

WYNNSTAY LLYSONNEN MILL

SITE CONDITION REPORT

NOVEMBER 2017

Prepared for:

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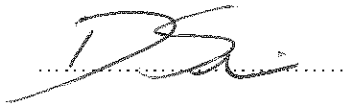
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TITLE:	SITE CONDITION REPORT

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WYNNSTAY LLYSONNEN MILL

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1.0 INTRODUCTION

1.1 Scope

ExCAL Limited has been commissioned by Wynnstay to undertake a land contamination desk top study of their Llysonnen Mill site in Travellers Rest, Carmarthen. The report will support an Environmental Permit Variation application.

The permit variation is to install a new drainage system for the site, which will be laid, in part, within a grass verge to the south/south east of the site, which currently falls outside the permit boundary.

The variation application will therefore include a proposal to amend the permit boundary to include areas of the site outside the current boundary, within which the new drainage will be installed.

The proposed drainage design and existing permit boundary are shown in drawing 129-01-10.d01 in Appendix A.

For the purpose of this report, the study area has been taken as the site ownership boundary, although the permit boundary will lie within this area.

The purpose of this report is to conduct a desk based review of historical information regarding potential sources of contamination that may be present in the area which currently lies outside the permit boundary.

A summary of the data found during the study is provided in this report.

2.0 THE SITE

2.1 Site Location

The approximate boundary of the Wynnstay site can be seen on Figure 1 below marked by a blue line. The permit boundary for the site lies within this ownership boundary.

The site address is: -

Wynnstay Group PLC,
Llysonnen Mill,
Llysonnen Road,
Travellers Rest,
Carmarthen,
SA31 3SG

The grid reference for the approximate centre of the site is 238376,219559.

Figure 1 – Wynnstay Site Location

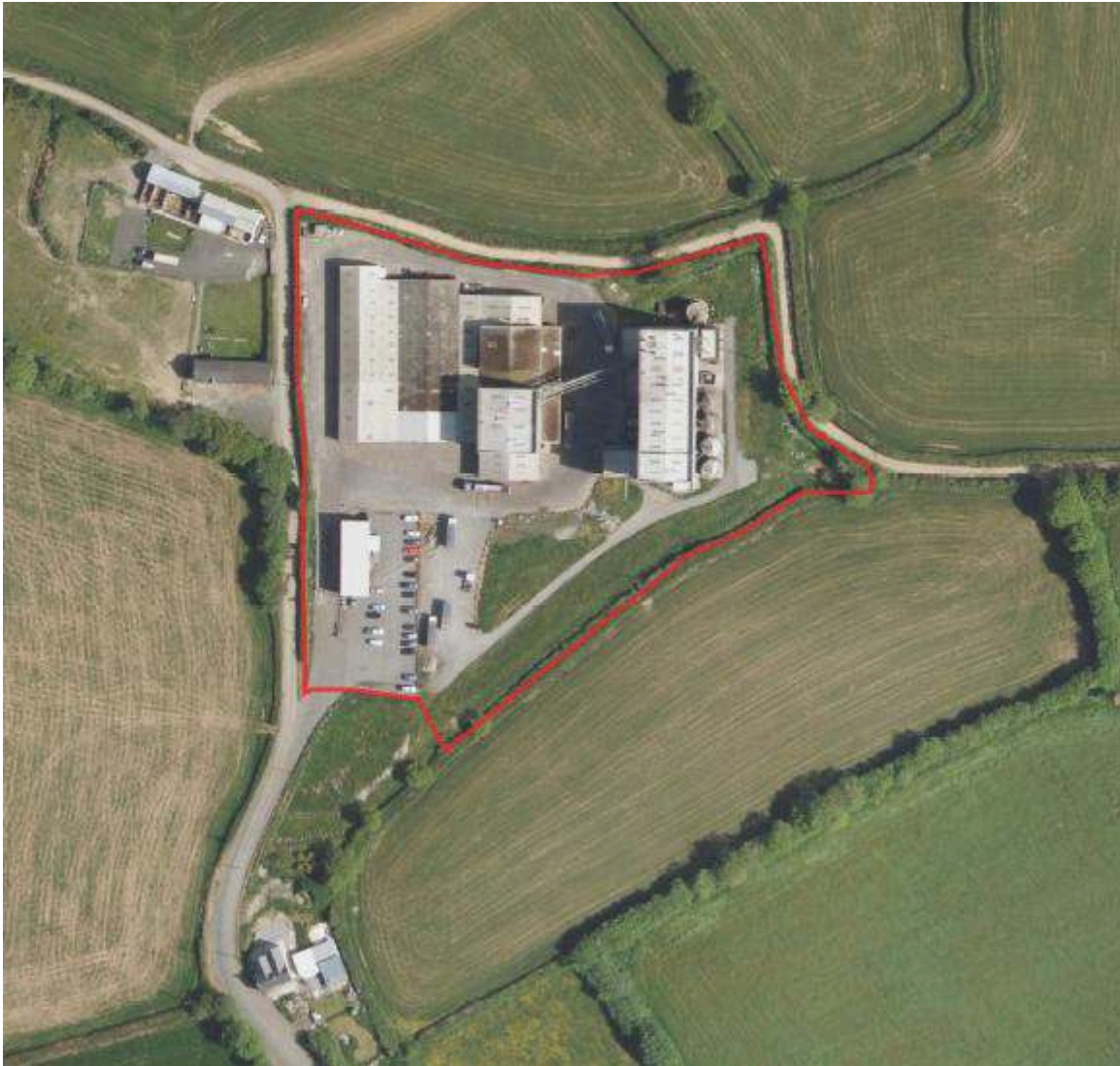


2.2 Site Use

The site is currently operating as an animal feed mill is predominantly bounded by fields, with a residential dwelling to the east and south and a larger residential development to the south east.

Figure 2 below shows an aerial photograph of the site, displaying the immediate surroundings.

Figure 2 – Wynnstay, Llysonnen Mill Aerial Photograph



3.0 DESK STUDY & DATA REVIEW

3.1 Sources

The desk study data has been collected from three main sources, namely: -

- 1) Groundsure Enviro Insight (Appendix B);
- 2) Groundsure Geo Insight (Appendix C);
- 3) Historical Mapping (Appendix D).

