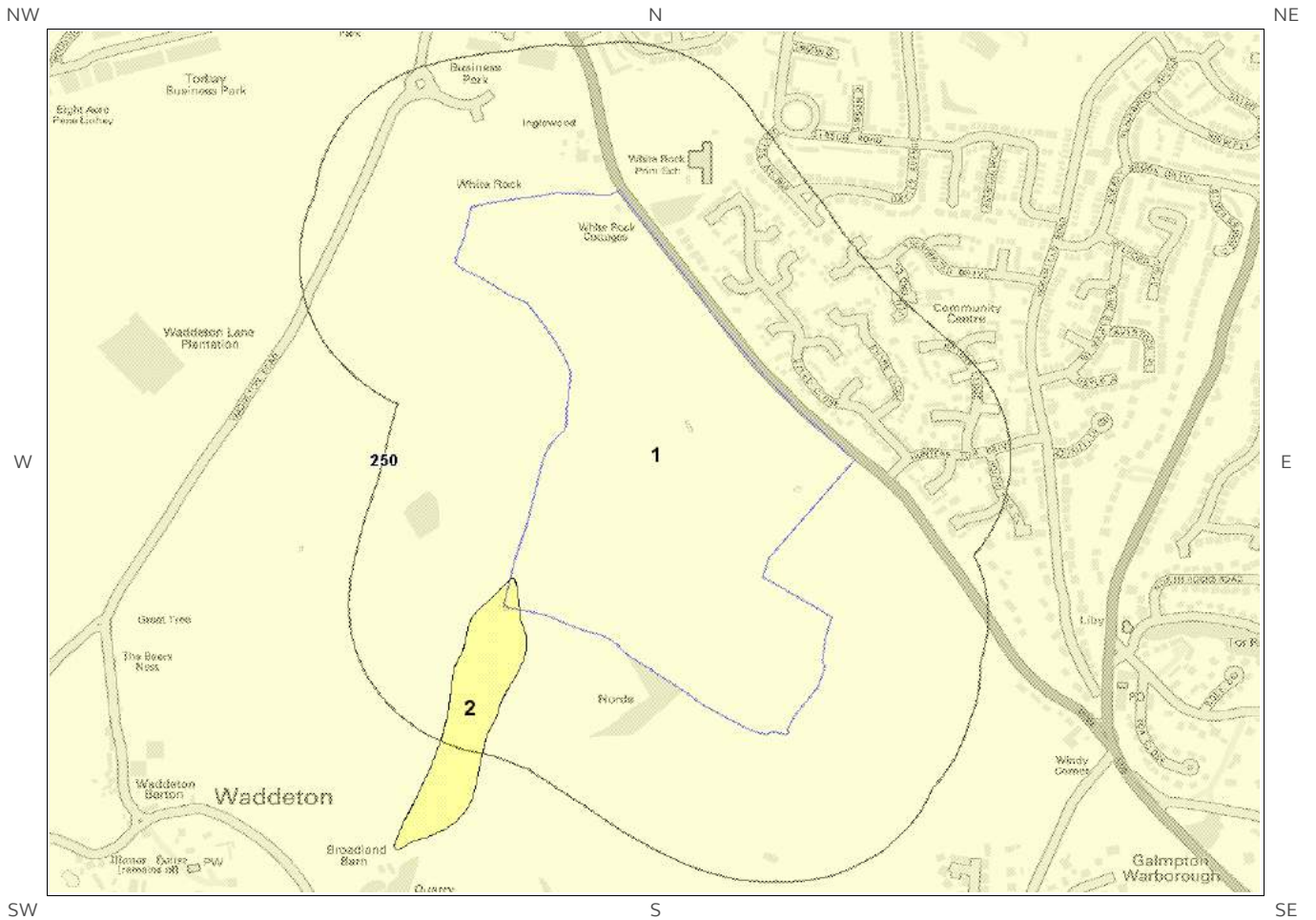


Collapsible Deposits Legend

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4.6 Running Sand Map



Running Sand Legend

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4 Natural Ground Subsidence

The National Ground Subsidence rating is obtained through the 6 natural ground stability hazard datasets, which are supplied by the British Geological Survey (BGS).

The following GeoSure data represented on the mapping is derived from the BGS Digital Geological map of Great Britain at 1:50,000 scale.

What is the maximum hazard rating of natural subsidence within the study site** boundary? Low

4.1 Shrink-Swell Clays

The following Shrink Swell information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.
2	0.0	On Site	Very Low	Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.

4.2 Landslides

The following Landslides information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.
2	0.0	On Site	Low	Possibility of slope instability problems after major changes in ground conditions. Consideration should be given to stability if changes to the ground, such as drainage or excavations, take place. Possible increase in construction cost to reduce potential slope stability problems. For existing property, no significant increase in insurance risk due to natural slope instability problems.
3	0.0	On Site	Low	Possibility of slope instability problems after major changes in ground conditions. Consideration should be given to stability if changes to the ground, such as drainage or excavations, take place. Possible increase in construction cost to reduce potential slope stability problems. For existing property, no significant increase in insurance risk due to natural slope instability problems.
4	0.0	On Site	Very Low	Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

* This includes an automatically generated 50m buffer zone around the site

ID	Distance (m)	Direction	Hazard Rating	Details
5	0.0	On Site	Very Low	Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

4.3 Ground Dissolution of Soluble Rocks

The following Ground Dissolution information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.
2	0.0	On Site	Low	Significant soluble rocks are present. Low possibility of subsidence occurring naturally, but may be possible in adverse conditions such as high surface or subsurface water flow. Consider implications for stability when changes to drainage or new construction are planned. For new build, site investigation should consider potential for dissolution problems on the site and its surroundings. Care should be taken with local drainage into the bedrock. Some possibility groundwater pollution. For existing property, possible increase in insurance risk due to soluble rocks.
3	0.0	On Site	Negligible	Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

4.4 Compressible Deposits

The following Compressible Deposits information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for compressible ground identified. No special actions required to avoid problems due to compressible ground. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible ground.

4.5 Collapsible Deposits

The following Collapsible Rocks information provided by the British Geological Survey:

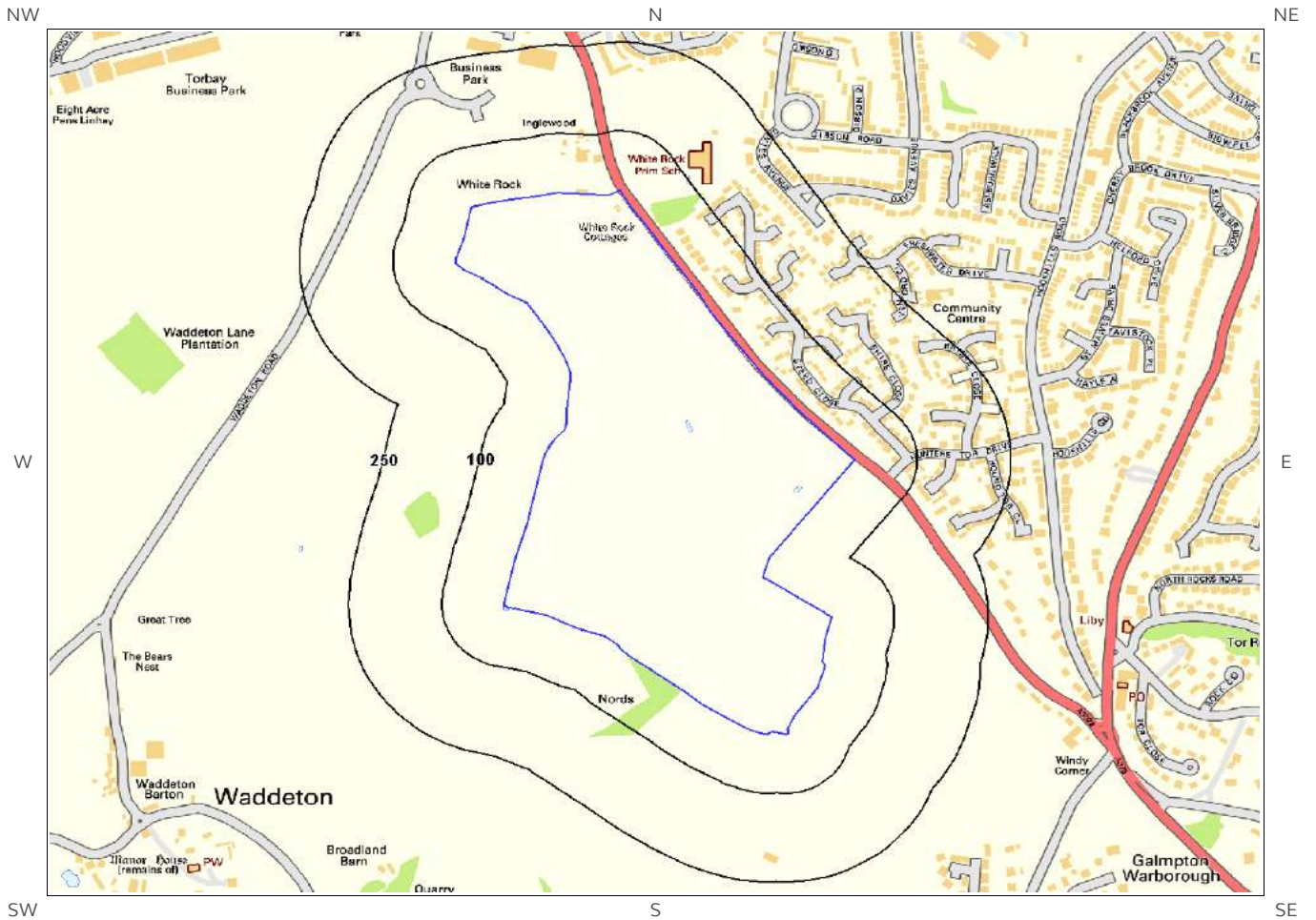
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

4.6 Running Sands

The following Running Sands information provided by the British Geological Survey:

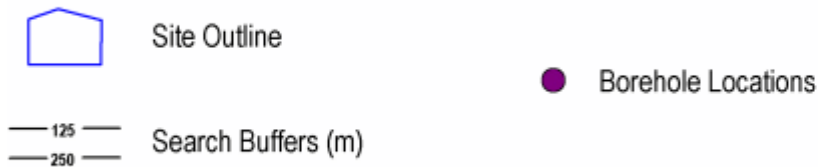
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.
2	0.0	On Site	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

5 Borehole Records Map



Borehole Records Legend

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5 Borehole Records

The systematic analysis of data extracted from the BGS Borehole Records database provides the following information.

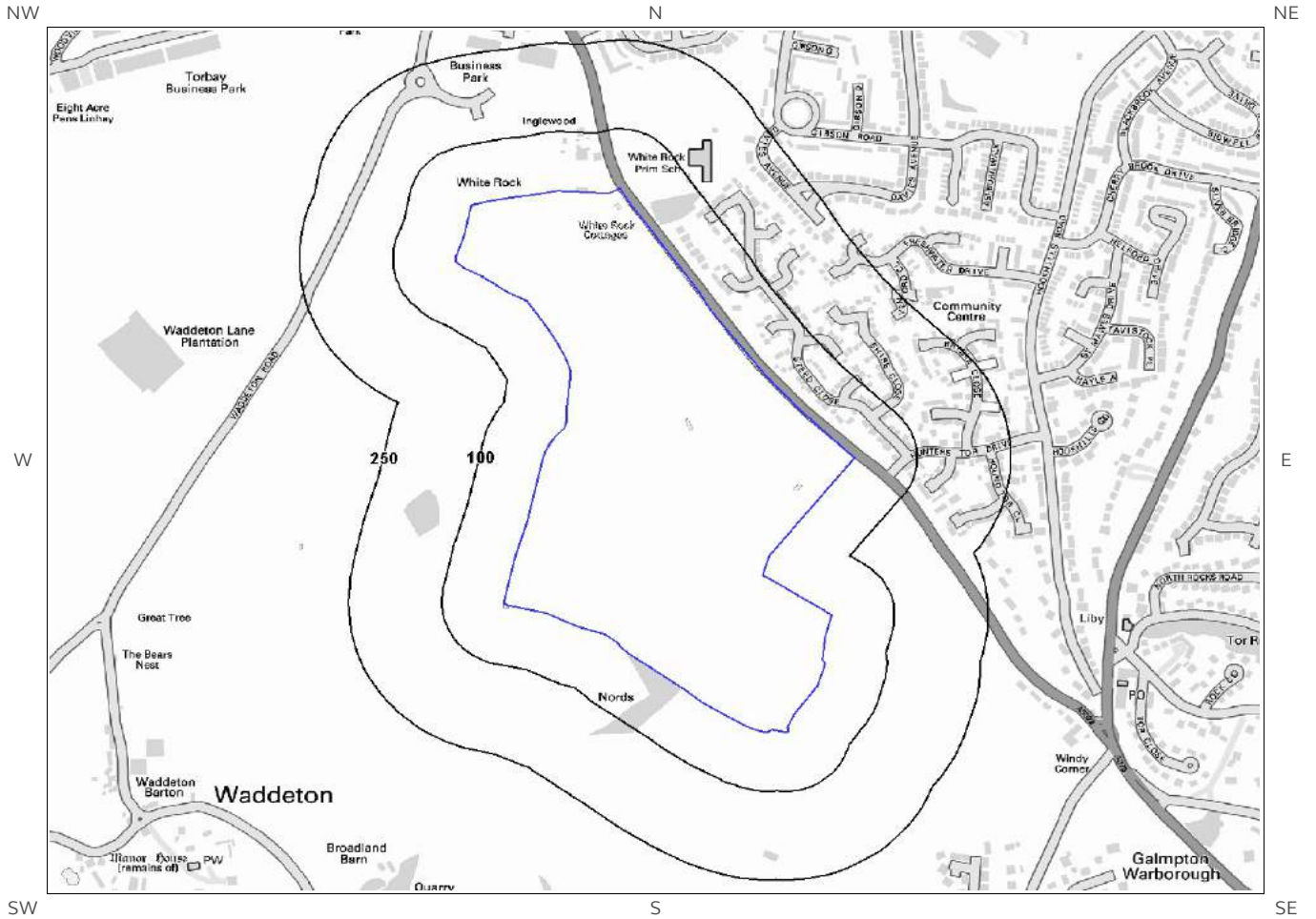
Records of boreholes within 250m of the study site boundary: 0

Database searched and no data found.

Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
54.0	SW	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
69.0	W	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
69.0	N	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
74.0	N	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
75.0	N	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
81.0	E	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
99.0	E	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
99.0	E	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
101.0	E	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
103.0	N	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
110.0	E	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
118.0	S	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
120.0	W	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
121.0	NE	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
121.0	SE	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
121.0	SE	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
123.0	SE	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
133.0	NE	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
137.0	SE	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
137.0	SE	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
141.0	NE	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
155.0	SE	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
158.0	S	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
162.0	NE	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
171.0	SW	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
171.0	SW	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
171.0	SW	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
171.0	SW	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
172.0	SW	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
172.0	SW	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
177.0	NE	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
181.0	SE	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
183.0	SW	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
192.0	SE	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
194.0	SW	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
194.0	SW	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
203.0	SE	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
210.0	NE	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
213.0	E	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
220.0	NE	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
220.0	NE	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
228.0	S	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
228.0	S	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
229.0	NW	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
230.0	NW	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
233.0	N	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
235.0	N	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
236.0	N	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
245.0	S	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
248.0	NE	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
249.0	SW	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg












*As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.

7 Railways and Tunnels Map



Railways and Tunnels Legend

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	Underground or Partially Underground Railway / Subway System		Railway Track (OpenStreetMap)
	Site Outline		Railway Tunnel (OS Mapping)
	250 Search Buffers (m)		Abandoned or Dismantled Railway (OpenStreetMap)
	500 Search Buffers (m)		Railway Track (OS Mapping)
			High Speed 2
			Crossrail 1
			Railway and/or Tunnel Feature from Historical Mapping

7 Railways and Tunnels

7.1 Tunnels

This data is derived from OpenStreetMap and provides information on the possible locations of underground railway systems in the UK - the London Underground, the Tyne & Wear Metro and the Glasgow Subway.

Have any underground railway lines been identified within the study site boundary? No

Have any underground railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels Map.

This data is derived from Ordnance Survey mapping and provides information on the possible locations of railway tunnels forming part of the UK overground railway network.

Have any other railway tunnels been identified within the site boundary? No

Have any other railway tunnels been identified within 250m of the site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels Map.

7.2 Historical Railway and Tunnel Features

This data is derived from Groundsure's unique Historical Land-use Database and contains features relating to tunnels, railway tracks or associated works that have been identified from historical Ordnance Survey mapping.

Have any historical railway or tunnel features been identified within the study site boundary? No

Have any historical railway or tunnel features been identified within 250m of the study site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels Map.

7.3 Historical Railways

This data is derived from OpenStreetMap and provides information on the possible alignments of abandoned or dismantled railway lines in proximity to the study site.

Have any historical railway lines been identified within the study site boundary? No

Have any historical railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Note: multiple sections of the same track may be listed in the detail above

Any records that have been identified are represented on the Railways and Tunnels Map.

7.4 Active Railways

These datasets are derived from Ordnance Survey mapping and OpenStreetMap and provide information on the possible locations of active railway lines in proximity to the study site.

Have any active railway lines been identified within the study site boundary? No

Have any active railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Note: multiple sections of the same track may be listed in the detail above

Any records that have been identified are represented on the Railways and Tunnels Map.

7.5 Railway Projects

These datasets provide information on the location of large scale railway projects High Speed 2 and Crossrail 1 .

Is the study site within 5km of the route of the High Speed 2 rail project? No

Is the study site within 500m of the route of the Crossrail 1 rail project? No

Further information on proximity to these routes, the project construction status and associated works can be obtained through the purchase of a Groundsure HS2 and Crossrail 1 Report.

The route data has been digitised from publicly available maps by Groundsure. The route as provided relates to the Crossrail 1 project only, and does not include any details of the Crossrail 2 project, as final details of the route for Crossrail 2 are still under consultation.

- (i) the Client or Beneficiary's failure to provide facilities, access or information;
- (ii) fire, storm, flood, tempest or epidemic;
- (iii) Acts of God or the public enemy;
- (iv) riot, civil commotion or war;
- (v) strikes, labour disputes or industrial action;
- (vi) acts or regulations of any governmental or other agency;
- (vii) suspension or delay of services at public registries by Third Party Data Providers;
- (viii) changes in law; or
- (ix) any other reason beyond Groundsure's reasonable control.

In the event that Groundsure is prevented from performing the Services (or any part thereof) in accordance with this clause 12.6 for a period of not less than 30 days then Groundsure shall be entitled to terminate this Contract immediately on written notice to the Client.

12.8 Any notice provided shall be in writing and shall be deemed to be properly given if delivered by hand or sent by first class post, facsimile or by email to the address, facsimile number or email address of the relevant party as may have been notified by each party to the other for such purpose or in the absence of such notification the last known address.

12.9 Such notice shall be deemed to have been received on the day of delivery if delivered by hand, facsimile or email (save to the extent such day is not a working day where it shall be deemed to have been delivered on the next working day) and on the second working day after the day of posting if sent by first class post.

12.10 The Contract constitutes the entire agreement between the parties and shall supersede all previous arrangements between the parties relating to the subject matter hereof.

12.11 Each of the provisions of the Contract is severable and distinct from the others and if one or more provisions is or should become invalid, illegal or unenforceable, the validity and enforceability of the remaining provisions shall not in any way be tainted or impaired.

12.12 This Contract shall be governed by and construed in accordance with English law and any proceedings arising out of or connected with this Contract shall be subject to the exclusive jurisdiction of the English courts.

12.13 Groundsure is an executive member of the Council of Property Search Organisation (CoPSO) and has signed up to the Search Code administered by the Property Codes Compliance Board (PCCB). All Risk Screening Reports shall be supplied in accordance with the provisions of the Search Code.

12.14 If the Client or Beneficiary has a complaint about the Services, written notice should be given to the Compliance Officer at Groundsure who will respond in a timely manner. In the event you are not satisfied with Groundsure's complaints handling process or you are unable to resolve the complaint, at your discretion you may refer the complaint to The Property Ombudsman Scheme at the following URL/email: website www.tpos.co.uk or email: admin@tpos.co.uk

12.15 The Client agrees that it shall, and shall procure that each Beneficiary shall, treat in confidence all Confidential Information and shall not, and shall procure that each Beneficiary shall not (i) disclose any Confidential Information to any third party other than in accordance with the terms of this Contract; and (ii) use Confidential Information for a purpose other than the exercise of its rights and obligations under this Contract. Subject to clause 6.6, nothing shall prevent the Client or any Beneficiary from disclosing Confidential Information to the extent required by law

Groundsure Enviro Insight

Address: White Rock,
Date: 19 Jul 2016
Reference: EMS-373342_500371
Client: Clarkebond UK Limited



Aerial Photograph Capture date: 22-May-2010
Grid Reference: 288142,057468
Site Size: 31.45ha

Report Reference: EMS-373342_500371
Client Reference: EMS_373342_500371

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Overview of Findings

For further details on each dataset, please refer to each individual section in the main report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Section 1: Historical Industrial Sites	On-site	0-50	51-250	251-500
1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	1	10	7	19
1.2 Additional Information – Historical Tank Database	1	1	1	8
1.3 Additional Information – Historical Energy Features Database	0	13	11	47
1.4 Additional Information – Historical Petrol and Fuel Site Database	0	0	0	0
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	0	0	0	4
1.6 Potentially Infilled Land	1	5	4	6

Section 2: Environmental Permits, Incidents and Registers	On-site	0-50m	51-250	251-500
2.1 Industrial Sites Holding Environmental Permits and/or Authorisations				
2.1.1 Records of historic IPC Authorisations	0	0	0	0
2.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	0	0
2.1.3 Records of Red List Discharge Consents	0	0	0	0
2.1.4 Records of List 1 Dangerous Substances Inventory sites	0	0	0	0
2.1.5 Records of List 2 Dangerous Substances Inventory sites	0	0	0	0
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	0	0	2
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
2.1.8 Records of Licensed Discharge Consents	1	0	0	2
2.1.9 Records of Water Industry Referrals	0	0	0	0
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	0	0	0
2.2 Records of COMAH and NIHHS sites	0	0	0	0
2.3 Environment Agency Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	0	0	0	0
2.3.2 National Incidents Recording System, List 1	0	0	0	1
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0

Section 3: Landfill and Other Waste Sites	On-site	0-50m	51-250	251-500	501-1000	1000-1500
3.1 Landfill Sites						
3.1.1 Environment Agency Registered Landfill Sites	0	0	0	0	0	Not searched
3.1.2 Environment Agency Historic Landfill Sites	0	0	1	0	0	1
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	0
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	0	0	0	1	3
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	0	Not searched	Not searched
3.2.2 Environment Agency Licensed Waste Sites	0	0	0	2	0	0

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	1	2	3	Not searched
4.2 Records of Petrol and Fuel Sites	0	0	0	1
4.3 National Grid Underground Electricity Cables	0	0	0	0
4.4 National Grid Gas Transmission Pipelines	0	0	0	0

Section 5: Geology	
5.1 Are there any records of Artificial Ground and Made Ground present beneath the study site?	No
5.2 Are there any records of Superficial Ground and Drift Geology present beneath the study site?	Yes
5.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.	

Section 6: Hydrogeology and Hydrology	0-500m					
6.1 Are there any records of Strata Classification in the Superficial Geology within 500m of the study site?	Yes					
6.2 Are there any records of Strata Classification in the Bedrock Geology within 500m of the study site?	Yes					
	On-site	0-50m	51-250	251-500	501-1000	1000-2000
6.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	0	1	7	12
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	8
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	2
6.6 Source Protection Zones (within 500m of the study site)	0	0	0	1	Not searched	Not searched
6.7 Source Protection Zones within Confined Aquifer	0	0	0	0	Not searched	Not searched
6.8 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site)	4	0	3	2	Not searched	Not searched
	On-site	0-50m	51-250	251-500	501-1000	1000-1500

Section 6: Hydrogeology and Hydrology

0-500m

6.9 Is there any Environment Agency information on river quality within 1500m of the study site?	No	No	No	No	No	No
6.10 Detailed River Network entries within 500m of the site	0	0	0	0	Not searched	Not searched
6.11 Surface water features within 250m of the study site	No	No	No	Not searched	Not searched	Not searched

Section 7: Flooding

7.1 Are there any Environment Agency Zone 2 floodplains within 250m of the study site?	No
7.2 Are there any Environment Agency Zone 3 floodplains within 250m of the study site	No
7.3 What is the Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site?	Very Low
7.4 Are there any Flood Defences within 250m of the study site?	No
7.5 Are there any areas benefiting from Flood Defences within 250m of the study site?	No
7.6 Are there any areas used for Flood Storage within 250m of the study site?	No
7.7 What is the maximum BGS Groundwater Flooding susceptibility within 50m of the study site?	Potential at Surface
7.8 What is the BGS confidence rating for the Groundwater Flooding susceptibility areas?	High

Section 8: Designated Environmentally Sensitive Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	0	4
8.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
8.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	1
8.4 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
8.5 Records of Ramsar sites	0	0	0	0	0	0
8.6 Records of Ancient Woodlands	0	0	0	0	1	2
8.7 Records of Local Nature Reserves (LNR)	0	0	0	0	0	2
8.8 Records of World Heritage Sites	0	0	0	0	0	0
8.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0
8.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	1	2

Section 8: Designated Environmentally Sensitive Sites	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.11 Records of National Parks	0	0	0	0	0	0
8.12 Records of Nitrate Sensitive Areas	0	0	0	0	0	0
8.13 Records of Nitrate Vulnerable Zones	0	0	0	0	0	0
8.14 Records of Green Belt land	0	0	0	0	0	0

Section 9: Natural Hazards	
9.1 What is the maximum risk of natural ground subsidence?	Low
9.1.1 What is the maximum Shrink-Swell hazard rating identified on the study site?	Very Low
9.1.2 What is the maximum Landslides hazard rating identified on the study site?	Low
9.1.3 What is the maximum Soluble Rocks hazard rating identified on the study site?	Low
9.1.4 What is the maximum Compressible Ground hazard rating identified on the study site?	Negligible
9.1.5 What is the maximum Collapsible Rocks hazard rating identified on the study site?	Very Low
9.1.6 What is the maximum Running Sand hazard rating identified on the study site?	Very Low
9.2 Radon	
9.2.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The property is in a Radon Affected Area, as between 10 and 30% of properties are above the Action Level.
9.2.2 Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	Full radon protective measures are necessary.

Section 10: Mining	
10.1 Are there any coal mining areas within 75m of the study site?	No
10.2 Are there any Non-Coal Mining areas within 50m of the study site boundary?	Yes
10.3 Are there any brine affected areas within 75m of the study site?	No

Using this report

The following report is designed by Environmental Consultants for Environmental Professionals bringing together the most up-to-date market leading environmental data. This report is provided under and subject to the Terms & Conditions agreed between Groundsure and the Client. The document contains the following sections:

1. Historical Industrial Sites

Provides information on past land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. Potentially Infilled Land features are also included. This search is conducted using radii of up to 500m.

2. Environmental Permits, Incidents and Registers

Provides information on Regulated Industrial Activities and Pollution Incidents as recorded by Regulatory Authorities, and sites determined as Contaminated Land. This search is conducted using radii up to 500m.

3. Landfills and Other Waste Sites

Provides information on landfills and other waste sites that may pose a risk to the study site. This search is conducted using radii up to 1500m.

4. Current Land Uses

Provides information on current land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. These searches are conducted using radii of up to 500m. This includes information on potentially contaminative industrial sites, petrol stations and fuel sites as well as high pressure gas pipelines and underground electricity transmission lines.

5. Geology

Provides information on artificial and superficial deposits and bedrock beneath the study site.

6. Hydrogeology and Hydrology

Provides information on productive strata within the bedrock and superficial geological layers, abstraction licenses, Source Protection Zones (SPZs) and river quality. These searches are conducted using radii of up to 2000m.

7. Flooding

Provides information on river and coastal flooding, flood defences, flood storage areas and groundwater flood areas. This search is conducted using radii of up to 250m.

8. Designated Environmentally Sensitive Sites

Provides information on the Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, Local Nature Reserves (LNR), Areas of Outstanding Natural Beauty (AONB), National Parks (NP), Environmentally Sensitive Areas, Nitrate Sensitive Areas, Nitrate Vulnerable Zones and World Heritage Sites and Scheduled Ancient Woodland. These searches are conducted using radii of up to 2000m.

9. Natural Hazards

Provides information on a range of natural hazards that may pose a risk to the study site. These factors include natural ground subsidence and radon..

10. Mining

Provides information on areas of coal and non-coal mining and brine affected areas.

11. Contacts

This section of the report provides contact points for statutory bodies and data providers that may be able to provide further information on issues raised within this report. Alternatively, Groundsure provide a free Technical Helpline (08444 159000) for further information and guidance.

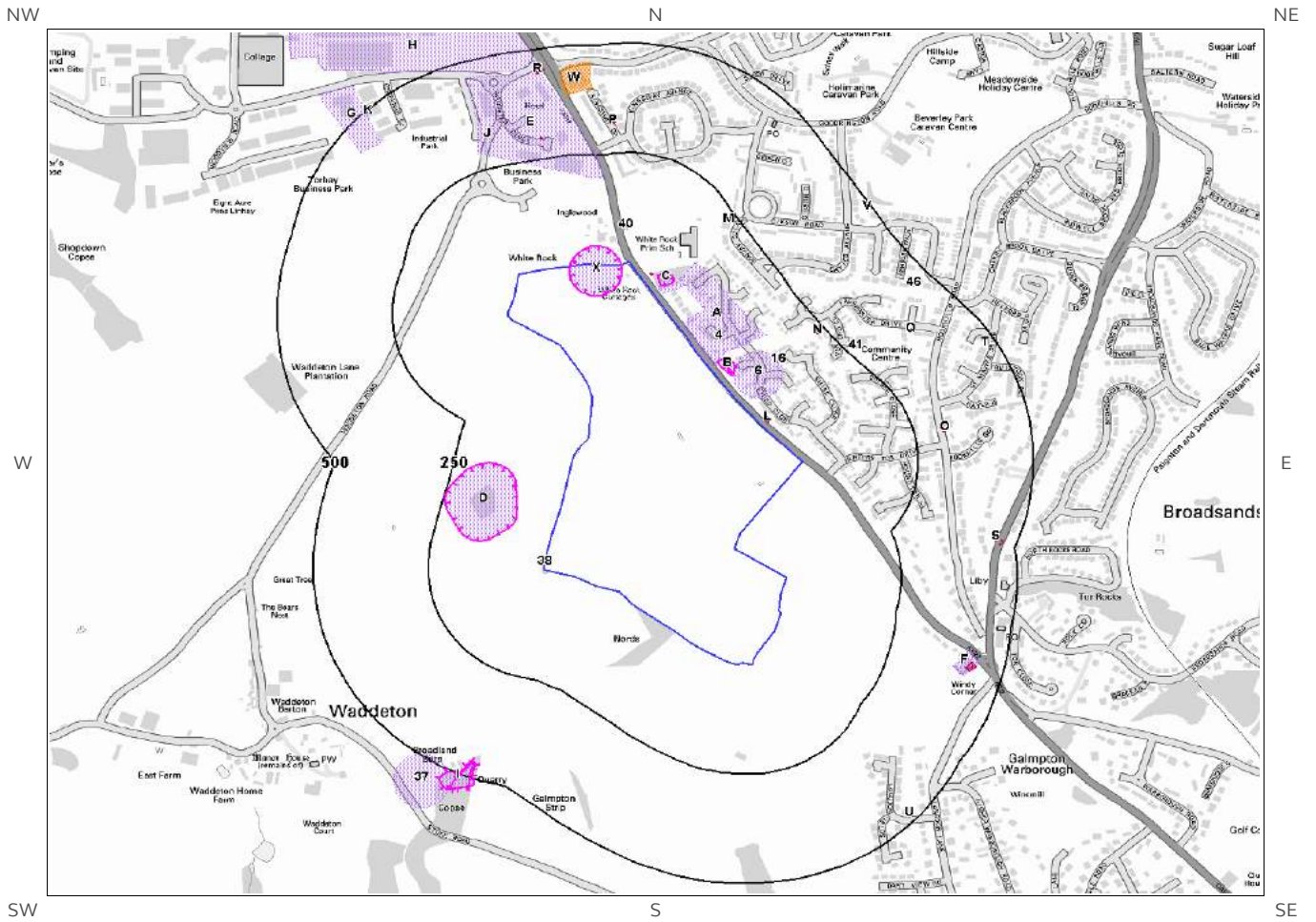
Note: Maps

Only certain features are placed on the maps within the report. All features represented on maps found within this search are given an identification number. This number identifies the feature on the mapping and correlates it to the additional information provided below. This identification number precedes all other information and takes the following format -Id: 1, Id: 2, etc. Where numerous features on the same map are in such close proximity that the numbers would obscure each other a letter identifier is used instead to represent the features. (e.g. Three features which overlap may be given the identifier "A" on the map and would be identified separately as features 1A, 3A, 10A on the data tables provided).

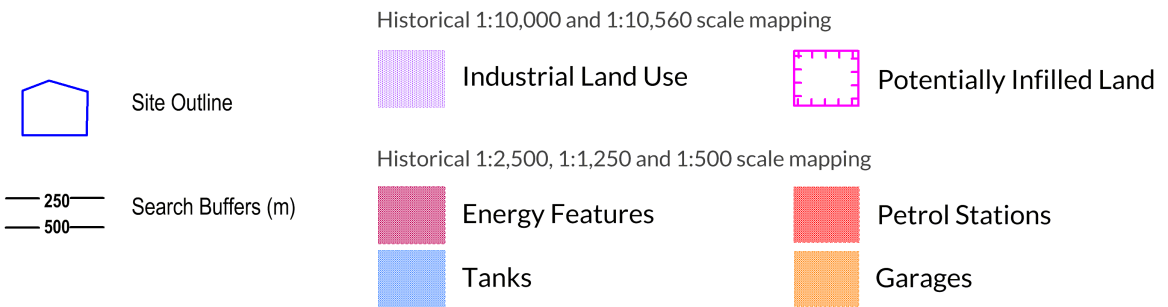
Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as "Not Shown".

All distances given in this report are in Metres (m). Directions are given as compass headings such as N: North, E: East, NE: North East from the nearest point of the study site boundary.