3.2 Site History

A review of the available historical maps indicates that the first development to be constructed was a warehouse between 1963 and 1968.

By 1975, the warehouse now resembles the structure of the existing warehouse building on site, with the building label having been updated to factory. An additional unnamed building is also shown in the area of the current site offices adjacent to a weighbridge.

The 1987 map shows the construction of the current mill building to the east of the site along with the external silos, with the overall site layout now resembling the modern day footprint.

The housing developments to the south and south west of the site have been present since at least 1877, with the eastern development commencing prior to 1963.

3.3 Identification of Potentially Polluting Industries, Landfill and Permitted Sites

3.3.1 Industrial Units

Searches of information provided by the Environmental Agency, Natural Resources Wales and Local Authorities reveal the following information.

The only permitted activities within 500m of the study site are associated with Wynnstay's licenses which are either still effective or superceded. This includes licensed discharge consents

There are no recorded pollution incidents within 500m of the site.

3.3.2 Landfill and Other Waste Sites

There are three records of historic landfill sites within 1500m of the boundary, the nearest of which is located 329m to the south of the site. Records show this accepted inert, industrial and household materials and the license was successfully surrendered on 31st of December 1992.

No other historic, active or inactive landfill sites lie within 1000m of the site boundary.

3.3.3 Potentially Contaminative Industrial Sites

Records show there are several other waste treatment, transfer or disposal sites in the area, however none of these lie within 500m of the site.

There are no records of petrol or fuel sites, National Grid high pressure gas transmission pipelines or National Grid high voltage underground electricity transmission cables within 500m of the site.

3.4 Geology

The site is underlain by superficial glaciofluvial sheet deposits comprising sand and gravel, the permeability of which is categorized as Very High via intergranular flow.

The bedrock on site is classified as Tetragraptus beds – Mudstone.

There are no records of artificial or made ground within the site or within 50m of the site boundary.

3.5 Hydrogeology and Hydrology

3.5.1 Aquifers

Data obtained for the site shows that the north eastern area of the site underlain by a secondary (A) aquifer within the superficial geology, while all the bedrock underlying the site is classified as a secondary (B) aquifer of undifferentiated layers.

3.5.2 Abstraction Licenses

Four groundwater abstraction license exist within 2000m of the study site, however all lie in excess of 1500m from the site.

One active surface water abstraction license and two active potable water extraction license are found to be within 2000m of the study site, however again these are located in excess of 1500m from the site.

The site does not lie within a Source Protection Zones (SPZ).

3.5.3 Groundwater Vulnerability and Soil Leaching Potential

The soil vulnerability is categorised as I1 with a description as follows;

I3 – Soils which can possibly transmit a wide range of pollutants.

3.5.4 River Quality

The only information available on river biological quality within 1500m of the site is for the Tawelan Brook which is located 892m from the site based on the Hydrology Map data.

The Tawelan Brook is graded as B for Biological Quality Grade between 2005 and 2009 and has a chemical quality grade of A (Very Good) between 2005 and 2008.

3.5.5 River Networks

Several detailed river network records are available within 500m of the site, the closest of which includes two drains on site, the Tennant Canal 233m south east of the site and various secondary and tertiary rivers and culverts in between, primarily south east of the site.

3.5.6 Surface Water Features

The only river entry within the data is for a currently undefined tertiary river located 321m north of the site.

3.6 Risk of Flooding

The site does not lie on a floodplain and the Risk of Flooding from Rivers and the Sea (RoFRaS) flood rating is Very Low.

There are no flood defences within 250m of the site and no areas are used for Flood Storage within 250m of the site.

British Geological Survey data for the site indicates that there are areas within 50m of the site that are susceptible to groundwater flooding although this has limited potential.

3.7 Nearby Sensitive Designations

There are 5 records for SSSI's (Sites of Special Scientific Interest) within 2000m of the site. Four of these designations are associated with the Maesyrior SSSI to the West/Northwest of the site.

The fifth designation is for the Cors Goch, Llanllwch SSSI to the south of the site, which is also designated as a NNR (National Nature Reserve).

All of the sensitive designations lie over 750m from the site.

There are also several records for restored and replanted ancient woodland around the site. All records lie in excess of 900m from the site.

No further sensitive designations have been reported.

3.8 Mining History

There are no coal mining areas recorded within 50m of the site boundary.

A record for non-coal mining has been reported for "vein material" found on site. This designation is explained as: -

"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."

There are no records of any shafts or adits within the site boundary.

3.9 Summary

Wynnstay are applying for a permit variation to install a new drainage system, which are located partially outside of the current permit boundary.

The variation application will request that the permit boundary be amended to include the additional areas within which the new drainage scheme has been proposed.

The purpose of this report was to review historical data to identify potential sources of contamination that could be associated with the area to be included within the permit boundary.

Review of the data has not highlighted any potential contamination sources on, or within the immediate vicinity of the site.

There are no records of any recorded pollution events within or adjacent to the site boundary.

There are no records of artificial or made ground within or adjacent to the site.