1. Historical Land Use



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1. Historical Industrial Sites

1.1 Potentially Contaminative Uses identified from 1:10,000 scale Mapping

The systematic analysis of data extracted from standard 1:10,560 and 1:10,000 scale historical maps provides the following information:

Records of sites with a potentially contaminative past land use within 500m of the search boundary: 37

ID	Distance [m]	Direction	Use	Date
1X	0	On Site	Unspecified Quarry	1886
2A	9	NE	Nurseries	1981
3A	9	NE	Nurseries	1963
4	12	NE	Nurseries	1938
5A	15	NE	Nurseries	1933
6	20	NE	Old Lime Kiln	1938
7B	20	NE	Unspecified Pit	1981
8B	20	NE	Unspecified Pit	1963
9C	25	NE	Unspecified Pit	1981
10C	25	NE	Unspecified Pit	1963
11B	27	NE	Refuse Heap	1982
12D	85	W	Marl Pits	1988
13D	85	W	Marl Pits	1963
14D	85	W	Marl Pits	1981
15D	85	W	Marl Pits	1982
16	122	NE	Old Lime Kiln	1933
17E	199	N	Unspecified Works	1982
18E	199	N	Unspecified Works	1988
19F	393	E	Telephone Exchange	1933
20F	393	E	Telephone Exchange	1938
21F	394	E	Telephone Exchange	1963
22F	394	E	Telephone Exchange	1981
23F	398	E	Telephone Exchange	1982
24F	398	E	Telephone Exchange	1988
25G	424	NW	Unspecified Depot	1988
26G	424	NW	Unspecified Depot	1982
27H	458	N	Industrial Estate	1982
28H	458	N	Industrial Estate	1988
29H	458	N	Unspecified Works	1982
30H	458	N	Unspecified Works	1988
31I	463	S	Unspecified Quarry	1963
32I	463	S	Unspecified Disused Quarry	1982
33I	463	S	Unspecified Quarry	1981

34I	463	S	Unspecified Disused Quarry	1988
35I	464	S	Unspecified Quarry	1886
36I	464	S	Unspecified Old Quarry	1906
37	489	SW	Disused Lime Kiln	1988

1.2 Additional Information – Historical Tank Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical tanks within 500m of the search boundary:

11

ID	Distance (m)	Direction	Use	Date
38	0	On Site	Unspecified Tank	1952
39C	20	NE	Unspecified Tank	1952
40	74	N	Unspecified Tank	1933
41	266	NE	Unspecified Tank	1973
42J	322	N	Unspecified Tank	1989
43J	323	N	Unspecified Tank	1978
44J	324	N	Unspecified Tank	1993
45J	324	N	Unspecified Tank	1997
46	456	NE	Unspecified Tank	1952
47K	492	NW	Unspecified Tank	1989
48K	493	NW	Unspecified Tank	1993

1.3 Additional Information – Historical Energy Features Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical energy features within 500m of the search boundary:

71

ID	Distance (m)	Direction	Use	Date
49L	13	NE	Gas Governor	1993
50L	13	NE	Gas Governor	1993
51L	13	NE	Gas Governor	1989
52L	13	NE	Gas Governor	1987
53L	13	NE	Gas Governor	1986
54C	21	NE	Electricity Substation	1986
55C	21	NE	Electricity Substation	1987
56C	21	NE	Electricity Substation	1985
57C	22	NE	Electricity Substation	1968

58C	22	NE	Electricity Substation	1993
59C	22	NE	Electricity Substation	1993
60C	22	NE	Electricity Substation	1989
61C	22	NE	Electricity Substation	1973
62M	227	NE	Electricity Substation	1993
63M	227	NE	Electricity Substation	1993
64N	229	NE	Electricity Substation	1986
65N	229	NE	Electricity Substation	1987
66N	229	NE	Electricity Substation	1985
67M	230	NE	Electricity Substation	1989
68M	230	NE	Electricity Substation	1983
69N	230	NE	Electricity Substation	1993
70N	230	NE	Electricity Substation	1993
71N	230	NE	Electricity Substation	1989
72M	231	NE	Electricity Substation	1973
73E	295	N	Electricity Substation	1989
74E	295	N	Electricity Substation	1978
75E	298	N	Electricity Substation	1997
76E	298	N	Electricity Substation	1993
77O	309	E	Electricity Substation	1983
78O	309	E	Electricity Substation	1993
79O	310	E	Electricity Substation	1973
80O	310	E	Electricity Substation	1984
81O	310	E	Electricity Substation	1968
82P	318	N	Electricity Substation	1973
83P	319	N	Electricity Substation	1989
84P	319	N	Electricity Substation	1983
85P	320	N	Electricity Substation	1993
86P	320	N	Electricity Substation	1993
87Q	374	NE	Electricity Substation	1983
88Q	375	NE	Electricity Substation	1984
89Q	375	NE	Electricity Substation	1993
90F	420	E	Electricity Substation	1983
91F	420	E	Electricity Substation	1973
92F	420	E	Electricity Substation	1968
93F	422	E	Electricity Substation	1993
94F	423	E	Electricity Substation	1973
95F	430	E	Electricity Substation	1993
96F	432	E	Electricity Substation	1980
97R	446	N	Electricity Substation	1997
98R	446	N	Electricity Substation	1993
99R	447	N	Electricity Substation	1978
100R	447	N	Electricity Substation	1989
101R	450	N	Electricity Substation	1952
102S	452	SE	Electricity Substation	1993
103S	467	SE	Electricity Substation	1973

104S	467	SE	Electricity Substation	1983
105S	467	SE	Electricity Substation	1968
106S	467	SE	Electricity Substation	1980
107T	472	NE	Electricity Substation	1983
108T	473	NE	Electricity Substation	1993
109T	473	NE	Electricity Substation	1984
110T	473	NE	Electricity Substation	1973
111U	480	SE	Electricity Substation	1993
112U	481	SE	Electricity Substation	1968
113U	481	SE	Electricity Substation	1973
114V	485	NE	Electricity Substation	1993
115V	485	NE	Electricity Substation	1993
116V	485	NE	Electricity Substation	1973
117V	485	NE	Electricity Substation	1989
118V	485	NE	Electricity Substation	1989
119V	486	NE	Electricity Substation	1968

1.4 Additional Information – Historical Petrol and Fuel Site Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical petrol stations and fuel sites within 500m of the search boundary: 0

Database searched and no data found.

1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical garage and motor vehicle repair sites within 500m of the search boundary: 4

ID	Distance (m)	Direction	Use	Date
120W	389	N	Garage	1978
121W	389	N	Garage	1993
122W	389	N	Garage	1997
123W	391	N	Garage	1989

1.6 Potentially Infilled Land

Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 16

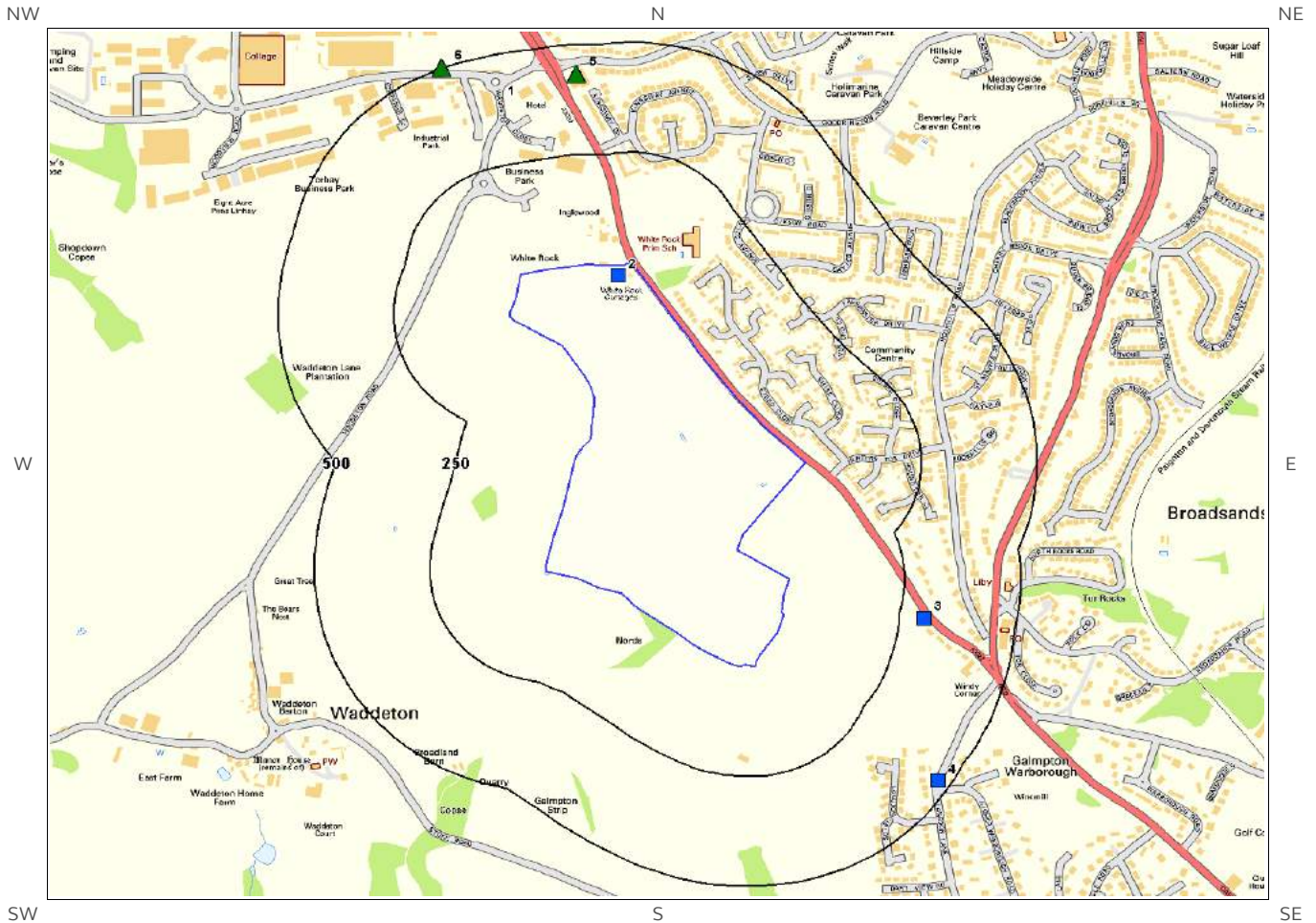
The following Historical Potentially Infilled Features derived from the Historical Mapping information is


















ID	Distance(m)	Direction	Use	Date
124X	0	On Site	Unspecified Quarry	1886
125B	20	NE	Unspecified Pit	1981
126B	20	NE	Unspecified Pit	1963
127C	25	NE	Unspecified Pit	1981
128C	25	NE	Unspecified Pit	1963
129B	27	NE	Refuse Heap	1982
130D	85	W	Marl Pits	1988
131D	85	W	Marl Pits	1963
132D	85	W	Marl Pits	1981
133D	85	W	Marl Pits	1982
134I	463	S	Unspecified Disused Quarry	1982
135I	463	S	Unspecified Disused Quarry	1988
136I	463	S	Unspecified Quarry	1963
137I	463	S	Unspecified Quarry	1981
138I	464	S	Unspecified Quarry	1886
139I	464	S	Unspecified Old Quarry	1906



2. Environmental Permits, Incidents and Registers Map



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- | | | | | | |
|---|-------------------------------|---|--|---|---|
|  | Site Outline |  | Recorded Pollution Incident |  | RAS 3 & 4 Authorisations |
|  | Dangerous Substances (List 1) |  | Part A(1) Authorised Processes and Historic IPC Authorisations |  | Part A(2) and Part B Authorised Processes |
|  | Dangerous Substances (List 2) |  | Water Industry Referrals |  | COMAH / NIHHS Sites |
|  | Search Buffers (m) |  | Licensed Discharge Consents |  | Sites Determined as Contaminated Land |
|  | |  | Red List Discharge Consents |  | Hazardous Substance Consents and Enforcements |

2. Environmental Permits, Incidents and Registers

2.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency and Local Authorities reveal the following information:

2.1.1 Records of historic IPC Authorisations within 500m of the study site:

0

Database searched and no data found.

2.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site:

0

Database searched and no data found.

2.1.3 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site:

0

Database searched and no data found.

2.1.4 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site:

0

Database searched and no data found.

2.1.5 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site:

0

Database searched and no data found.

2.1.6 Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site:

2

The following Part A(2) and Part B Activities are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
5	428	N	287959 58354	Address: Sandridge of Torbay, Brixham Road, Paignton, Devon, TQ4 7BG Process: Unloading of Petrol into Storage at Service Stations Status: Historical Permit Permit Type: Part B Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified
6	497	N	287669 58369	Address: AVX Ltd, Long Road, Paignton, TQ4 7ER Process: Organic Acid/ Tantalum process Status: Historical Permit Permit Type: Part B Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

2.1.8 Records of Licensed Discharge Consents within 500m of the study site:

3

The following Licensed Discharge Consents records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
2	0	On Site	288050 057900	Address: NO 1 WHITEROCK COTTAGES, BRIXHAM ROAD, PAIGNTON, DEVON Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 202111 Permit Version: 1 Receiving Water: Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 23/07/2001 Effective Date: 23-Jul-2001 Revocation Date: -
3	303	E	288710 057120	Address: PAIGNTON (BRIXHAM ROAD), , . Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: NRA-SW-1418 Permit Version: 1 Receiving Water: Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 30/10/1989 Effective Date: 30-Oct-1989 Revocation Date: 23/10/2000
4	472	SE	288740 056750	Address: 3A LANGDON LANE, GALPTOM, DEVON, . Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: NRA-SW-7886 Permit Version: 1 Receiving Water: Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 22/03/1996 Effective Date: 22-Mar-1996 Revocation Date: -

2.1.9 Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site:

0

Database searched and no data found.

2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site:

0

Database searched and no data found.

2.2 Dangerous or Hazardous Sites

Records of COMAH & NIHHS sites within 500m of the study site:

0

Database searched and no data found.

2.3 Environment Agency Recorded Pollution Incidents

2.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site:

0

Database searched and no data found.

2.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site:

1

The following NIRS List 1 records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance(m)	Direction	NGR	Details
1	397	N		Incident Date: 09-Dec-1999 Incident Identification: 51467.0 Catchments Name: TIDAL DART Water Description: ESTUARY Water Course: DART ESTUARY (EAST BANK) Incident Substantiated: Yes Priority Description: NotAvailable Waste Description: Not Available Water Impact: No Impact Land Impact: Minor Impact Air Impact: Major (Persistent, Extensive) Impact Action Taken: No Further Action

2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

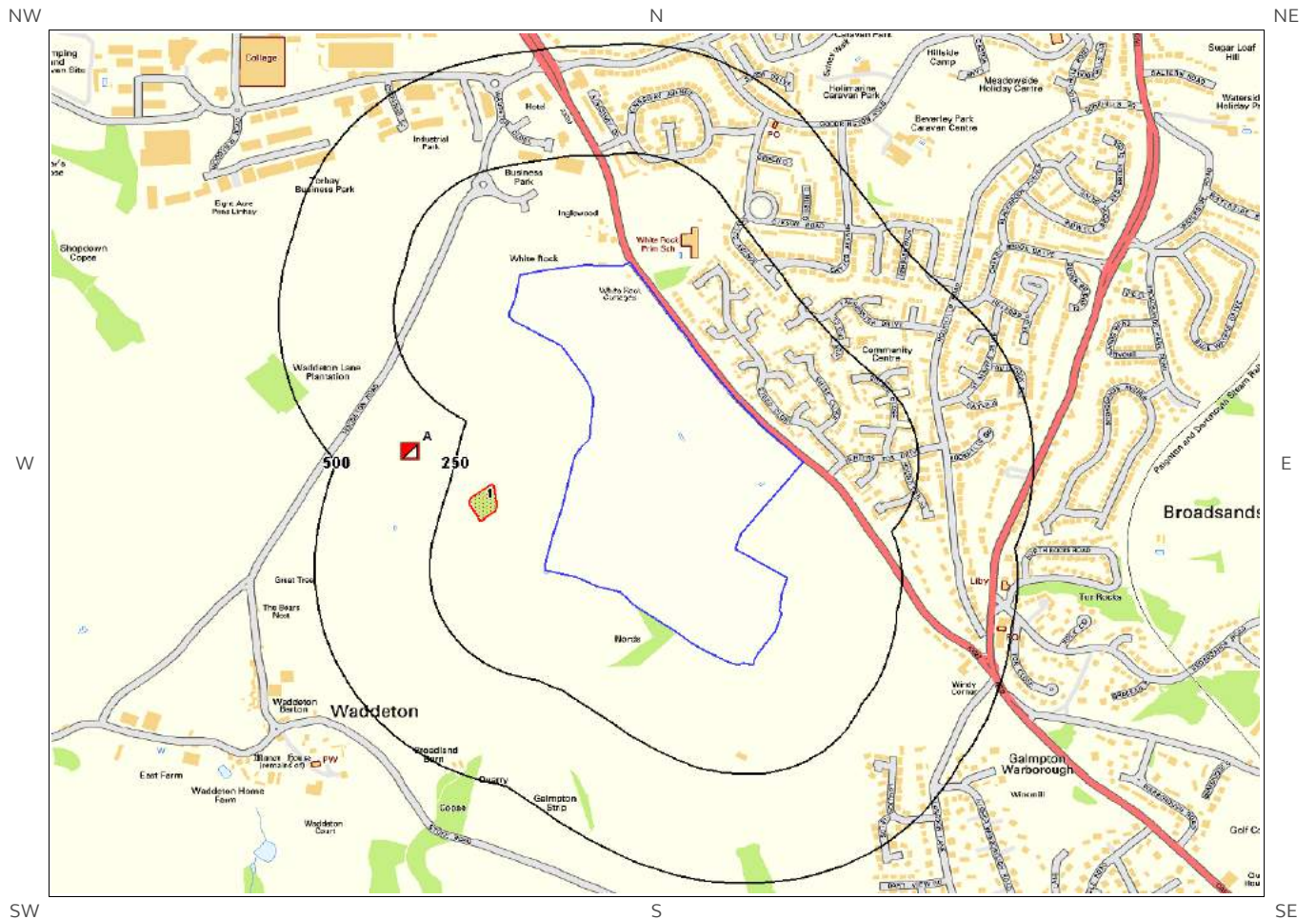
How many records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site?

0

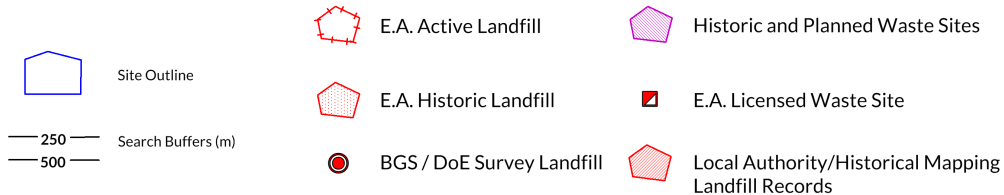
Database searched and no data found.