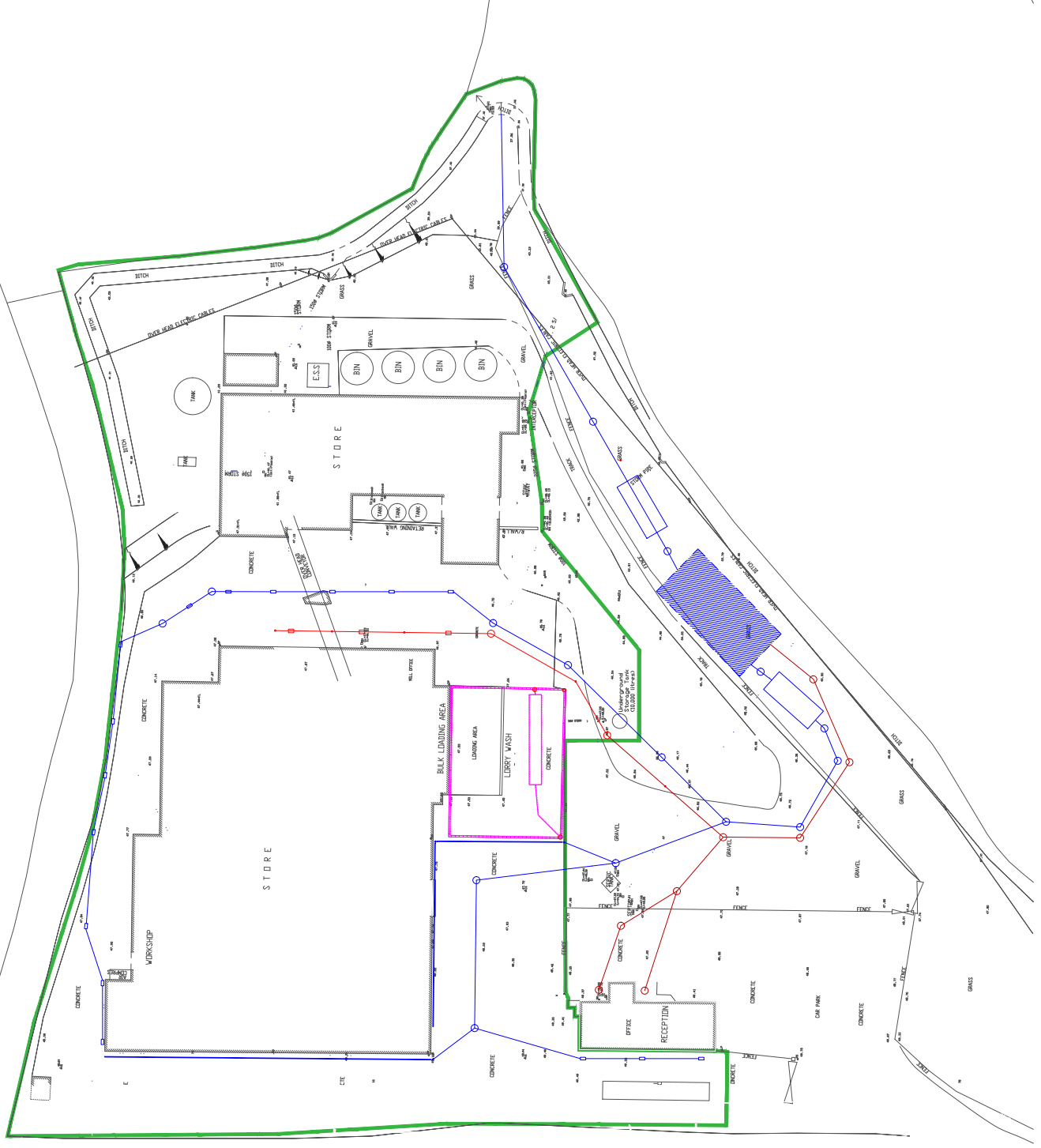
Review of historical maps for the site do not show any development within the site boundary other than the warehouse buildings which are shown to be extended and added to, to form the Wynnstay site as it exists today.

The areas within which the new drainage plant will be installed are shown as undeveloped in all maps.

Consequently, intrusive site investigation to obtain samples for analysis is not required.

APPENDIX A

Drawings



Issued for Comment

Job: 129-01-10

Title: Existing Permit Boundary and Proposed Drainage

Date: November 2017

Scale: NTS

Drawn by: AD

Checked by: DS



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Drawing No: 129-01-10.D01

Revision No: | Date: 29.11.17

APPENDIX B

Groundsure Enviro Insight Report



Excal Ltd

Capel Hendre, Capel Hendre Ind Est,
Ammanford, SA18 3SJ

Groundsure Reference: HMD-142-4498526

Your Reference: Wynnstay_SCR_-_EC_3254

Report Date 27 Nov 2017

Report Delivery Method: Email - pdf

Enviro Insight

Address: WYNNSTAY GROUP PLC, LLYSONNEN MILL, LLYSONNEN ROAD, TRAVELLERS REST,
CARMARTHEN, SA31 3SG

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Enviro Insight** as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above Groundsure reference number.

Yours faithfully,

A handwritten signature in black ink, appearing to be 'A. J. O.', written in a cursive style.

Managing Director
Groundsure Limited

Enc.
Groundsure Enviroinsight

Enviro Insight

Address: WYNNSTAY GROUP PLC, LLYSONNEN MILL, LLYSONNEN ROAD, TRAVELLERS REST, CARMARTHEN, SA31 3SG

Date: 27 Nov 2017

Reference: HMD-142-4498526

Client: Excal Ltd



Aerial Photograph Capture date: 04-Jun-2013

Grid Reference: 238376,219559

Site Size: 1.88ha

Report Reference: HMD-142-4498526

Client Reference: Wynnstay_SCR_-_EC_3254

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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	2	0	0	10
1.2 Additional Information – Historical Tank Database	5	0	7	0
1.3 Additional Information – Historical Energy Features Database	1	0	0	2
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	0
1.6 Potentially Infilled Land	0	0	0	8

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	7	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	1	0	0	0
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
2.1.8 Records of Licensed Discharge Consents	2	3	0	1
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/Natural Resources Wales 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	0
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/Natural Resources Wales Registered Landfill Sites	0	0	0	0	0	Not searched
3.1.2 Environment Agency/Natural Resources Wales Historic Landfill Sites	0	0	0	1	0	2
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	2
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	0	0	0	0	1
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/Natural Resources Wales Licensed Waste Sites	0	0	0	0	7	8

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	10	0	1	Not searched
4.2 Records of Petrol and Fuel Sites	0	0	0	0
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	0	0	7
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	2
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	3
6.6 Source Protection Zones (within 500m of the study site)	0	0	0	0	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)	1	0	0	0	Not searched	Not searched

Section 6: Hydrogeology and Hydrology

0-500m

	On-site	0-50m	51-250	251-500	501-1000	1000-1500
6.9 Is there any Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site?	No	No	No	No	Yes	Yes
6.10 Detailed River Network entries within 500m of the site	0	0	0	8	Not searched	Not searched
6.11 Surface water features within 250m of the study site	No	No	Yes	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/Natural Resources Wales 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?	Limited potential					
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	3	2
8.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	1
8.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	0
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	7	62
8.7 Records of Local Nature Reserves (LNR)	0	0	0	0	0	0
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

Section 8: Designated Environmentally Sensitive Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	0	0
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?