3. Landfill and Other Waste Sites Map



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3. Landfill and Other Waste Sites

3.1 Landfill Sites

3.1.1 Records from Environment Agency landfill data within 1000m of the study site:

0

Database searched and no data found.

3.1.2 Records of Environment Agency historic landfill sites within 1500m of the study site:

2

The following landfill records are represented as either points or polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
1	135	W	287700 57300	Site Address: Marl Pit, Waddeton, Stoke Gabriel, Devon Waste Licence: Yes Site Reference: L/9/125/89, S(104) Waste Type: Inert, Industrial Environmental Permitting Regulations (Waste) Reference: EK1/L/DAI002 Licence Issue: 22-Nov-1989 Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: Dainton Group Services Limited First Recorded: 01-Dec-1989 Last Recorded: -
Not shown	1124	NE	288700 59200	Site Address: Clennon Valley Tip, Dartmouth Road, Paignton, Devon Waste Licence: - Site Reference: GDO 332 Waste Type: Household, Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: Torbay County Borough Council Licence Holder: - First Recorded: 31-Dec-1930 Last Recorded: 01-Jan-1970

3.1.3 Records of BGS/DoE non-operational landfill sites within 1500m of the study site:

0

Database searched and no data found.

3.1.4 Records of Landfills from Local Authority and Historical Mapping Records within 1500m of the study site:

4

The following landfill records are represented as points or polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Site Address	Source	Data Type
Not shown	917	S	288095 56102	Refuse Tip	1972 mapping	Polygon
Not shown	1100	NE	288897 58716	Refuse Tip	1968 mapping	Polygon
Not shown	1142	NE	288931 58745	Refuse Tip	1968 mapping	Polygon
Not shown	1161	NE	288942 58813	Refuse Tip	1968 mapping	Polygon

3.2 Other Waste Sites

3.2.1 Records of waste treatment, transfer or disposal sites within 500m of the study site:

0

Database searched and no data found.

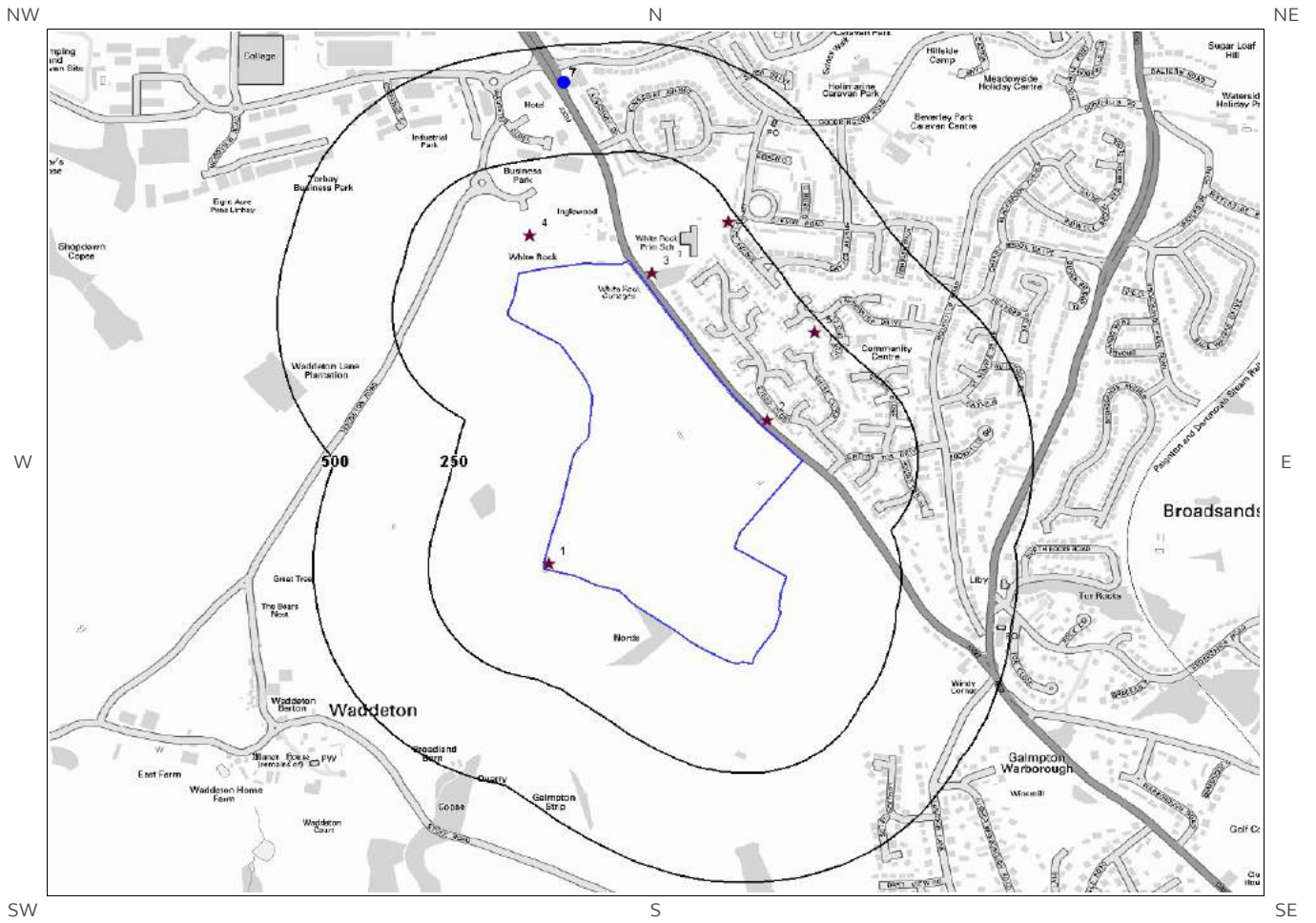
3.2.2 Records of Environment Agency licensed waste sites within 1500m of the study site:

2

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
3A	352	W	287600 57500	<p>Site Address: Waddeton, Devon Type: - Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: DAI002 EPR reference: EA/EPR/FP3597HS/S002 Operator: Dainton Group Services Ltd Waste Management licence No: 21970 Annual Tonnage: 0.0</p> <p>Issue Date: 22/11/1989 Effective Date: - Modified: - Surrendered Date: 0 Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Marl Pit Correspondence Address: -</p>
4A	352	W	287600 57500	<p>Site Address: Waddeton, Devon Type: - Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: DAI002 EPR reference: - Operator: Dainton Group Services Ltd Waste Management licence No: 21970 Annual Tonnage: 0.0</p> <p>Issue Date: 22/11/1989 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Surrendered Site Name: Marl Pit Correspondence Address: Dainton House Farm, Ipplepen, Devon, TQ12 5TZ</p>

4. Current Land Use Map



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-  Site Outline
-  Current Industrial Sites
-  Electricity Transmission Cables
-  Search Buffers (m)
-  Petrol & Fuel Sites
-  Gas Transmission Pipelines

4. Current Land Uses

4.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site:

6

The following records are represented as points on the Current Land Uses map.

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	0	On Site	Tank	287904 57240	TQ4	Tanks (Generic)	Industrial Features
2	17	NE	Gas Governor Station	288378 57569	TQ4	Gas Features	Infrastructure and Facilities
3	25	NE	Electricity Sub Station	288127 57904	TQ4	Electrical Features	Infrastructure and Facilities
4	81	N	Pump	287863 57990	TQ4	Water Pumping Stations	Industrial Features
5	228	NE	Electricity Sub Station	288480 57769	TQ4	Electrical Features	Infrastructure and Facilities
6	228	NE	Electricity Sub Station	288293 58022	TQ4	Electrical Features	Infrastructure and Facilities

4.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site:

1

The following petrol or fuel site records provided by Catalist are represented as points on the Current Land Use map:

ID	Distance (m)	Direction	NGR	Company	Address	LPG	Status
7	416	N	287937 58340	Obsolete	Alan Kerr Ltd, Brixham Road, Brixham Road, Paignton, Devon, TQ4 7BG	Not Applicable	Obsolete



4.3 National Grid High Voltage Underground Electricity Transmission Cables

This dataset identifies the high voltage electricity transmission lines running between generating power plants and electricity substations. The dataset does not include the electricity distribution network (smaller, lower voltage cables distributing power from substations to the local user network). This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high voltage underground electricity transmission cables within 500m of the study site: 0

Database searched and no data found.

4.4 National Grid High Pressure Gas Transmission Pipelines

This dataset identifies high-pressure, large diameter pipelines which carry gas between gas terminals, power stations, compressors and storage facilities. The dataset does not include the Local Transmission System (LTS) which supplies gas directly into homes and businesses. This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high pressure gas transmission pipelines within 500m of the study site: 0

Database searched and no data found.

5. Geology

5.1 Artificial Ground and Made Ground

Database searched and no data found.

The database has been searched on site, including a 50m buffer.

5.2 Superficial Ground and Drift Geology

The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
HEAD	HEAD	CLAY, SILT, SAND AND GRAVEL [UNLITHIFIED DEPOSITS CODING SCHEME]

5.3 Bedrock and Solid Geology

The database has been searched on site, including a 50m buffer.

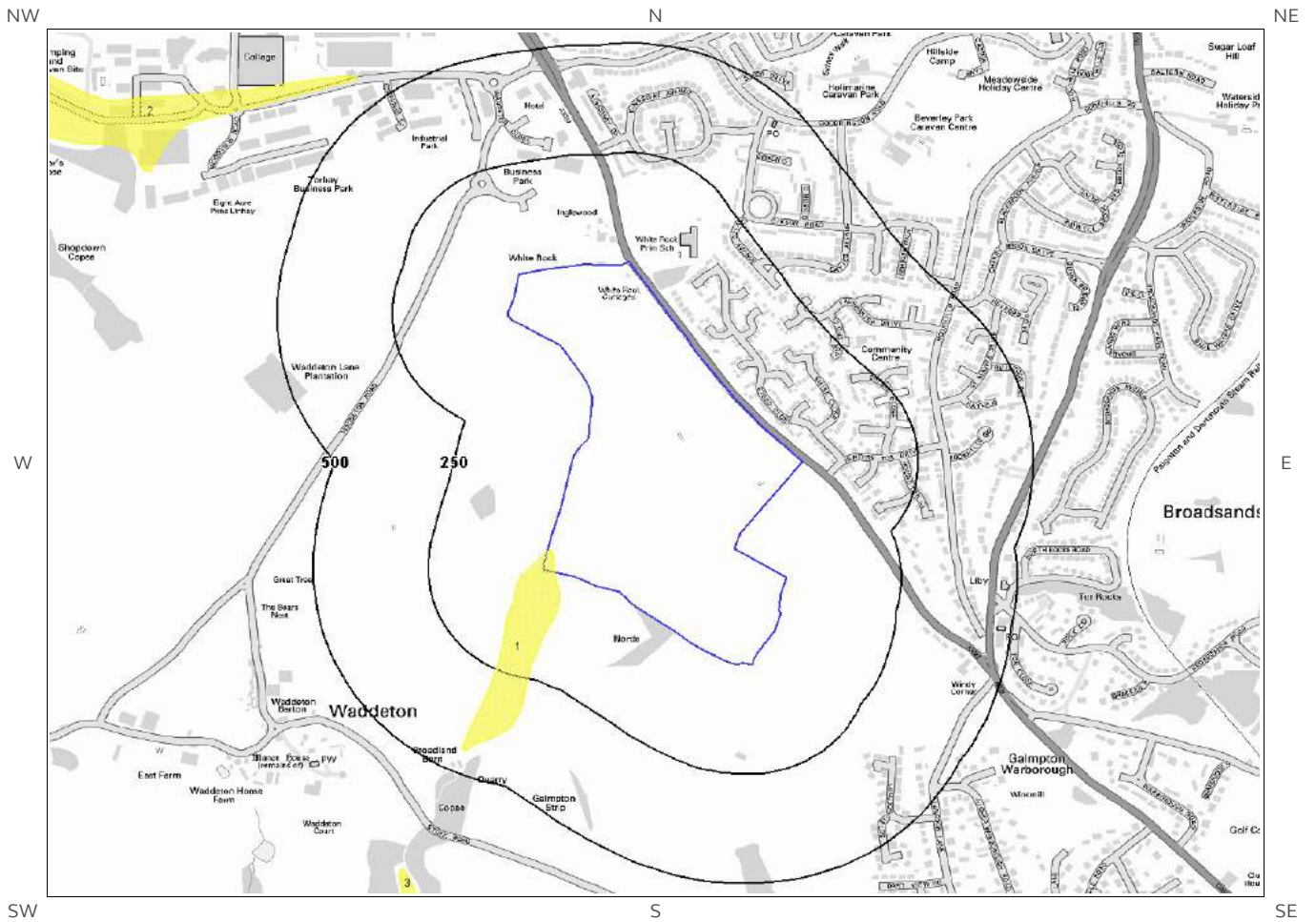
Lex Code	Description	Rock Type
SACO-MDLM	SALTERN COVE FORMATION	MUDSTONE AND LIMESTONE, INTERBEDDED
BRXL-LMST	BRIXHAM LIMESTONE FORMATION	LIMESTONE
SACO-MDLM	SALTERN COVE FORMATION	MUDSTONE AND LIMESTONE, INTERBEDDED
BRXL-LMST	BRIXHAM LIMESTONE FORMATION	LIMESTONE
TOBR-BRSS	TORBAY BRECCIA FORMATION	BRECCIA AND SANDSTONE, INTERBEDDED
BRXL-LMST	BRIXHAM LIMESTONE FORMATION	LIMESTONE
SACO-MDLM	SALTERN COVE FORMATION	MUDSTONE AND LIMESTONE, INTERBEDDED
SACO-MDLM	SALTERN COVE FORMATION	MUDSTONE AND LIMESTONE, INTERBEDDED
SACO-LMST	SALTERN COVE FORMATION	LIMESTONE
SACO-MDLM	SALTERN COVE FORMATION	MUDSTONE AND LIMESTONE, INTERBEDDED
SACO-LMST	SALTERN COVE FORMATION	LIMESTONE
SACO-MDLM	SALTERN COVE FORMATION	MUDSTONE AND LIMESTONE, INTERBEDDED
AVS-TUF	ASHPRINGTON VOLCANIC FORMATION	TUFF

Lex Code	Description	Rock Type
SACO-MDLM	SALTERN COVE FORMATION	MUDSTONE AND LIMESTONE, INTERBEDDED

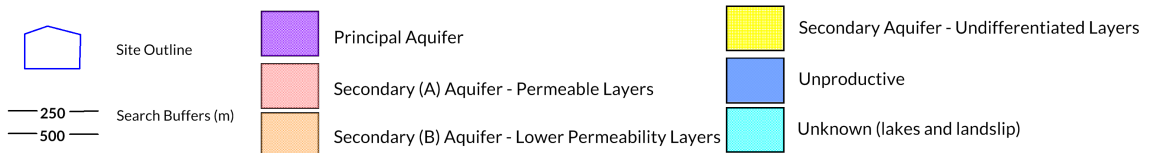
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

6 Hydrogeology and Hydrology

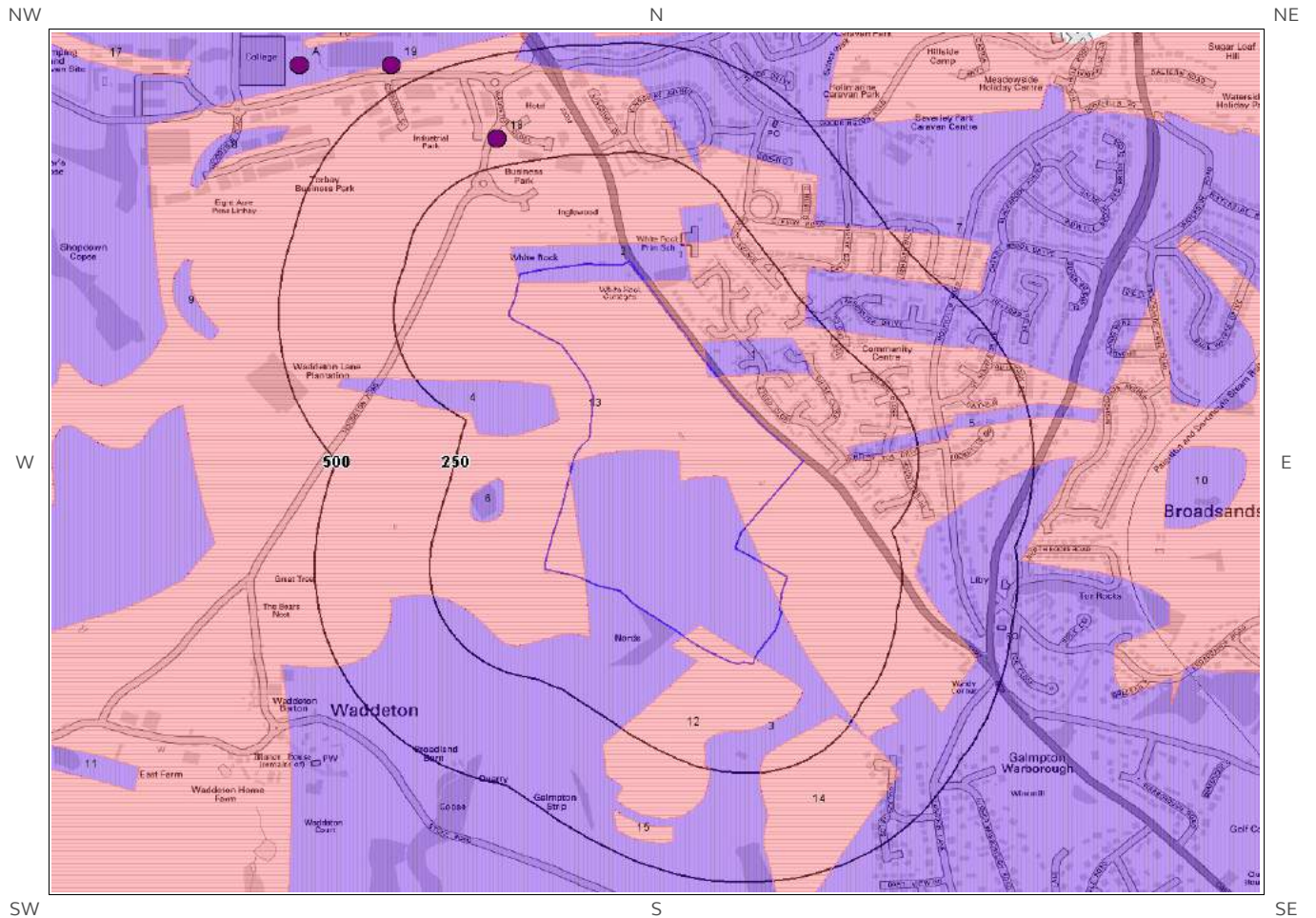
6a. Aquifer Within Superficial Geology



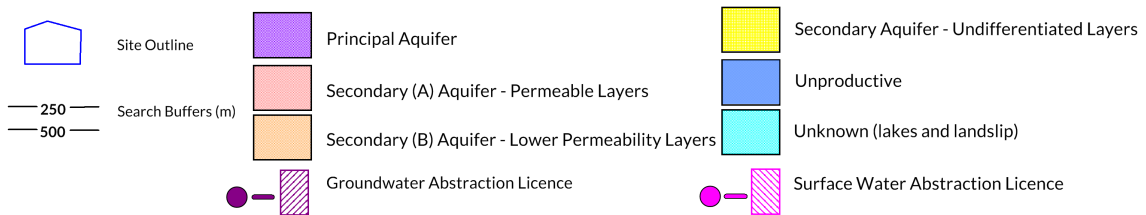
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6b. Aquifer Within Bedrock Geology and Abstraction Licenses

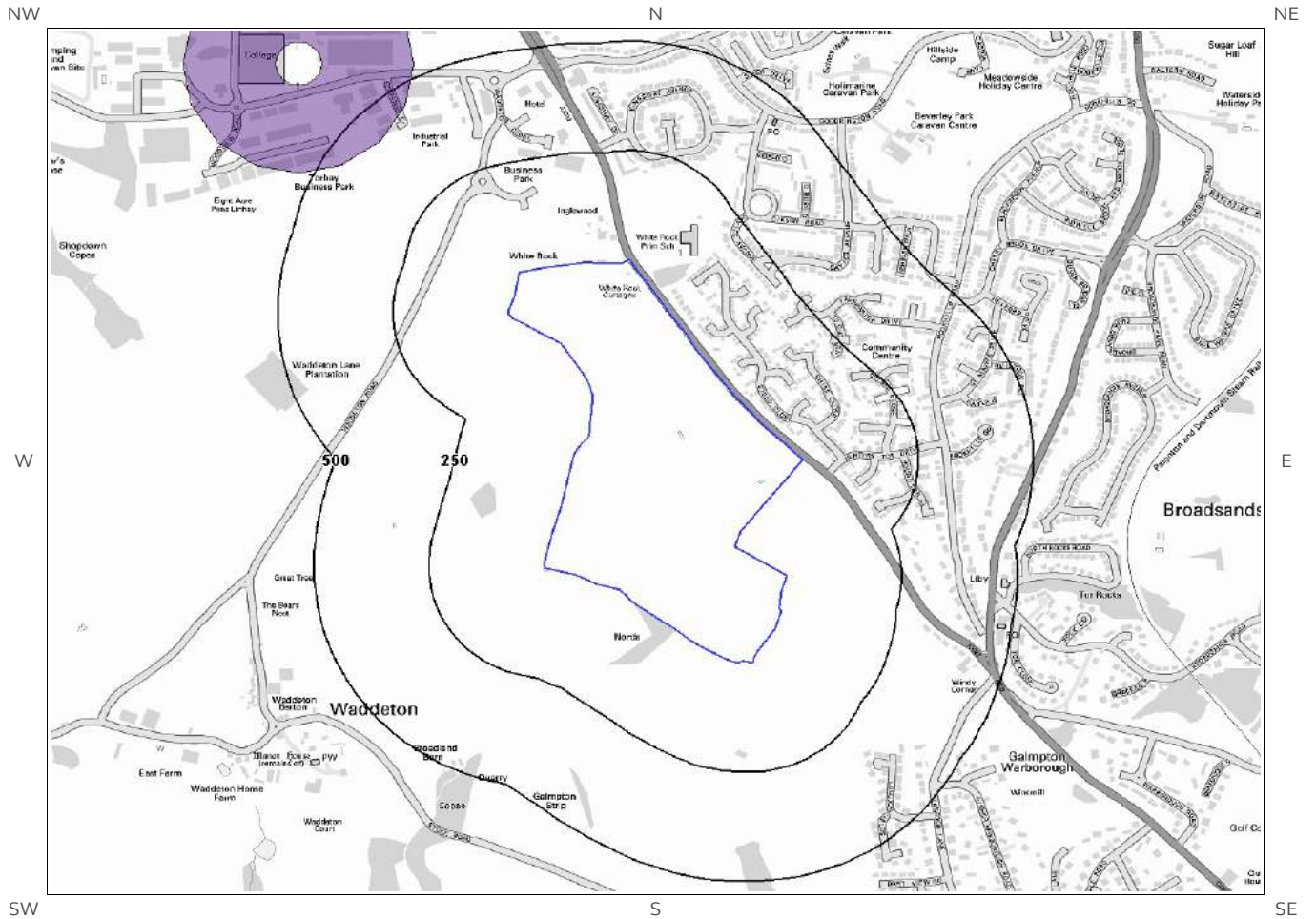


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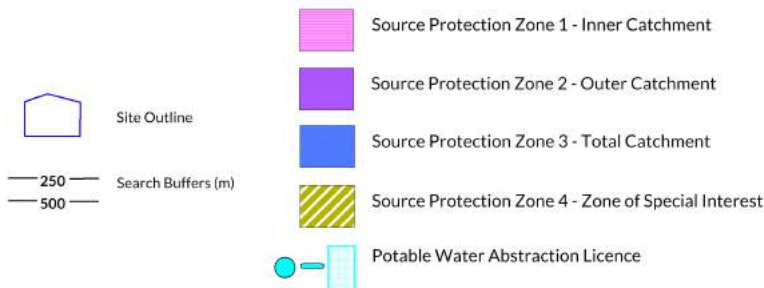




6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licenses

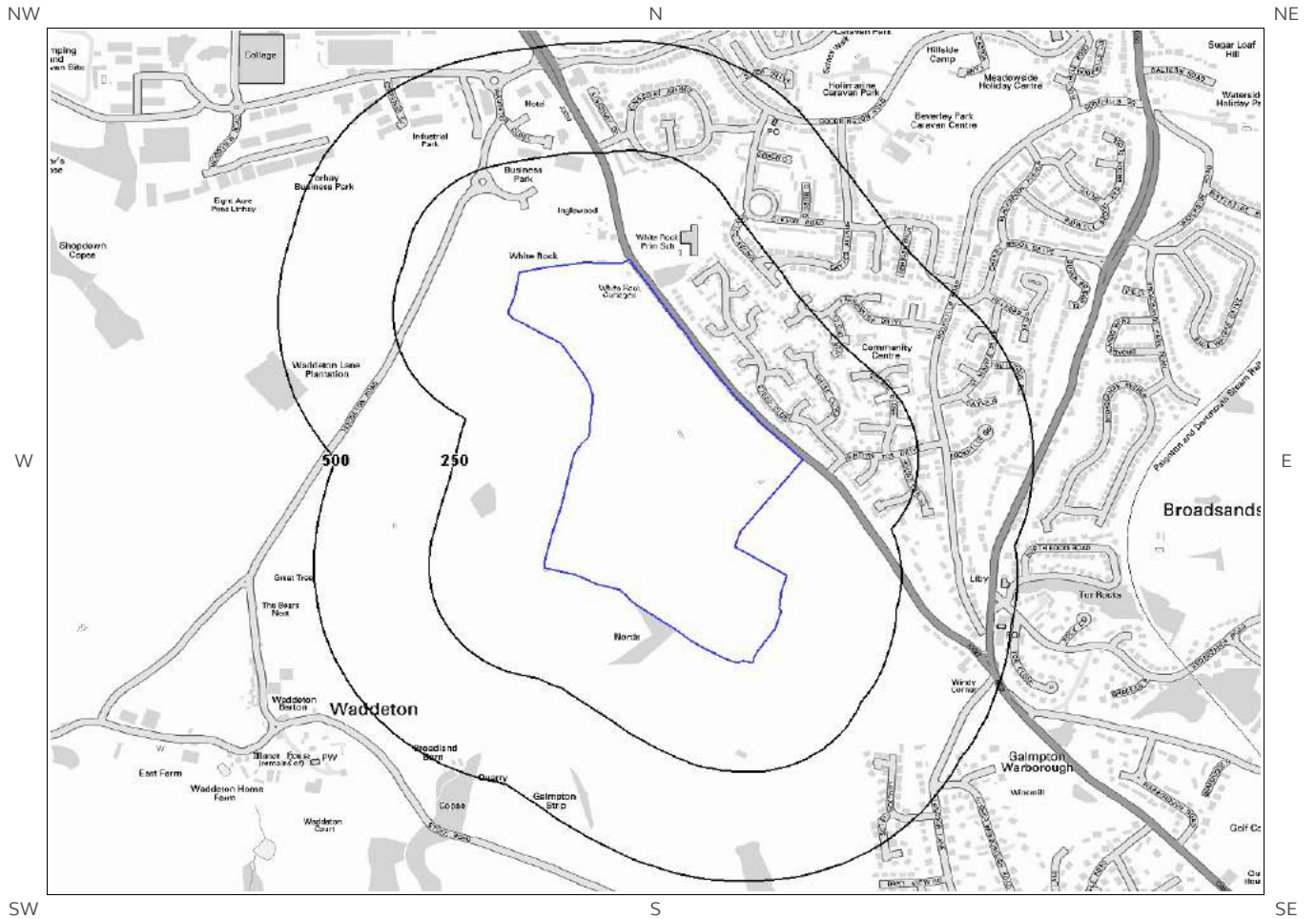


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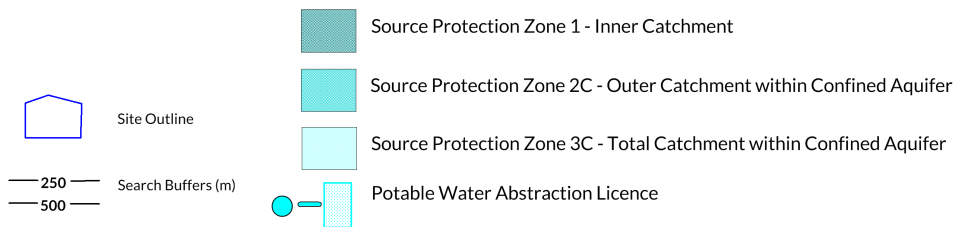




6d. Hydrogeology – Source Protection Zones within confined aquifer

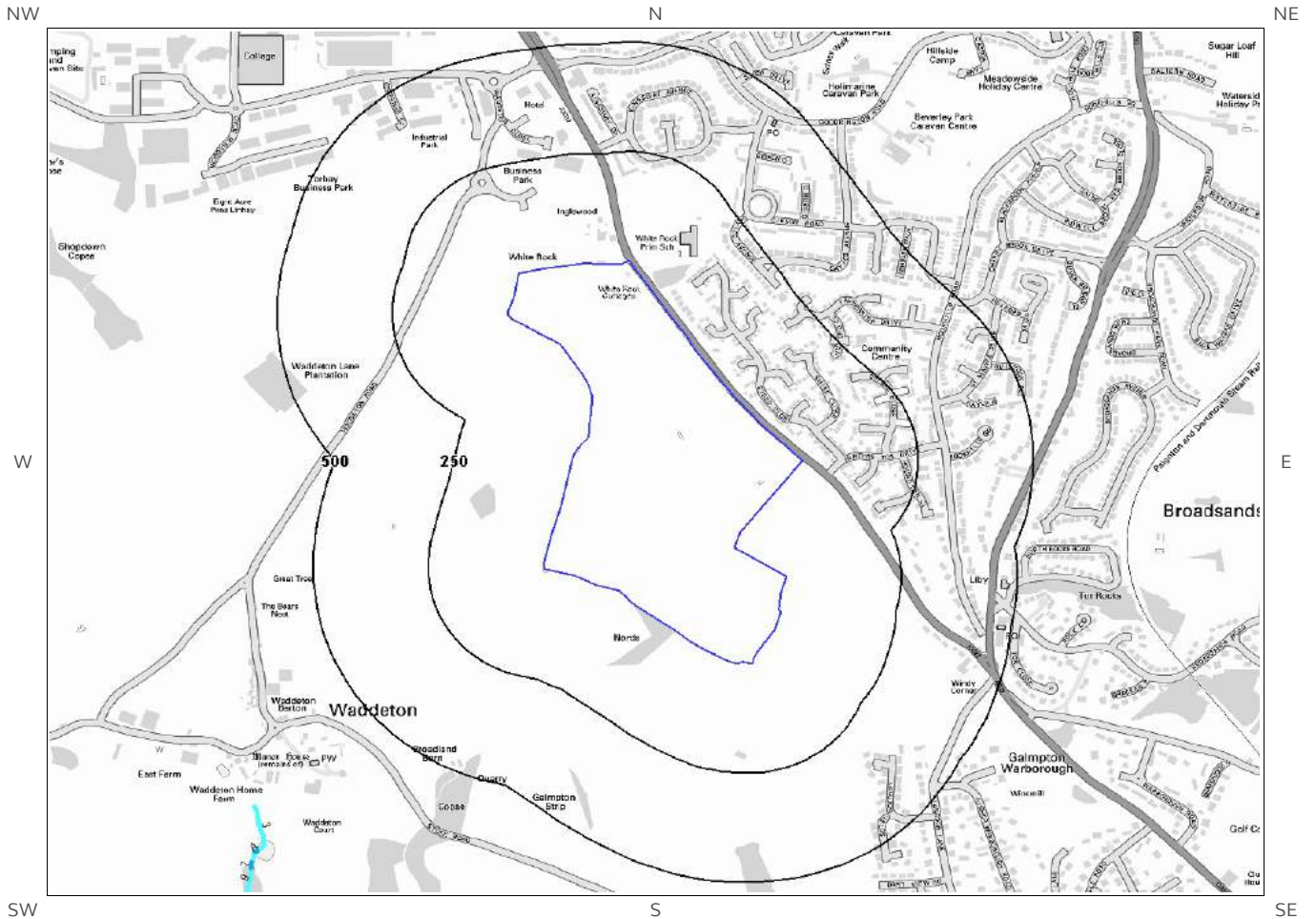


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6e. Hydrology – Detailed River Network and River Quality



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- | | | | | | |
|---|------------------------|---|---------------------------------------|--|-------------------------------------|
|  | Site Outline |  | Primary River |  | Canal |
|  | 250 Search Buffers (m) |  | Secondary River |  | Canal Tunnel |
|  | 500 Search Buffers (m) |  | Tertiary River |  | Culvert |
| | |  | Lake/Reservoir |  | Multiple Channel Culvert |
| | |  | Underground River (inferred) |  | Underground River (Potential Sewer) |
| | |  | General Quality Assessment: Biology |  | Underground River (local knowledge) |
| | |  | General Quality Assessment: Chemistry | | |

6. Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

Are there records of strata classification within the superficial geology at or in proximity to the property? Yes

From 1 April 2010, the Environment Agency's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insight User Guide.

The following aquifer records are shown on the Aquifer within Superficial Geology Map (6a):

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	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

6.2 Aquifer within Bedrock Deposits

Are there records of strata classification within the bedrock geology at or in proximity to the property? Yes

From 1 April 2010, the Environment Agency's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insights User Guide.