Very 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?

Negligible

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 1 and 3% 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?

No 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.

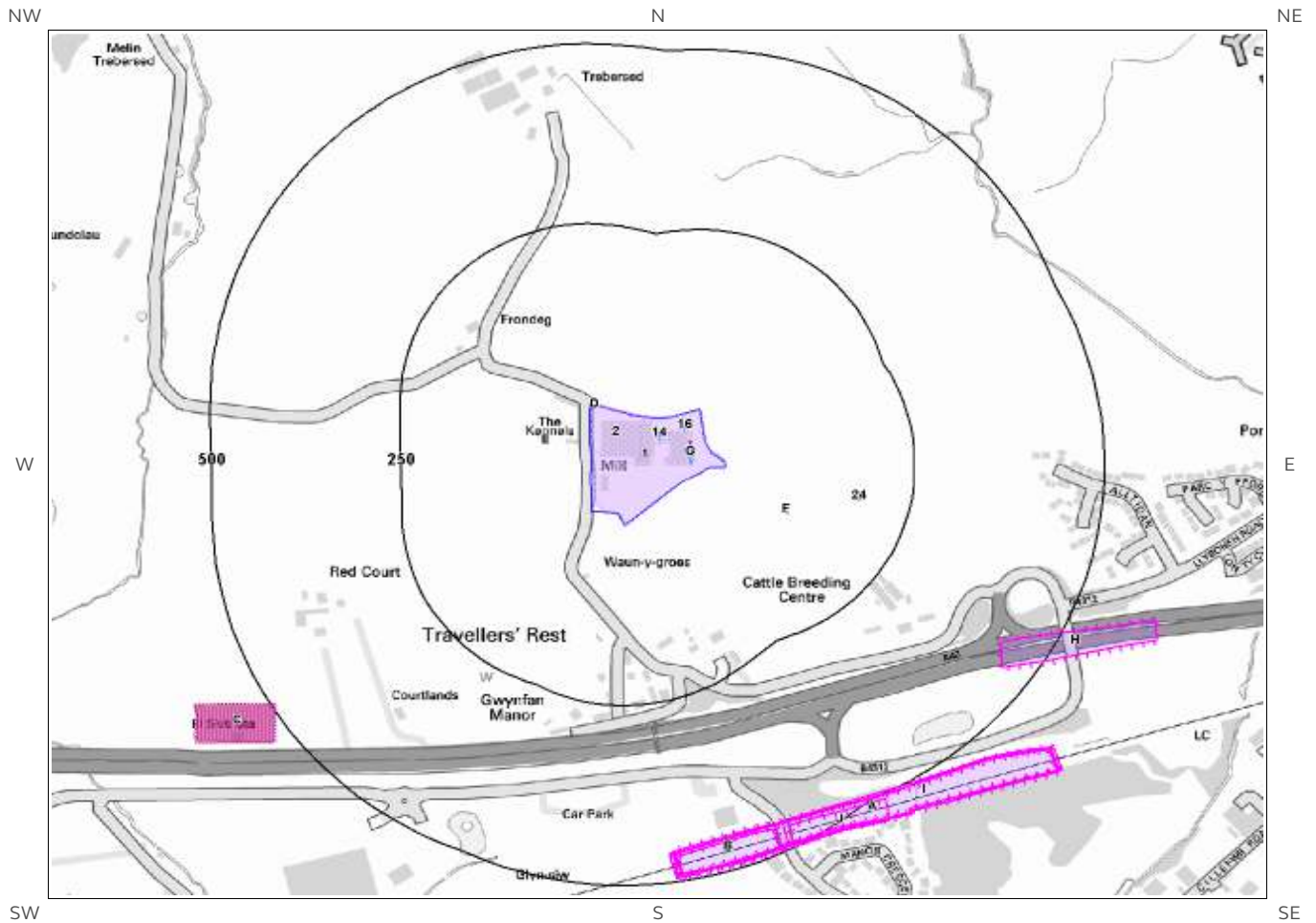
Note: Maps

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).

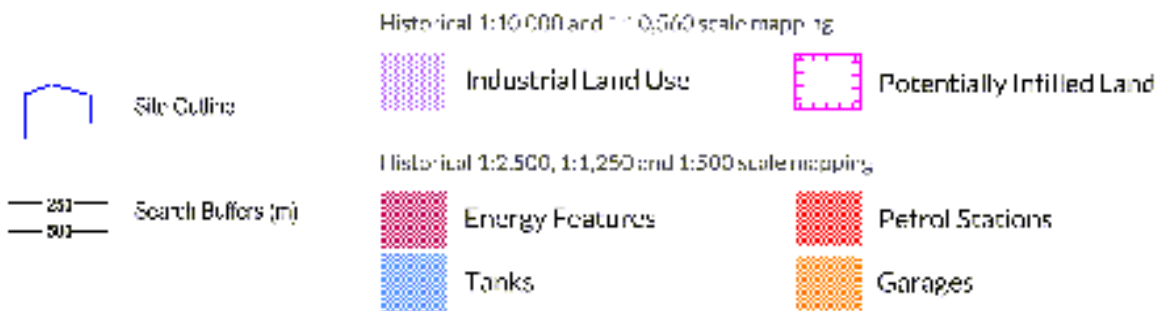
Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as "Not Shown".

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: 12

ID	Distance [m]	Direction	Use	Date
1	0	On Site	Unspecified Mill	1992
2	0	On Site	Unspecified Warehouse	1973
3H	438	SE	Cuttings	1973
4B	452	S	Cuttings	1963
5A	455	S	Cuttings	1938
6A	455	S	Cuttings	1905
7A	456	S	Cuttings	1948
8B	459	S	Cuttings	1886
9I	459	SE	Cuttings	1963
10J	469	SE	Cuttings	1886
11C	494	SW	Electricity Substation	1973
12C	494	SW	Electricity Substation	1992

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: 12

ID	Distance (m)	Direction	Use	Date
13D	0	On Site	Unspecified Tank	1975
14	0	On Site	Tanks	1975
15G	0	On Site	Tanks	1987
16	0	On Site	Tanks	1987
17D	0	On Site	Tanks	1987
18E	58	W	Unspecified Tank	1987
19E	60	W	Unspecified Tank	1975
20E	60	W	Unspecified Tank	1968
21F	100	SE	Unspecified Tank	1968
22F	100	SE	Unspecified Tank	1975
23F	102	SE	Unspecified Tank	1987

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:

3

ID	Distance (m)	Direction	Use	Date
25G	0	On Site	Electricity Substation	1987
26C	495	SW	Electricity Substation	1969
27C	495	SW	Electricity Substation	1987

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:

0

Database searched and no data found.