The following aquifer records are shown on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	Designation	Description
1	0	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	0	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
3	0	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
12	0	On Site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
13	0	On Site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
4	69	W	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
5	99	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	Distance (m)	Direction	Designation	Description
6	120	W	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
14	192	SE	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	220	NE	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
15	397	S	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

6.3 Groundwater Abstraction Licences

Are there any Groundwater Abstraction Licences within 2000m of the study site? Yes

The following Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	NGR	Details
18	311	N	287790 58210	Status: Historical Licence No: SW/046/0003/006 Details: Hydraulic Testing Direct Source: Ground Water - Fresh Point: White Rock Borehole Data Type: Point Name: Deeley Freed Estates Annual Volume (m ³): 0 Max Daily Volume (m ³): 760 Original Application No: NPS/WR/001581 Original Start Date: 26/6/2009 Expiry Date: 26/6/2010 Issue No: 1 Version Start Date: 26/6/2009 Version End Date:
19	554	NW	287560 58380	Status: Historical Licence No: SW/046/0003/006 Details: Hydraulic Testing Direct Source: Ground Water - Fresh Point: White Rock Borehole Data Type: Point Name: Deeley Freed Estates Annual Volume (m ³): 0 Max Daily Volume (m ³): 760 Original Application No: NPS/WR/001581 Original Start Date: 26/6/2009 Expiry Date: 26/6/2010 Issue No: 1 Version Start Date: 26/6/2009 Version End Date:
20A	677	NW	287360 58380	Status: Historical Licence No: 14/46/004/0606 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - Fresh Point: Borehole At Paignton Data Type: Point Name: Devonshire Park Limited Annual Volume (m ³): 150019 Max Daily Volume (m ³): 409.1 Original Application No: NPS/WR/008067 Original Start Date: 3/11/1976 Expiry Date: - Issue No: 105 Version Start Date: 10/10/2011 Version End Date:
21A	677	NW	287360 58380	Status: Historical Licence No: 14/46/004/0606 Details: Process Water Direct Source: Ground Water - Fresh Point: Borehole At Paignton Data Type: Point Name: Devonshire Park Limited Annual Volume (m ³): 150019 Max Daily Volume (m ³): 409.1 Original Application No: NPS/WR/008067 Original Start Date: 3/11/1976 Expiry Date: - Issue No: 105 Version Start Date: 10/10/2011 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
22A	677	NW	287360 58380	Status: Historical Licence No: 14/46/004/0606 Details: General Cooling (Existing Licences Only) (High Loss) Direct Source: Ground Water - Fresh Point: Borehole At Paignton Data Type: Point Name: Devonshire Park Limited	Annual Volume (m ³): 150019 Max Daily Volume (m ³): 409.1 Original Application No: NPS/WR/008067 Original Start Date: 3/11/1976 Expiry Date: - Issue No: 105 Version Start Date: 10/10/2011 Version End Date:
23A	677	NW	287360 58380	Status: Historical Licence No: 14/46/004/0606 Details: Process Water Direct Source: Ground Water - Fresh Point: Northern Telecom - Borehole Data Type: Point Name: Modus Properties Ltd	Annual Volume (m ³): 150019 Max Daily Volume (m ³): 409.1 Original Application No: 10731 Original Start Date: 3/11/1976 Expiry Date: - Issue No: 104 Version Start Date: 1/4/2008 Version End Date:
24A	677	NW	287360 58380	Status: Historical Licence No: 14/46/004/0606 Details: General Cooling (Existing Licences Only) (High Loss) Direct Source: Ground Water - Fresh Point: Northern Telecom - Borehole Data Type: Point Name: Modus Properties Ltd	Annual Volume (m ³): 150019 Max Daily Volume (m ³): 409.1 Original Application No: 10731 Original Start Date: 3/11/1976 Expiry Date: - Issue No: 104 Version Start Date: 1/4/2008 Version End Date:
25A	677	NW	287360 58380	Status: Historical Licence No: 14/46/004/0606 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - Fresh Point: Northern Telecom - Borehole Data Type: Point Name: Modus Properties Ltd	Annual Volume (m ³): 150019 Max Daily Volume (m ³): 409.1 Original Application No: 10731 Original Start Date: 3/11/1976 Expiry Date: - Issue No: 104 Version Start Date: 1/4/2008 Version End Date:
Not shown	1320	S	288500 55700	Status: Historical Licence No: 14/46/004/0018 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - Fresh Point: Galmpton Mill, Tapped Spring Data Type: Point Name: Mr R A & Mrs K Chaston	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: 297 Original Start Date: 25/3/1966 Expiry Date: - Issue No: 101 Version Start Date: 15/9/2000 Version End Date:
Not shown	1320	S	288500 55700	Status: Historical Licence No: 14/46/004/0018 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - Fresh Point: "galmpton Mill, Tapped Spring" Data Type: Point Name: Mr R A & Mrs K Chaston	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: 297 Original Start Date: 25/3/1966 Expiry Date: - Issue No: 101 Version Start Date: 15/9/2000 Version End Date:
Not shown	1336	S	288600 55700	Status: Historical Licence No: 14/46/004/0016 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: Lower Greenway Farm, Tapped Spring Data Type: Point Name: Jackson	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: 3344 Original Start Date: 18/2/1966 Expiry Date: - Issue No: 100 Version Start Date: 18/2/1966 Version End Date:
Not shown	1336	S	288600 55700	Status: Historical Licence No: 14/46/004/0016 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: "lower Greenway Farm, Tapped Spring" Data Type: Point Name: Jackson	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: 3344 Original Start Date: 18/2/1966 Expiry Date: - Issue No: 100 Version Start Date: 18/2/1966 Version End Date:

ID	Distance (m)	Direction	NGR	Details
Not shown	1336	S	288600 55700	<p>Status: Historical Licence No: 14/46/004/0017 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: "manor Farm, Tapped Spring" Data Type: Point Name: Brown</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 3253 Original Start Date: 4/3/1966 Expiry Date: - Issue No: 100 Version Start Date: 4/3/1966 Version End Date:</p>
Not shown	1336	S	288600 55700	<p>Status: Historical Licence No: 14/46/004/0017 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: Manor Farm, Tapped Spring Data Type: Point Name: Brown</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 3253 Original Start Date: 4/3/1966 Expiry Date: - Issue No: 100 Version Start Date: 4/3/1966 Version End Date:</p>
Not shown	1349	SW	286700 56600	<p>Status: Historical Licence No: 14/46/004/0334 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: Sandridge Barton Farm - Tapped Spring Data Type: Point Name: Devonshire Investments Estates</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 3330 Original Start Date: 20/1/1967 Expiry Date: - Issue No: 100 Version Start Date: 19/4/1972 Version End Date:</p>
Not shown	1771	N	288000 59700	<p>Status: Historical Licence No: 14/46/003/0867 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - Fresh Point: Paignton Zoo - Borehole Data Type: Point Name: Paignton Zoological & Botanical Gardens Limited</p> <p>Annual Volume (m³): 18491 Max Daily Volume (m³): 105.4 Original Application No: 12345 Original Start Date: 25/5/1994 Expiry Date: - Issue No: 100 Version Start Date: 1/10/2007 Version End Date:</p>
Not shown	1979	S	287800 55100	<p>Status: Historical Licence No: 14/46/004/0015 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household" Direct Source: Ground Water - Fresh Point: "lower Greenway Farm, Tapped Spring" Data Type: Point Name: Jackson</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 3344 Original Start Date: 18/2/1966 Expiry Date: - Issue No: 100 Version Start Date: 18/2/1966 Version End Date:</p>
Not shown	1979	S	287800 55100	<p>Status: Historical Licence No: 14/46/004/0015 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: Lower Greenway Farm, Tapped Spring Data Type: Point Name: Jackson</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 3344 Original Start Date: 18/2/1966 Expiry Date: - Issue No: 100 Version Start Date: 18/2/1966 Version End Date:</p>
Not shown	1979	S	287800 55100	<p>Status: Historical Licence No: 14/46/004/0015 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Ground Water - Fresh Point: Lower Greenway Farm, Tapped Spring Data Type: Point Name: Jackson</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 3344 Original Start Date: 18/2/1966 Expiry Date: - Issue No: 100 Version Start Date: 18/2/1966 Version End Date:</p>
Not shown	1979	S	287800 55100	<p>Status: Historical Licence No: 14/46/004/0015 Details: General Farming & Domestic Direct Source: Ground Water - Fresh Point: "lower Greenway Farm, Tapped Spring" Data Type: Point Name: Jackson</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Original Application No: 3344 Original Start Date: 18/2/1966 Expiry Date: - Issue No: 100 Version Start Date: 18/2/1966 Version End Date:</p>

6.4 Surface Water Abstraction Licences

Are there any Surface Water Abstraction Licences within 2000m of the study site? Yes

The following Surface Water Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	NGR	Details	
Not shown	1843	N	287696 59747	Status: Active Licence No: 14/46/003/0868 Details: Supply To A Leat For Throughflow Direct Source: Surface Water - Fresh Point: Clennon Valley Stream - Paignton Zoo (point C) Data Type: Point Name: South West Environmental Parks Ltd	Annual Volume (m ³): 504576 Max Daily Volume (m ³): 1382.4 Application No: NPS/WR/012640 Original Start Date: 24/5/1994 Expiry Date: - Issue No: 102 Version Start Date: 1/4/2014 Version End Date:
Not shown	1845	N	287700 59750	Status: Historical Licence No: 14/46/003/0868 Details: Supply To A Leat For Throughflow Direct Source: Surface Water - Fresh Point: Clennon Valley Stream - Paignton Zoo (point C) Data Type: Point Name: Paignton Zoological & Botanical Gardens Limited	Annual Volume (m ³): 504576 Max Daily Volume (m ³): 1382.4 Application No: 12344 Original Start Date: 24/5/1994 Expiry Date: - Issue No: 101 Version Start Date: 2/6/2005 Version End Date:
Not shown	1875	N	287700 59780	Status: Active Licence No: 14/46/003/0868 Details: Supply To A Leat For Throughflow Direct Source: Surface Water - Fresh Point: Clennon Valley Stream - Paignton Zoo (point B) Data Type: Point Name: South West Environmental Parks Ltd	Annual Volume (m ³): 504576 Max Daily Volume (m ³): 1382.4 Application No: NPS/WR/012640 Original Start Date: 24/5/1994 Expiry Date: - Issue No: 102 Version Start Date: 1/4/2014 Version End Date:
Not shown	1888	N	287680 59790	Status: Historical Licence No: 14/46/003/0868 Details: Supply to a Leat for Throughflow Direct Source: Surface Water - Fresh Point: Unnamed Watercourse At Paignton Zoo (point B) Data Type: Point Name: Paignton Zoological & Botanical Gardens Limited	Annual Volume (m ³): - Max Daily Volume (m ³): - Application No: 12344 Original Start Date: 24/5/1994 Expiry Date: - Issue No: 100 Version Start Date: 24/5/1994 Version End Date:
Not shown	1888	N	287680 59790	Status: Historical Licence No: 14/46/003/0868 Details: Supply To A Leat For Throughflow Direct Source: Surface Water - Fresh Point: Clennon Valley Stream - Paignton Zoo (point B) Data Type: Point Name: Paignton Zoological & Botanical Gardens Limited	Annual Volume (m ³): 504576 Max Daily Volume (m ³): 1382.4 Application No: 12344 Original Start Date: 24/5/1994 Expiry Date: - Issue No: 101 Version Start Date: 2/6/2005 Version End Date:
Not shown	1909	N	287692 59813	Status: Active Licence No: 14/46/003/0868 Details: Supply To A Leat For Throughflow Direct Source: Surface Water - Fresh Point: Clennon Valley Stream - Paignton Zoo (point A) Data Type: Point Name: South West Environmental Parks Ltd	Annual Volume (m ³): 504576 Max Daily Volume (m ³): 1382.4 Application No: NPS/WR/012640 Original Start Date: 24/5/1994 Expiry Date: - Issue No: 102 Version Start Date: 1/4/2014 Version End Date:

ID	Distance (m)	Direction	NGR	Details	
Not shown	1926	N	287690 59830	Status: Historical Licence No: 14/46/003/0868 Details: Supply To A Leat For Throughflow Direct Source: Surface Water - Fresh Point: Clennon Valley Stream - Paignton Zoo (point A) Data Type: Point Name: Paignton Zoological & Botanical Gardens Limited	Annual Volume (m ³): 504576 Max Daily Volume (m ³): 1382.4 Application No: 12344 Original Start Date: 24/5/1994 Expiry Date: - Issue No: 101 Version Start Date: 2/6/2005 Version End Date:
Not shown	1939	N	287670 59840	Status: Historical Licence No: 14/46/003/0868 Details: Supply to a Leat for Throughflow Direct Source: Surface Water - Fresh Point: Unnamed Watercourse At Paignton Zoo (point A) Data Type: Point Name: Paignton Zoological & Botanical Gardens Limited	Annual Volume (m ³): - Max Daily Volume (m ³): - Application No: 12344 Original Start Date: 24/5/1994 Expiry Date: - Issue No: 100 Version Start Date: 24/5/1994 Version End Date:

6.5 Potable Water Abstraction Licences

Are there any Potable Water Abstraction Licences within 2000m of the study site? Yes

The following Potable Water Abstraction Licences records are represented as points, lines and regions on the SPZ and Potable Water Abstraction Licences Map (6c):

ID	Distance (m)	Direction	NGR	Details	
Not shown	1979	S	287800 55100	Status: Historical Licence No: 14/46/004/0015 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household" Direct Source: Ground Water - Fresh Point: "lower Greenway Farm, Tapped Spring" Data Type: Point Name: Jackson	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: 3344 Original Start Date: 18/2/1966 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:
Not shown	1979	S	287800 55100	Status: Historical Licence No: 14/46/004/0015 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Ground Water - Fresh Point: Lower Greenway Farm, Tapped Spring Data Type: Point Name: Jackson	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: 3344 Original Start Date: 18/2/1966 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:

6.6 Source Protection Zones

Are there any Source Protection Zones within 500m of the study site?

Yes

The following Source Protection Zones records are represented on the SPZ and Potable Water Abstraction Map (6c):

ID	Distance (m)	Direction	Zone	Description
1	428	NW	2	Outer catchment

6.7 Source Protection Zones within Confined Aquifer

Are there any Source Protection Zones within the Confined Aquifer within 500m of the study site?

No

Historically, Source Protection Zone maps have been focused on regulation of activities which occur at or near the ground surface, such as prevention of point source pollution and bacterial contamination of water supplies. Sources in confined aquifers were often considered to be protected from these surface pressures due to the presence of a low permeability confining layer (e.g. glacial till, clay). The increased interest in subsurface activities such as onshore oil and gas exploration, ground source heating and cooling requires protection zones for confined sources to be marked on SPZ maps where this has not already been done.

Database searched and no data found.

6.8 Groundwater Vulnerability and Soil Leaching Potential

Is there any Environment Agency information on groundwater vulnerability and soil leaching potential within 500m of the study site? Yes

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Major Aquifer/High Leaching Potential	H1	Soils which readily transmit liquid discharges because they are shallow or susceptible to rapid flow directly to rock, gravel or groundwater.
0	On Site	Major Aquifer/Intermediate Leaching Potential	I1	Soils which can possibly transmit a wide range of pollutants.
0	On Site	Major Aquifer/Intermediate Leaching Potential	I1	Soils which can possibly transmit a wide range of pollutants.
0	On Site	Minor Aquifer/Intermediate Leaching Potential	I1	Soils which can possibly transmit a wide range of pollutants.
75	NE	Minor Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.
131	W	Major Aquifer/Intermediate Leaching Potential	I1	Soils which can possibly transmit a wide range of pollutants.
213	SE	Major Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.
351	N	Major Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.
460	SW	Major Aquifer/Intermediate Leaching Potential	I1	Soils which can possibly transmit a wide range of pollutants.

6.9 River Quality

Is there any Environment Agency information on river quality within 1500m of the study site? No

6.9.1 Biological Quality:

Database searched and no data found.

6.9.2 Chemical Quality:

Database searched and no data found.

6.10 Detailed River Network

Are there any Detailed River Network entries within 500m of the study site?

No

Database searched and no data found.

6.11 Surface Water Features

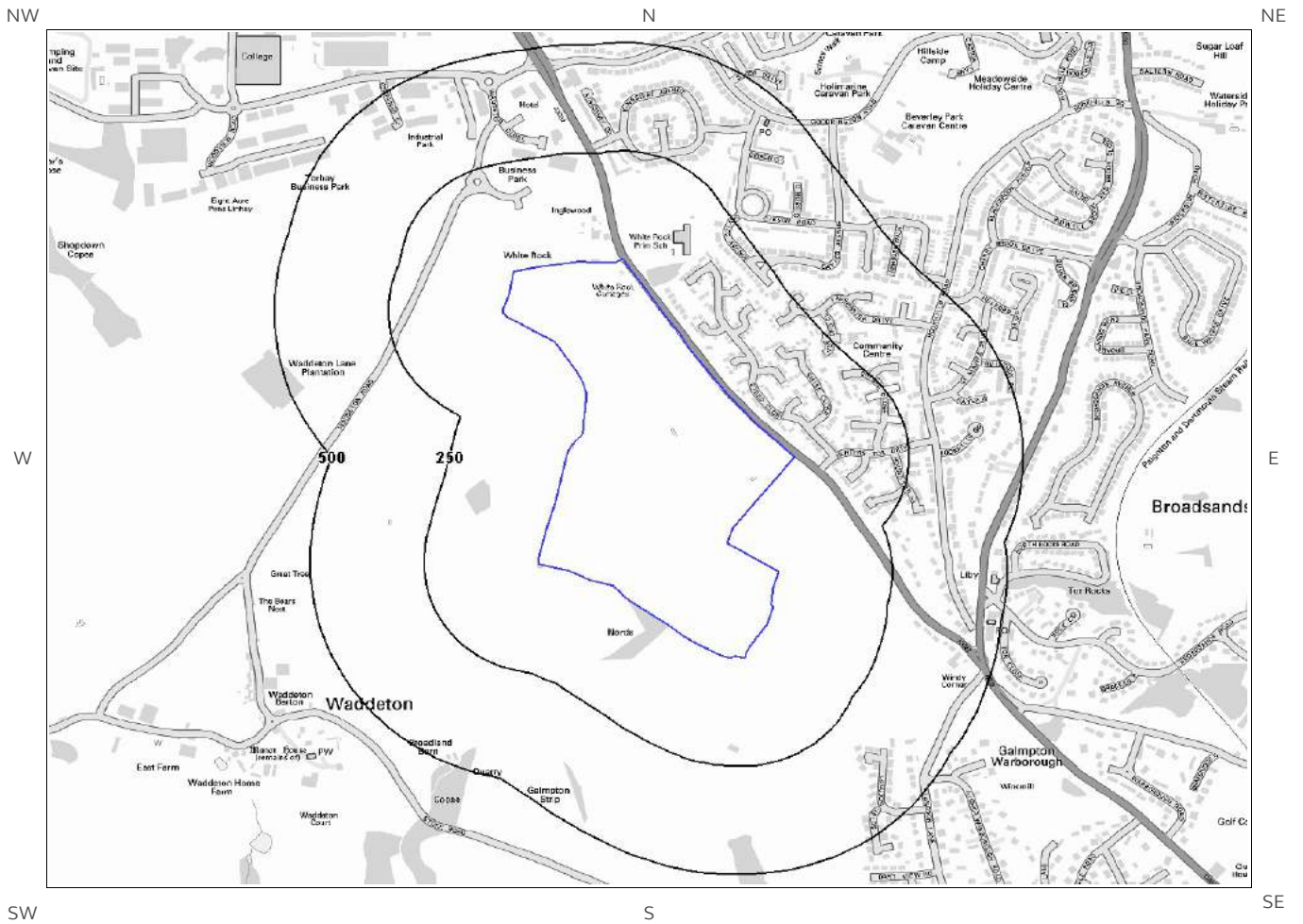
Are there any surface water features within 250m of the study site?

No

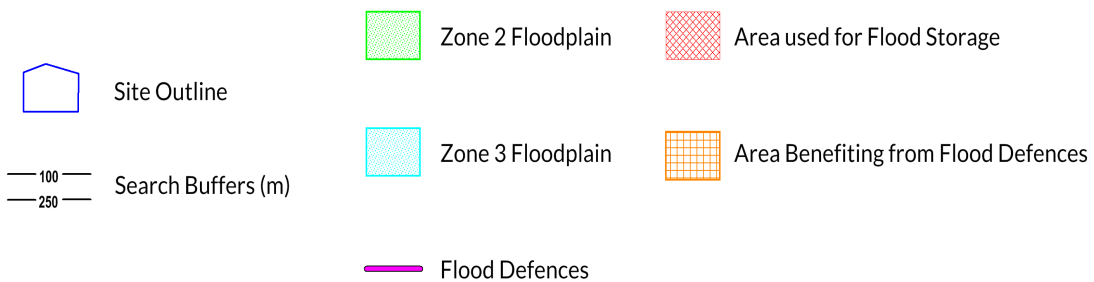
Database searched and no data found.



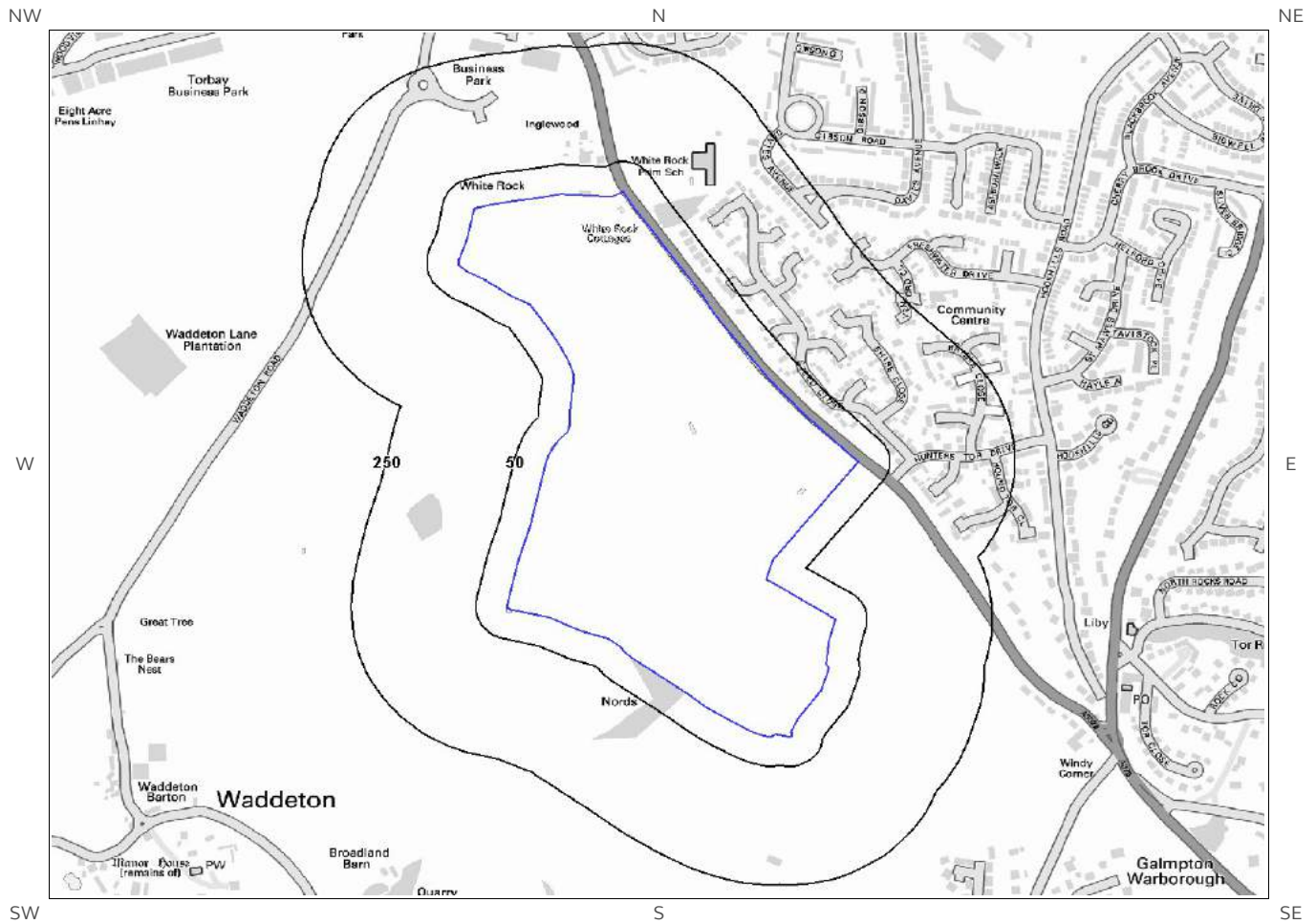
7a. Environment Agency Flood Map for Planning (from rivers and the sea)



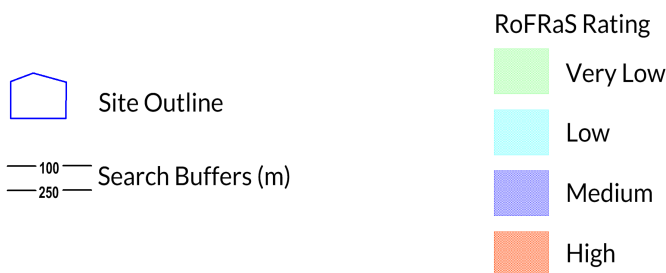
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7b. Environment Agency Risk of Flooding from Rivers and the Sea (RoFRaS) Map



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7 Flooding

7.1 River and Coastal Zone 2 Flooding

Is the site within 250m of an Environment Agency Zone 2 floodplain? No

Environment Agency Zone 2 floodplains estimate the annual probability of flooding as between 1 in 1000 (0.1%) and 1 in 100 (1%) from rivers and between 1 in 1000 (0.1%) and 1 in 200 (0.5%) from the sea. Any relevant data is represented on Map 7a – Flood Map for Planning:

Database searched and no data found.

7.2 River and Coastal Zone 3 Flooding

Is the site within 250m of an Environment Agency Zone 3 floodplain? No

Zone 3 shows the extent of a river flood with a 1 in 100 (1%) or greater chance of occurring in any year or a sea flood with a 1 in 200 (0.5%) or greater chance of occurring in any year. Any relevant data is represented on Map 7a – Flood Map for Planning.

Database searched and no data found.

7.3 Risk of Flooding from Rivers and the Sea (RoFRaS) Flood Rating

What is the highest risk of flooding onsite? Very Low

The Environment Agency RoFRaS database provides an indication of river and coastal flood risk at a national level on a 50m grid with the flood rating at the centre of the grid calculated and given above. The data considers the probability that the flood defences will overtop or breach by considering their location, type, condition and standard of protection.

RoFRaS data for the study site indicates the property is in an area with a Very Low (less than 1 in 1000) chance of flooding in any given year.

7.4 Flood Defences

Are there any Flood Defences within 250m of the study site? No
Database searched and no data found.

7.5 Areas benefiting from Flood Defences

Are there any areas benefiting from Flood Defences within 250m of the study site? No

7.6 Areas benefiting from Flood Storage

Are there any areas used for Flood Storage within 250m of the study site?

No

7.7 Groundwater Flooding Susceptibility Areas

7.7.1 Are there any British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site? Yes

Does this relate to Clearwater Flooding or Superficial Deposits Flooding? Superficial Deposits Flooding

Notes: Groundwater flooding may either be associated with shallow unconsolidated sedimentary aquifers which overlie unproductive aquifers (Superficial Deposits Flooding), or with unconfined aquifers (Clearwater Flooding).

7.7.2 What is the highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions?

Potential at Surface

Where potential for groundwater flooding to occur at surface is indicated, this means that given the geological conditions in the area groundwater flooding hazard should be considered in all land-use planning decisions. It is recommended that other relevant information e.g. records of previous incidence of groundwater flooding, rainfall, property type, and land drainage information be investigated in order to establish relative, but not absolute, risk of groundwater flooding.

7.8 Groundwater Flooding Confidence Areas

What is the British Geological Survey confidence rating in this result?

High

Notes: Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

The confidence rating is on a threefold scale - Low, Moderate and High. This provides a relative indication of the BGS confidence in the accuracy of the susceptibility result for groundwater flooding. This is based on the amount and precision of the information used in the assessment. In areas with a relatively lower level of confidence the susceptibility result should be treated with more caution. In other areas with higher levels of confidence the susceptibility result can be used with more confidence.

8. Designated Environmentally Sensitive Sites Map



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- | | | | |
|--|--------------------------|--|-------------------------|
| | AONB | | Ancient Woodland |
| | National Park | | National Nature Reserve |
| | SSSI | | Local Nature Reserves |
| | Special Protection Areas | | Ramsar Sites |
| | Nitrate Vulnerable Zones | | |

8. Designated Environmentally Sensitive Sites

Presence of Designated Environmentally Sensitive Sites within 2000m of the study site? Yes

8.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site:

4

The following Site of Special Scientific Interest (SSSI) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	SSSI Name	Data Source
2	1209	NE	Saltern Cove	Natural England
3	1224	NE	Saltern Cove	Natural England
4	1255	NE	Saltern Cove	Natural England
5	1510	NE	Saltern Cove	Natural England

8.2 Records of National Nature Reserves (NNR) within 2000m of the study site:

0

Database searched and no data found.

8.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site:

1

The following Special Area of Conservation (SAC) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	SAC Name	Data Source
1	1195	E	Lyme Bay and Torbay	Natural England

8.4 Records of Special Protection Areas (SPA) within 2000m of the study site:

0

Database searched and no data found.

8.5 Records of Ramsar sites within 2000m of the study site:

0

Database searched and no data found.

8.6 Records of Ancient Woodland within 2000m of the study site:

3

The following records of Designated Ancient Woodland provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
11	634	SW	UNKNOWN	Ancient Replanted Woodland
Not shown	1272	N	UNKNOWN	Ancient and Semi-Natural Woodland
Not shown	1899	S	UNKNOWN	Ancient Replanted Woodland

8.7 Records of Local Nature Reserves (LNR) within 2000m of the study site:

2

The following Local Nature Reserve (LNR) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	LNR Name	Data Source
6	1209	NE	Sugar Loaf Hill and Saltern Cove	Natural England
7	1218	NE	Sugar Loaf Hill and Saltern Cove	Natural England

8.8 Records of World Heritage Sites within 2000m of the study site:

0

Database searched and no data found.

8.9 Records of Environmentally Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

8.10 Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site:

3

The following Area of Outstanding Natural Beauty (AONB) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	AONB/NSA Name	Data Source
8	557	SW	South Devon	Natural England
9	1363	E	South Devon	Natural England
10	1546	E	South Devon	Natural England

8.11 Records of National Parks (NP) within 2000m of the study site:

0

Database searched and no data found.

8.12 Records of Nitrate Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

8.13 Records of Nitrate Vulnerable Zones within 2000m of the study site:

0

Database searched and no data found.

8.14 Records of Green Belt land within 2000m of the study site:

0

Database searched and no data found.

9. Natural Hazards Findings

9.1 Detailed BGS GeoSure Data

BGS GeoSure Data has been searched to 50m. The data is included in tabular format. If you require further information on geology and ground stability, please obtain a **Groundsure Geo Insight**, available from our [website](#). The following information has been found:

9.1.1 Shrink Swell

What is the maximum Shrink-Swell* hazard rating identified on the study site? Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.

9.1.2 Landslides

What is the maximum Landslide* hazard rating identified on the study site? Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Possibility of slope instability problems after major changes in ground conditions. Consideration should be given to stability if changes to drainage or excavations take place. Possible increase in construction cost to reduce potential slope stability problems. Existing property Ö no significant increase in insurance risk due to natural slope instability problems.

9.1.3 Soluble Rocks

What is the maximum Soluble Rocks* hazard rating identified on the study site? Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Significant soluble rocks are present. Low possibility of subsidence occurring naturally, but may be possible in adverse conditions such as high surface or subsurface water flow. Consider implications for stability when changes to drainage or new construction are planned. For new build Ö site investigation should consider potential for dissolution problems on the site and its surroundings. Care should be taken with local drainage into the bedrock. Some possibility groundwater pollution. For existing property Ö possible increase in insurance risk due to soluble rocks.

* This indicates an automatically generated 50m buffer and site.

9.1.4 Compressible Ground

What is the maximum Compressible Ground* hazard rating identified on the study site? Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard

No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

9.1.5 Collapsible Rocks

What is the maximum Collapsible Rocks* hazard rating identified on the study site? Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard

Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

9.1.6 Running Sand

What is the maximum Running Sand** hazard rating identified on the study site? Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard

Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

9.2 Radon

9.2.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is in a Radon Affected Area, as between 10 and 30% of properties are above the Action Level.

* This indicates an automatically generated 50m buffer and site.



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9.2.2 Radon Protection

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Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? Full radon protective measures are necessary.

10. Mining

10.1 Coal Mining

Are there any coal mining areas within 75m of the study site? No

Database searched and no data found.

10.2 Non-Coal Mining

Are there any Non-Coal Mining areas within 50m of the study site boundary? Yes

The following non-coal mining information is provided by the BGS:

Distance (m)	Direction	Name	Commodity	Assessment of likelihood
0.0	On Site	Not available	Vein Mineral	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
0.0	On Site	Not available	Vein Mineral	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered

Past underground mine workings may occur. The rock types present in these areas are such that small mineral veins may be present on which it is possible that small scale mining has been undertaken and/or it is possible that limited underground extraction of other materials may have occurred. All such occurrences are likely to be of minor localised extent and infrequent. It should be noted, however, that there is always the possibility of the existence of other sub-surface excavations, such as wells, cess pits, follies, air raid shelters/bunkers and other military structures etc. that could affect surface ground stability but which are outside the scope of this dataset. However, if in a coalfield area you should still consider a Coal Authority mining search for the area of interest.

10.3 Brine Affected Areas

Are there any brine affected areas within 75m of the study site? No
Guidance: No Guidance Required.

Contact Details

EmapSite
Telephone: 0118 9736883
sales@emapsite.com

British Geological Survey Enquiries

Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email:

Web:www.bgs.ac.uk

BGS Geological Hazards Reports and general geological enquiries:
enquiries@bgs.ac.uk

Environment Agency

National Customer Contact Centre, PO Box 544
Rotherham, S60 1BY
Tel: 08708 506 506

Web:www.environment-agency.gov.uk

Email:enquiries@environment-agency.gov.uk

Public Health England

Public information access office
Public Health England, Wellington House
133-155 Waterloo Road, London, SE1 8UG
www.gov.uk/phe

Email:enquiries@phe.gov.uk

Main switchboard: 020 7654 8000

The Coal Authority

200 Lichfield Lane
Mansfield
Notts NG18 4RG
Tel: 0345 7626 848
DX 716176 Mansfield 5
www.coal.gov.uk

Ordnance Survey

Adanac Drive, Southampton
SO16 0AS
Tel: 08456 050505

Local Authority

Authority: South Hams District Council
Phone: 01803 861 234

Web: <http://www.southhams.gov.uk/>

Address: Follaton House, Plymouth Road, Totnes, Devon, TQ9 5NE

Gemapping PLC

Virginia Villas, High Street, Hartley Witney,
Hampshire RG27 8NW
Tel: 01252 845444

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**British
Geological Survey**

NATURAL ENVIRONMENT RESEARCH COUNCIL



**Environment
Agency**



**Public Health
England**



**The Coal
Authority**





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Acknowledgements: Site of Special Scientific Interest, National Nature Reserve, Ramsar Site, Special Protection Area, Special Area of Conservation data is provided by, and used with the permission of, Natural England who retain the Copyright and Intellectual Property Rights for the data.

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This report has been prepared in accordance with the Groundsure Ltd standard Terms and Conditions of business for work of this nature.

Standard Terms and Conditions

1 Definitions

In these terms and conditions unless the context otherwise requires:

“Beneficiary” means the person or entity for whose benefit the Client has obtained the Services.

“Client” means the party or parties entering into a Contract with Groundsure.

“Commercial” means any building or property which is not Residential.

“Confidential Information” means the contents of this Contract and all information received from the Client as a result of, or in connection with, this Contract other than

(i) information which the Client can prove was rightfully in its possession prior to disclosure by Groundsure and

(ii) any information which is in the public domain (other than by virtue of a breach of this Contract).

“Support Services” means Support Services provided by Groundsure including, without limitation, interpreting third party and in-house environmental data, providing environmental support advice, undertaking environmental audits and assessments, Site investigation, Site monitoring and related items.

“Contract” means the contract between Groundsure and the Client for the provision of the Services, and which shall incorporate these terms and conditions, the Order, and the relevant User Guide.

“Third Party Data Provider” means any third party providing Third Party Content to Groundsure.

“Data Reports” means reports comprising factual data with no accompanying interpretation.

“Fees” has the meaning set out in clause 5.1.

“Groundsure” means Groundsure Limited, a company registered in England and Wales under number 03421028.

“Groundsure Materials” means all materials prepared by Groundsure and provided as part of the Services, including but not limited to Third Party Content, Data Reports, Mapping, and Risk Screening Reports.

“Intellectual Property” means any patent, copyright, design rights, trade or service mark, moral rights, data protection rights, know-how or trade mark in each case whether registered or not and including applications for the same or any other rights of a similar nature anywhere in the world.

“Mapping” means a map, map data or a combination of historical maps of various ages, time periods and scales.

“Order” means an electronic, written or other order form submitted by the Client requesting Services from Groundsure in respect of a specified Site.

“Ordnance Survey” means the Secretary of State for Business, Innovation and Skills, acting through Ordnance Survey, Adanac Drive, Southampton, SO16 0AS, UK.

“Order Website” means the online platform through which Orders may be placed by the Client and accepted by Groundsure.