1.6 Potentially Infilled Land

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

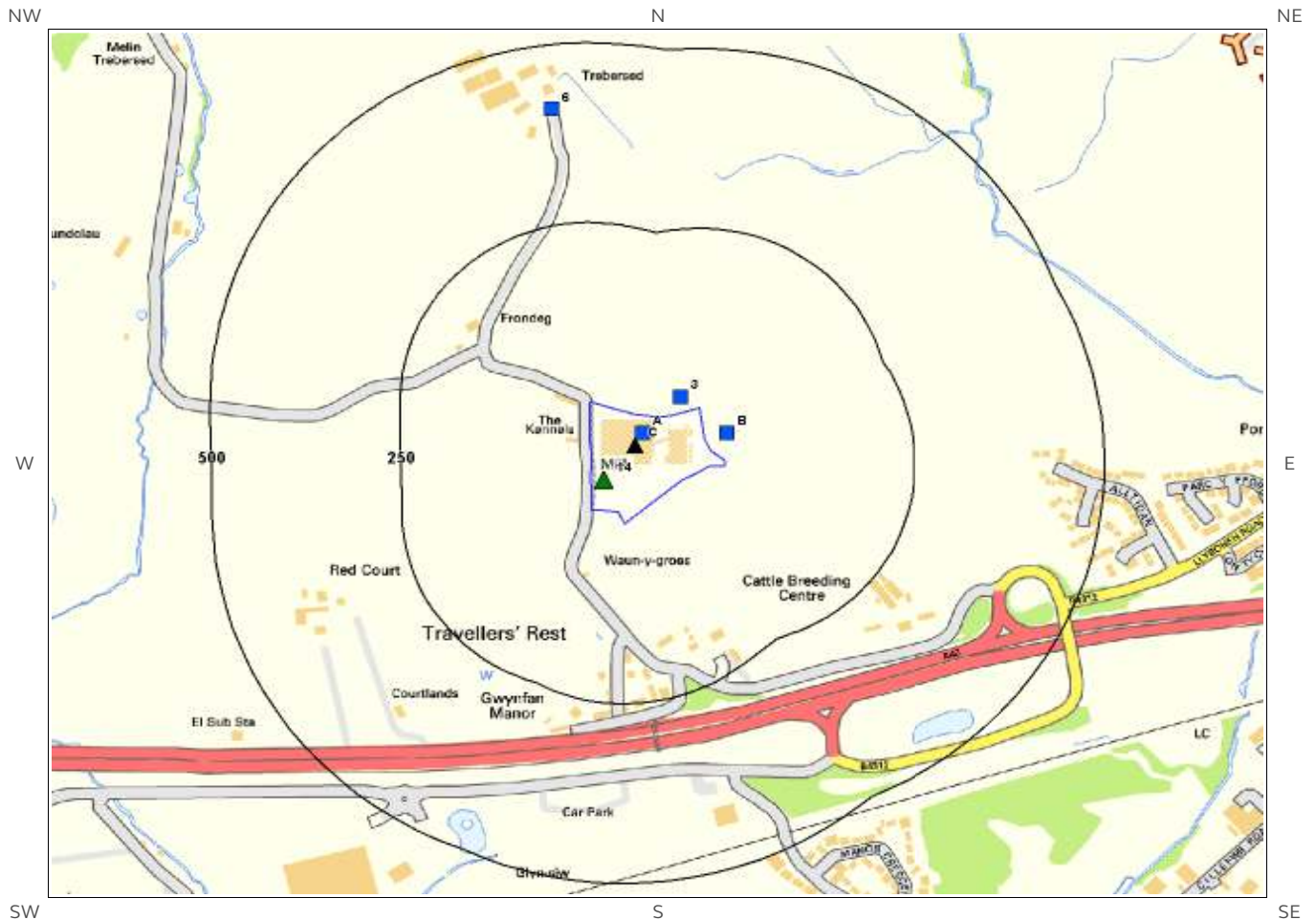
8

The following Historical Potentially Infilled Features derived from the Historical Mapping information is provided by Groundsure:

ID	Distance(m)	Direction	Use	Date
28H	438	SE	Cuttings	1973
29B	452	S	Cuttings	1963
30A	455	S	Cuttings	1938
31A	455	S	Cuttings	1905

32A	456	S	Cuttings	1948
33B	459	S	Cuttings	1886
34I	459	SE	Cuttings	1963
35J	469	SE	Cuttings	1886

2. Environmental Permits, Incidents and Registers Map



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- | | | | | | |
|---|--------------------|---|-------------------------------|---|--|
|  | Site Outline |  | Recorded Pollution Incident |  | RAS 3 & 4 Authorisations |
|  | Search Buffers (m) |  | Dangerous Substances (List 1) |  | Part A(1) Authorised Processes and Historic IPC Authorisations |
| | |  | Dangerous Substances (List 2) |  | Part A(2) and Part B Authorised Processes |
| | |  | Water Industry Referrals |  | COMAH / NIIHS Sites |
| | |  | 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/Natural Resources Wales 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:

7

The following Part A(1) and IPPC Authorised Activities are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
15C	0	On Site	238290 219580	Operator: Wynnstay Group Plc Installation Name: Llysonnen Mill Ea/epr/ep3034gs/a001 Process: ANIMAL VEGETABLE AND FOOD; TREATING ETC VEGETABLE RAW MATERIALS FOR FOOD >300T/D Permit Number: EP3034GS Original Permit Number: EP3034GS EPR Reference: - Issue Date: 5/7/2010 00:00:00 Effective Date: 5/7/2010 Last date noted as effective: 2017-07-15 Status: Superseded
16C	0	On Site	238290 219580	Operator: Wynnstay Group Plc Installation Name: Llysonnen Mill Epr/ep3034gs Process: ANIMAL VEGETABLE AND FOOD; TREATING ETC VEGETABLE RAW MATERIALS FOR FOOD >300T/D Permit Number: UP3735HF Original Permit Number: EP3034GS EPR Reference: - Issue Date: 5/10/2010 00:00:00 Effective Date: 5/10/2010 Last date noted as effective: 2017-07-15 Status: Effective
17C	0	On Site	238290 219580	Operator: Wynnstay Group Plc Installation Name: Llysonnen Mill Epr/ep3034gs Process: Treatment and processing, other than exclusively packaging, of the following raw... Permit Number: EP3034GS Original Permit Number: - EPR Reference: - Issue Date: 5/10/2010 00:00:00 Effective Date: 5/10/2010 Last date noted as effective: 2017-07-15 Status: Effective

ID	Distance (m)	Direction	NGR	Details	
18C	0	On Site	238290 219580	Operator: Wynnstay Group Plc Installation Name: Llysonnen Mill Epr/ep3034gs Process: ANIMAL VEGETABLE AND FOOD; TREATING ETC VEGETABLE RAW MATERIALS FOR FOOD >300T/D	Permit Number: EP3034GS Original Permit Number: - EPR Reference: - Issue Date: 5/10/2010 00:00:00 Effective Date: 5/10/2010 Last date noted as effective: 2017-07-15 Status: Effective
19C	0	On Site	238290 219580	Operator: Wynnstay Group Plc Installation Name: Llysonnen Mill Epr/ep3034gs Process: -	Permit Number: EP3034GS Original Permit Number: - EPR Reference: - Issue Date: 5/10/2010 00:00:00 Effective Date: 5/10/2010 Last date noted as effective: 2017-07-15 Status: Effective
20C	0	On Site	238290 219580	Operator: Wynnstay Group Plc Installation Name: Llysonnen Mill Ea/epr/ep3034gs/a001 Process: -	Permit Number: EP3034GS Original Permit Number: EP3034GS EPR Reference: - Issue Date: 5/7/2010 00:00:00 Effective Date: 5/7/2010 Last date noted as effective: 2017-07-15 Status: Superseded
21C	0	On Site	238290 219580	Operator: Wynnstay Group Plc Installation Name: Llysonnen Mill Ea/epr/ep3034gs/a001 Process: Treatment and processing, other than exclusively packaging, of the following raw...	Permit Number: EP3034GS Original Permit Number: EP3034GS EPR Reference: - Issue Date: 5/7/2010 00:00:00 Effective Date: 5/7/2010 Last date noted as effective: 2017-07-15 Status: Superseded

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:

1

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
14	0	On Site	238248 219533	Address: Wynstay Group Plc (WFP), Llysonnen Mill, Travellers Rest, Carmarthen, SA31 3SG Process: Animal Feed Compound Status: Historical Permit Permit Type: Part B Enforcement: No Enforcements Notified Date of Enforcement: No Enforcements Notified Comment: No Enforcements 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:

6

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

ID	Distance (m)	Direction	NGR	Details
1A	0	On Site	238300 219600	Address: WELSH FEED PRODUCERS, SEPTIC TANK, LLYSONNEN MILL, CARMARTHEN Effluent Type: UNSPECIFIED Permit Number: BN0247301 Permit Version: 1 Receiving Water: UNNAMED TRIB TAWELAN BROOK Status: CONSENT EXPIRED - TIME LIMIT Issue date: 25/08/1981 Effective Date: 25-Aug-1981 Revocation Date: 05/10/1993
2A	0	On Site	238300 219600	Address: WELSH FEED PRODUCERS, SEPTIC TANK, LLYSONNEN MILL, CARMARTHEN Effluent Type: UNSPECIFIED Permit Number: BN0128901 Permit Version: 1 Receiving Water: TAWELON BROOK Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 19/12/1975 Effective Date: 19-Dec-1975 Revocation Date: -
3	22	N	238350 219650	Address: DALOETY AGRICULTURE LLYSONNEN MILL, DALOETY AGRICULTURE LLYSONNEN MI, LLYSONNEN MILL TRAVELLERS REST C, TRAVELLERS REST CARMARTHEN, CARMARTHEN, CARMARTHEN Effluent Type: UNSPECIFIED Permit Number: BN0243102 Permit Version: 1 Receiving Water: TAWELAN BROOK Status: CONSENT EXPIRED - TIME LIMIT Issue date: 11/03/1981 Effective Date: 11-Mar-1981 Revocation Date: 05/10/1993

ID	Distance (m)	Direction	NGR	Details
4B	29	NE	238410 219600	<p>Address: LLYSONNEN MILL TRAVELLERS RESTCAR, LLYSONNEN MILL TRAVELLERS REST, TRAVELLERS RESTCARMARTHEN, CARMARTHEN, CARMARTHEN, CARMARTHEN</p> <p>Effluent Type: TRADE DISCHARGES - UNSPECIFIED</p> <p>Permit Number: BN0243101</p> <p>Permit Version: 2</p> <p>Receiving Water: A TRIBUTARY OF THE TAWELAN BRO</p> <p>Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88)</p> <p>Issue date: 05/10/1993</p> <p>Effective Date: 05-Oct-1993</p> <p>Revocation Date: -</p>
5B	29	NE	238410 219600	<p>Address: LLYSONNEN MILL TRAVELLERS RESTCAR, LLYSONNEN MILL TRAVELLERS REST, TRAVELLERS RESTCARMARTHEN, CARMARTHEN, CARMARTHEN, CARMARTHEN</p> <p>Effluent Type: TRADE DISCHARGES - UNSPECIFIED</p> <p>Permit Number: BN0243101</p> <p>Permit Version: 1</p> <p>Receiving Water: A TRIBUTARY OF THE TAWELAN BRO</p> <p>Status: REVOKED - UNSPECIFIED</p> <p>Issue date: 11/03/1981</p> <p>Effective Date: 11-Mar-1981</p> <p>Revocation Date: 04/10/1993</p>
6	410	N	238180 220050	<p>Address: TREBERSED ST PETERS CARMARTHEN DYF, TREBERSED ST PETERS CARMARTHEN, ST PETERS CARMARTHEN DYFED, CARMARTHEN DYFED, DYFED, DYFED</p> <p>Effluent Type: UNSPECIFIED</p> <p>Permit Number: BP0066701</p> <p>Permit Version: 1</p> <p>Receiving Water: TO LAND</p> <p>Status: CONSENT EXPIRED - TIME LIMIT</p> <p>Issue date: 16/10/1987</p> <p>Effective Date: 16-Oct-1987</p> <p>Revocation Date: 29/04/1994</p>

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/Natural Resources Wales 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:

0

Database searched and no data found.

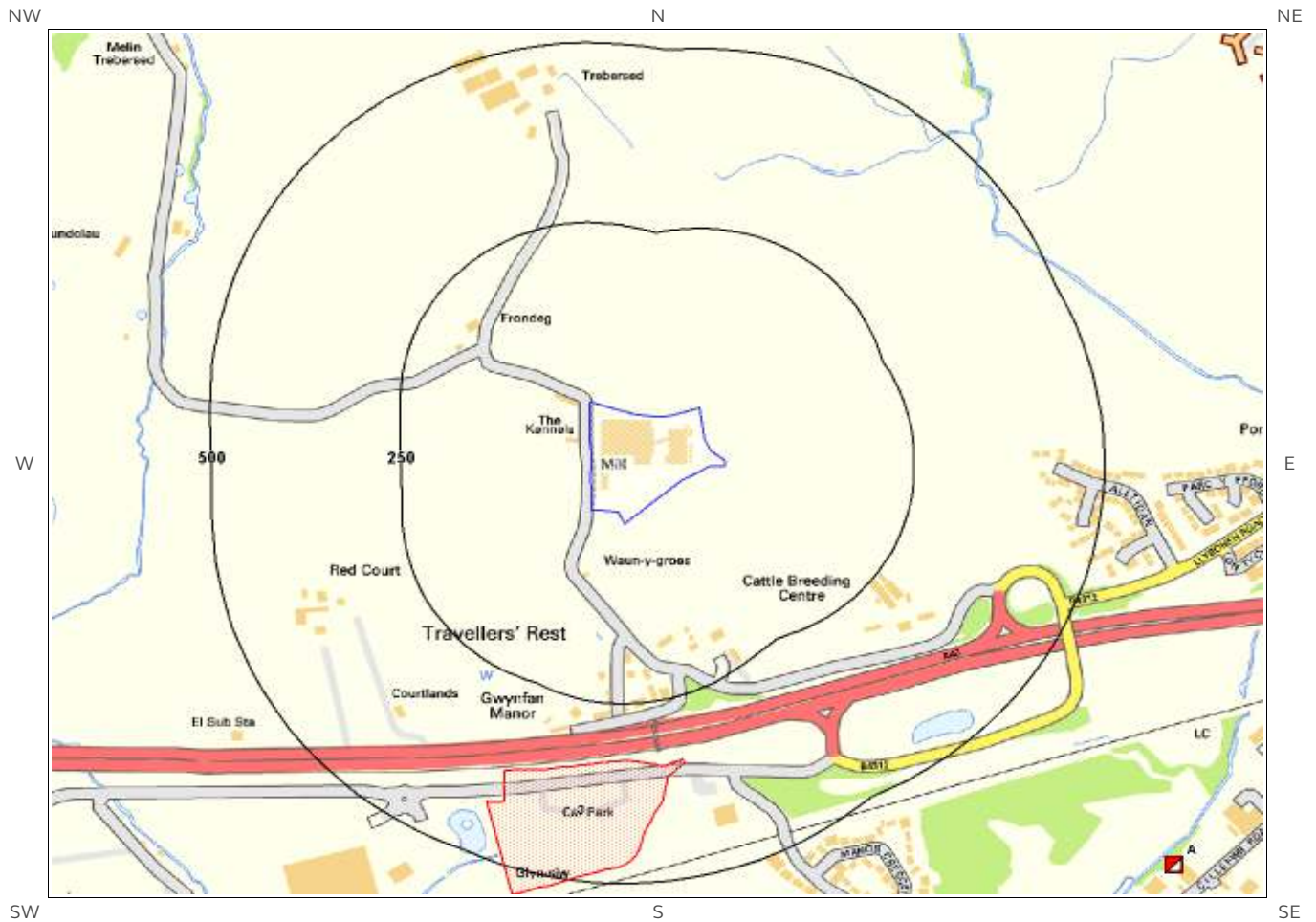
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

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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- | | | | | | |
|---|------------------------|---|---------------------------|---|---|
|  | Site Outline |  | EA/NRW Active Landfill |  | Historic and Planned Waste Sites |
|  | 250 Search Buffers (m) |  | EA/NRW Historic Landfill |  | EA/NRW Licensed Waste Site |
|  | 500 Search Buffers (m) |  | BGS / DoE Survey Landfill |  | Local Authority/Historical Mapping Landfill Records |

3. Landfill and Other Waste Sites

3.1 Landfill Sites

3.1.1 Records from Environment Agency/Natural Resources Wales landfill data within 1000m of the study site:

0

Database searched and no data found.

3.1.2 Records of Environment Agency/Natural Resources Wales historic landfill sites within 1500m of the study site:

3

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	
3	329	S	238200 219000	Site Address: Glyn Siw, Llanllwach, Carmarthen, Carmarthenshire Waste Licence: - Site Reference: - Waste Type: Inert, Industrial, Household Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: Ffynnon Plant Crymuch First Recorded: 31-Dec-1989 Last Recorded: 31-Dec-1992
Not shown	1014	SW	237200 218800	Site Address: Nant-y-Ci Tip, St Clewes Road, Carmarthen, Dyfed Waste Licence: - Site Reference: - Waste Type: Inert, Industrial, Commercial, Household Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: Carmarthen Borough Council Licence Holder: - First Recorded: 31-Dec-1950 Last Recorded: 31-Jul-1971
Not shown	1220	SW	236900 218800	Site Address: Nant-y-Ci Tip, St Clewes Road, Carmarthen, Dyfed Waste Licence: - Site Reference: - Waste Type: Inert, Industrial, Commercial, Household, Special Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: Carmarthen Borough Council Licence Holder: Carmarthen District Council First Recorded: 31-Dec-1960 Last Recorded: 31-Dec-1984