“Report” means a Risk Screening Report or Data Report for Commercial or Residential property.

“Residential” means any building or property used as or intended to be used as a single dwelling.

“Risk Screening Report” means a risk screening report comprising factual data with an accompanying interpretation by Groundsure.

“Services” means any Report, Mapping and/or Support Services which Groundsure has agreed to provide by accepting an Order pursuant to clause 2.6.

“Site” means the area of land in respect of which the Client has requested Groundsure to provide the Services.

“Third Party Content” means data, database information or other information which is provided to Groundsure by a Third Party Data Provider.

“User Guide” means the user guide, as amended from time to time, available upon request from Groundsure and on the website (www.Groundsure.com) and forming part of this Contract.

2 Scope of Services, terms and conditions, requests for insurance and quotations

2.1 Groundsure agrees to provide the Services in accordance with the Contract.

2.2 Groundsure shall exercise reasonable skill and care in the provision of the Services.

2.3 Subject to clause 7.3 the Client acknowledges that it has not relied on any statement or representation made by or on behalf of Groundsure which is not set out and expressly agreed in writing in the Contract and all such statements and representations are hereby excluded to the fullest extent permitted by law.

2.4 The Client acknowledges that terms and conditions appearing on a Client’s order form, printed stationery or other communication, or any terms or conditions implied by custom, practice or course of dealing shall be of no effect, and that this Contract shall prevail over all others in relation to the Order.

2.5 If the Client or Beneficiary requests insurance in conjunction with or as a result of the Services, Groundsure shall use reasonable endeavours to recommend such insurance, but makes no warranty that such insurance shall be available from insurers or that it will be offered on reasonable terms. Any insurance purchased by the Client or Beneficiary shall be subject solely to the terms of the policy issued by insurers and Groundsure will have no liability therefor. In addition you acknowledge and agree that Groundsure does not act as an agent or broker for any insurance providers. The Client should take (and ensure that the Beneficiary takes) independent advice to ensure that the insurance policy requested or offered is suitable for its requirements.

2.6 Groundsure’s quotations or proposals are valid for a period of 30 days only unless an alternative period of time is explicitly stipulated by Groundsure. Groundsure reserves the right to withdraw any quotation or proposal at any time before an Order is accepted by Groundsure. Groundsure’s acceptance of an Order shall be binding only when made in writing and signed by Groundsure’s authorised representative or when accepted through the Order Website.

3 The Client’s obligations

3.1 The Client shall comply with the terms of this Contract and

(i) procure that the Beneficiary or any third party relying on the Services complies with and acts as if it is bound by the Contract and

(ii) be liable to Groundsure for the acts and omissions of the Beneficiary or any third party relying on the Services as if such acts and omissions were those of the Client.

3.2 The Client shall be solely responsible for ensuring that the Services are appropriate and suitable for its and/or the Beneficiary’s needs.

3.3 The Client shall supply to Groundsure as soon as practicable and without charge all requisite information (and the Client warrants that such information is accurate, complete and appropriate), including without limitation any environmental information relating to the Site and shall give such assistance as Groundsure shall reasonably require in the provision of the Services including, without limitation, access to the Site, facilities and equipment.

3.4 Where the Client’s approval or decision is required to enable Groundsure to carry out work in order to provide the Services, such approval or decision shall be given or procured in reasonable time and so as not to delay or disrupt the performance of the Services.

3.5 Save as expressly permitted by this Contract the Client shall not, and shall procure that the Beneficiary shall not, re-sell, alter, add to, or amend the Groundsure Materials, or use the Groundsure Materials in a manner for which they were not intended. The Client may make the Groundsure Materials available to a third party who is considering acquiring some or all of, or providing funding in relation to, the Site, but such third party cannot rely on the same unless expressly permitted under clause 4.

3.6 The Client is responsible for maintaining the confidentiality of its user name and password if using the Order Website and the Client acknowledges that Groundsure accepts no liability of any kind for any loss or damage suffered by the Client as a consequence of using the Order Website.

4 Reliance

4.1 The Client acknowledges that the Services provided by Groundsure consist of the presentation and analysis of Third Party Content and other content and that information obtained from a Third Party Data Provider cannot be guaranteed or warranted by Groundsure to be reliable.

4.2 In respect of Data Reports, Mapping and Risk Screening Reports, the following classes of person and no other are entitled to rely on their contents;

(i) the Beneficiary,

(ii) the Beneficiary’s professional advisers, (iii) any person providing funding to the Beneficiary in relation to the Site (whether directly or as part of a lending syndicate),

(iv) the first purchaser or first tenant of the Site, and

(v) the professional advisers and lenders of the first purchaser or tenant of the Site.

4.3 In respect of Support Services, only the Client, Beneficiary and parties expressly named in a Report and no other parties are entitled to rely on its contents.

4.4 Save as set out in clauses 4.2 and 4.3 and unless otherwise expressly agreed in writing, no other person or entity of any kind is entitled to rely on any Services or Report issued or provided by Groundsure. Any party considering such Reports and Services does so at their own risk.

5 Fees and Disbursements

5.1 Groundsure shall charge and the Client shall pay fees at the rate and

frequency specified in the written proposal, Order Website or Order acknowledgement form, plus (in the case of Support Services) all proper disbursements incurred by Groundsure. The Client shall in addition pay all value added tax or other tax payable on such fees and disbursements in relation to the provision of the Services (together "Fees").

5.2 The Client shall pay all outstanding Fees to Groundsure in full without deduction, counterclaim or set off within 30 days of the date of Groundsure's invoice or such other period as may be agreed in writing between Groundsure and the Client ("Payment Date"). Interest on late payments will accrue on a daily basis from the Payment Date until the date of payment (whether before or after judgment) at the rate of 8% per annum.

5.3 The Client shall be deemed to have agreed the amount of any invoice unless an objection is made in writing within 28 days of the date of the invoice. As soon as reasonably practicable after being notified of an objection, without prejudice to clause 5.2 a member of Groundsure's management team will contact the Client and the parties shall then use all reasonable endeavours to resolve the dispute within 15 days.

6 Intellectual Property and Confidentiality

6.1 Subject to

(i) full payment of all relevant Fees and

(ii) compliance with this Contract, the Client is granted (and is permitted to sub-licence to the Beneficiary) a royalty-free, worldwide, non-assignable and (save to the extent set out in this Contract) non-transferable licence to make use of the Groundsure Materials.

6.2 All Intellectual Property in the Groundsure Materials are and shall remain owned by Groundsure or Groundsure's licensors (including without limitation the Third Party Data Providers) the Client acknowledges, and shall procure acknowledgement by the Beneficiary of, such ownership. Nothing in this Contract purports to transfer or assign any rights to the Client or the Beneficiary in respect of such Intellectual Property.

6.3 Third Party Data Providers may enforce any breach of clauses 6.1 and 6.2 against the Client or Beneficiary.

6.4 The Client shall, and shall procure that any recipients of the Groundsure Materials shall:

(i) not remove, suppress or modify any trade mark, copyright or other proprietary marking belonging to Groundsure or any third party from the Services;

(ii) use the information obtained as part of the Services in respect of the subject Site only, and shall not store or reuse any information obtained as part of the Services provided in respect of adjacent or nearby sites;

(iii) not create any product or report which is derived directly or indirectly from the Services (save that those acting in a professional capacity to the Beneficiary may provide advice based upon the Services);

(iv) not combine the Services with or incorporate such Services into any other information data or service;

(v) not reformat or otherwise change (whether by modification, addition or enhancement), the Services (save that those acting for the Beneficiary in a professional capacity shall not be in breach of this clause 6.4(v) where such reformatting is in the normal course of providing advice based upon the Services);

(vi) where a Report and/or Mapping contains material belonging to Ordnance Survey, acknowledge and agree that such content is protected by Crown Copyright and shall not use such content for any purpose outside of receiving the Services; and

(vii) not copy in whole or in part by any means any map prints or run-on copies containing content belonging to Ordnance Survey (other than that contained within Ordnance Survey's OS Street Map) without first being in possession of a valid Paper Map Copying Licence from Ordnance Survey,

6.5 Notwithstanding clause 6.4, the Client may make reasonable use of the Groundsure Materials in order to advise the Beneficiary in a professional capacity. However, Groundsure shall have no liability in respect of any advice, opinion or report given or provided to Beneficiaries by the Client.

6.6 The Client shall procure that any person to whom the Services are made available shall notify Groundsure of any request or requirement to disclose, publish or disseminate any information contained in the Services in accordance with the Freedom of Information Act 2000, the Environmental Information Regulations 2004 or any associated legislation or regulations in force from time to time.

7.Liability: Particular Attention Should Be Paid To This Clause

7.1 This Clause 7 sets out the entire liability of Groundsure, including any liability for the acts or omissions of its employees, agents, consultants, subcontractors and Third Party Content, in respect of:

(i) any breach of contract, including any deliberate breach of the Contract by Groundsure or its employees, agents or

subcontractors;

(ii) any use made of the Reports, Services, Materials or any part of them; and

(iii) any representation, statement or tortious act or omission (including negligence) arising under or in connection with the Contract.

7.2 All warranties, conditions and other terms implied by statute or common law are, to the fullest extent permitted by law, excluded from the Contract.

7.3 Nothing in the Contract limits or excludes the liability of the Supplier for death or personal injury resulting from negligence, or for any damage or liability incurred by the Client or Beneficiary as a result of fraud or fraudulent misrepresentation.

7.4 Groundsure shall not be liable for

(i) loss of profits;

(ii) loss of business;

(iii) depletion of goodwill and/or similar losses;

(iv) loss of anticipated savings;

(v) loss of goods;

(vi) loss of contract;

(vii) loss of use;

(viii) loss or corruption of data or information;

(ix) business interruption;

(x) any kind of special, indirect, consequential or pure economic loss, costs, damages, charges or expenses;

(xi) loss or damage that arise as a result of the use of all or part of the Groundsure Materials in breach of the Contract;

(xii) loss or damage arising as a result of any error, omission or inaccuracy in any part of the Groundsure Materials where such error, omission or inaccuracy is caused by any Third Party Content or any reasonable interpretation of Third Party Content;

(xiii) loss or damage to a computer, software, modem, telephone or other property; and

(xiv) loss or damage caused by a delay or loss of use of Groundsure's internet ordering service.

7.5 Groundsure's total liability in relation to or under the Contract shall be limited to £10 million for any claim or claims.

7.6 Groundsure shall procure that the Beneficiary shall be bound by limitations and exclusions of liability in favour of Groundsure which accord with those detailed in clauses 7.4 and 7.5 (subject to clause 7.3) in respect of all claims which the Beneficiary may bring against Groundsure in relation to the Services or other matters arising pursuant to the Contract.

8 Groundsure's right to suspend or terminate

8.1 If Groundsure reasonably believes that the Client or Beneficiary has not provided the information or assistance required to enable the proper provision of the Services, Groundsure shall be entitled to suspend all further performance of the Services until such time as any such deficiency has been made good.

8.2 Groundsure shall be entitled to terminate the Contract immediately on written notice in the event that:

(i) the Client fails to pay any sum due to Groundsure within 30 days of the Payment Date; or

(ii) the Client (being an individual) has a bankruptcy order made against him or (being a company) shall enter into liquidation whether compulsory or voluntary or have an administration order made against it or if a receiver shall be appointed over the whole or any part of its property assets or undertaking or if the Client is struck off the Register of Companies or dissolved; or

(iii) the Client being a company is unable to pay its debts within the meaning of Section 123 of the Insolvency Act 1986 or being an individual appears unable to pay his debts within the meaning of Section 268 of the Insolvency Act 1986 or if the Client shall enter into a composition or arrangement with the Client's creditors or shall suffer distress or execution to be levied on his goods; or

(iv) the Client or the Beneficiary breaches any term of the Contract (including, but not limited to, the obligations in clause 4) which is incapable of remedy or if remediable, is not remedied within five days of notice of the breach.

9. Client's Right to Terminate and Suspend

9.1 Subject to clause 10.1, the Client may at any time upon written notice terminate or suspend the provision of all or any of the Services.

9.2 In any event, where the Client is a consumer (and not a business) he/she hereby expressly acknowledges and agrees that:

(i) the supply of Services under this Contract (and therefore the performance of this Contract) commences immediately upon Groundsure's acceptance of the Order; and

(ii) the Reports and/or Mapping provided under this Contract are

- (a) supplied to the Client's specification(s) and in any event
- (b) by their nature cannot be returned.

10 Consequences of Withdrawal, Termination or Suspension

10.1 Upon termination of the Contract:

(i) Groundsure shall take steps to bring to an end the Services in an orderly manner, vacate any Site with all reasonable speed and shall deliver to the Client and/or Beneficiary any property of the Client and/or Beneficiary in Groundsure's possession or control; and

(ii) the Client shall pay to Groundsure all and any Fees payable in respect of the performance of the Services up to the date of termination or suspension. In respect of any Support Services provided, the Client shall also pay Groundsure any additional costs incurred in relation to the termination or suspension of the Contract.

11 Anti-Bribery

11.1 The Client warrants that it shall:

(i) comply with all applicable laws, statutes and regulations relating to anti-bribery and anti-corruption including but not limited to the Bribery Act 2010;

(ii) comply with such of Groundsure's anti-bribery and anti-corruption policies as are notified to the Client from time to time; and

(iii) promptly report to Groundsure any request or demand for any undue financial or other advantage of any kind received by or on behalf of the Client in connection with the performance of this Contract.

11.2 Breach of this Clause 11 shall be deemed a material breach of this Contract.

12 General

12.1 The Mapping contained in the Services is protected by Crown copyright and must not be used for any purpose other than as part of the Services or as specifically provided in the Contract.

12.2 The Client shall be permitted to make one copy only of each Report or Mapping Order. Thereafter the Client shall be entitled to make unlimited copies of the Report or Mapping Order only in accordance with an Ordnance Survey paper map copy license available through Groundsure.

12.3 Groundsure reserves the right to amend or vary this Contract. No amendment or variation to this Contract shall be valid unless signed by an authorised representative of Groundsure.

12.4 No failure on the part of Groundsure to exercise, and no delay in exercising, any right, power or provision under this Contract shall operate as a waiver thereof.

12.5 Save as expressly provided in this Contract, no person other than the persons set out therein shall have any right under the Contract (Rights of Third Parties) Act 1999 to enforce any terms of the Contract.

12.6 The Secretary of State for Business, Innovation and Skills ("BIS") or BIS' successor body, as the case may be, acting through Ordnance Survey may enforce a breach of clause 6.4(vi) and clause 6.4(vii) of these terms and conditions against the Client in accordance with the provisions of the Contracts (Rights of Third Parties) Act 1999.

12.7 Groundsure shall not be liable to the Client if the provision of the Services is delayed or prevented by one or more of the following circumstances:

(i) the Client or Beneficiary's failure to provide facilities, access or information;

(ii) fire, storm, flood, tempest or epidemic;

(iii) Acts of God or the public enemy;

(iv) riot, civil commotion or war;

(v) strikes, labour disputes or industrial action;

(vi) acts or regulations of any governmental or other agency;

(vii) suspension or delay of services at public registries by Third Party Data Providers;

(viii) changes in law; or

(ix) any other reason beyond Groundsure's reasonable control.

In the event that Groundsure is prevented from performing the Services (or any part thereof) in accordance with this clause 12.6 for a period of not less than 30 days then Groundsure shall be entitled to terminate this Contract immediately on written notice to the Client.

12.8 Any notice provided shall be in writing and shall be deemed to be properly given if delivered by hand or sent by first class post, facsimile or by email to the address, facsimile number or email address of the relevant party as may have been notified by each party to the other for such purpose or in the absence of such notification the last known address.

12.9 Such notice shall be deemed to have been received on the day of delivery if delivered by hand, facsimile or email (save to the extent such day is not a working day where it shall be deemed to have been delivered on the next working day) and on the second working day after the day of posting if sent by first class post.

12.10 The Contract constitutes the entire agreement between the parties and shall supersede all previous arrangements between the parties relating to the subject matter hereof.

12.11 Each of the provisions of the Contract is severable and distinct from the others and if one or more provisions is or should become invalid, illegal or unenforceable, the validity and enforceability of the remaining provisions shall not in any way be tainted or impaired.

12.12 This Contract shall be governed by and construed in accordance with English law and any proceedings arising out of or connected with this Contract shall be subject to the exclusive jurisdiction of the English courts.

12.13 Groundsure is an executive member of the Council of Property Search Organisation (CoPSO) and has signed up to the Search Code administered by the Property Codes Compliance Board (PCCB). All Risk Screening Reports shall be supplied in accordance with the provisions of the Search Code.

12.14 If the Client or Beneficiary has a complaint about the Services, written notice should be given to the Compliance Officer at Groundsure who will respond in a timely manner. In the event you are not satisfied with Groundsure's complaints handling process or you are unable to resolve the complaint, at your discretion you may refer the complaint to The Property Ombudsman Scheme at the following URL/email: website www.tpos.co.uk or email: admin@tpos.co.uk

12.15 The Client agrees that it shall, and shall procure that each Beneficiary shall, treat in confidence all Confidential Information and shall not, and shall procure that each Beneficiary shall not (i) disclose any Confidential Information to any third party other than in accordance with the terms of this Contract; and (ii) use Confidential Information for a purpose other than the exercise of its rights and obligations under this Contract. Subject to clause 6.6, nothing shall prevent the Client or any Beneficiary from disclosing Confidential Information to the extent required by law. © Groundsure Limited June 2013



clarkebond

MULTIDISCIPLINARY ENGINEERING CONSULTANTS

The Cocoa House
129 Cumberland Road
Bristol
BS1 6UY

tel: +44 (0)117 929 2244

GF Suite
Bickleigh House
Park Five Business Centre
Exeter EX2 7HU

tel: +44 (0)1392 369098

Unit 17.1
The Leathermarket
11-13 Weston Street
London SE1 3ER

tel: +44(0)20 7939 0959

www.clarkebond.com