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

2

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

ID	Distance (m)	Direction	NGR	Details	
Not shown	1104	SW	237300.0 218900.0	Address: Nant-y-Ci Tip, St Clewes Road, Carmarthen (disused) BGS Number: 690.0	Risk: Risk to minor aquifer Waste Type: N/A
Not shown	1367	SW	237000.0 218900.0	Address: Nant-y-Ci Tip, St Clewes Road, Carmarthen BGS Number: 689.0	Risk: Risk to minor aquifer Waste Type: N/A

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

1

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	1079	SW	237328 218850	Refuse Tip	1969 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/Natural Resources Wales licensed waste sites within 1500m of the study site:

15

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

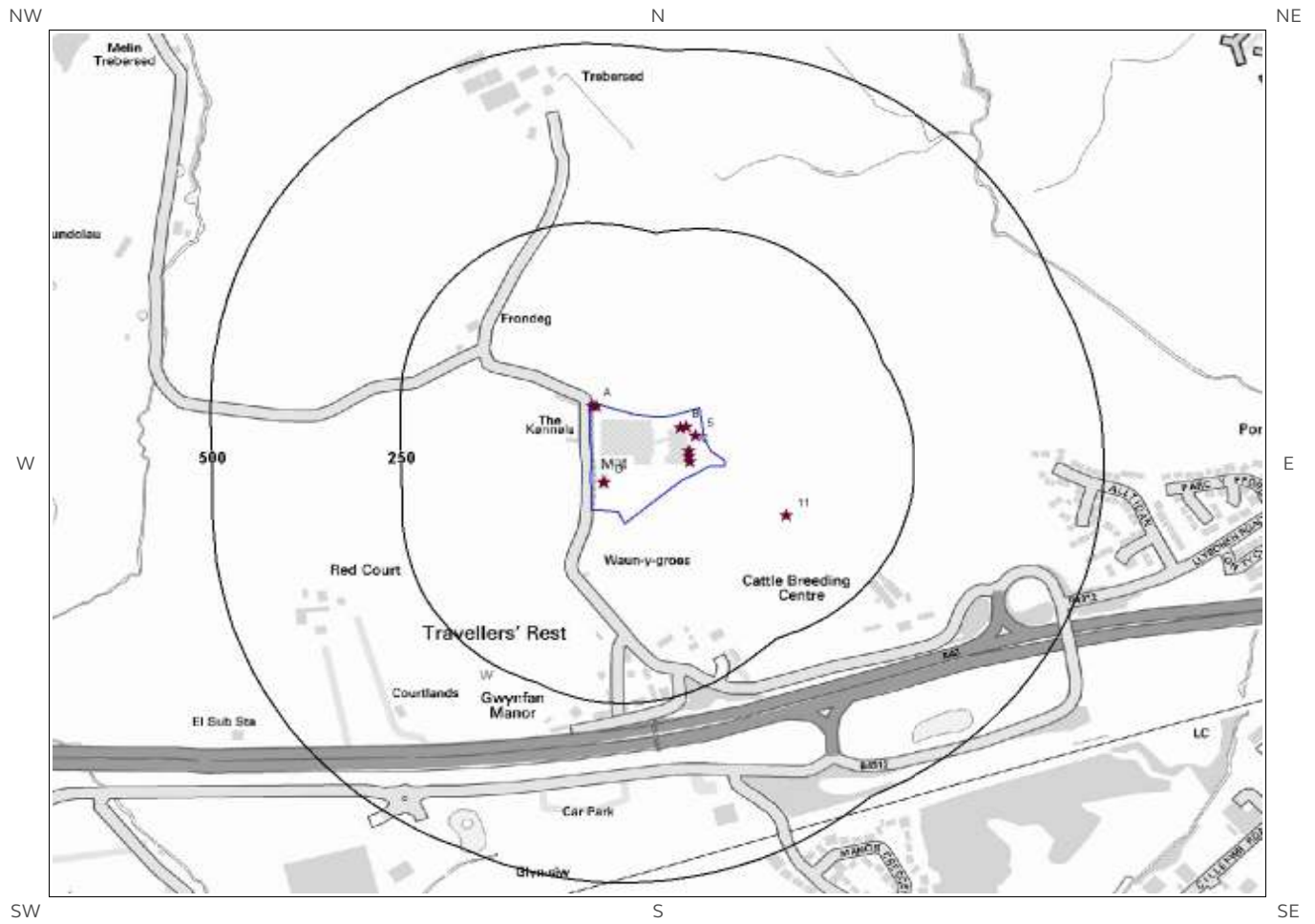
ID	Distance (m)	Direction	NGR	Details
6A	811	SE	239000 219000	<p>Site Address: Unit 2, Alltynap Rd, Johnstown, Carmarthen, Carms, SA31 3RA Type: Material Recycling Treatment Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CWM013 EPR reference: - Operator: CWM Environmental Ltd Waste Management licence No: 34218 Annual Tonnage: 4999.0</p> <p>Issue Date: 18/02/2004 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Transfer Station / Recycling Centre Correspondence Address: Unit 2, Alltynap Road, Johnstown, Carmarthen, Carms, SA32 8BG</p>
7A	811	SE	239000 219000	<p>Site Address: Unit 2, "Alltynap Rd, Cillefwr Ind Est", Johnstown, Carmarthen, Carmarthenshire, SA31 3RA Type: Material Recycling Treatment Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CRC001 EPR reference: - Operator: Cwm Environmental Ltd Waste Management licence No: 34218 Annual Tonnage: 0.0</p> <p>Issue Date: 18/02/2004 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Transfer Station / Recycling Centre Correspondence Address: Unit 2, "Alltynap Road, Cillefwr Industrial Estate", Johnstown, Carmarthen, Carmarthenshire, SA32 8BG</p>
Not shown	818	SE	238900 218900	<p>Site Address: Plot 1, Cillefwr Industrial Estate, Johnstown, Carmarthen, Carmarthenshire, SA31 3RB Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CRE001 EPR reference: - Operator: Carmarthen Recycling And Environmental Services Ltd Waste Management licence No: 34181 Annual Tonnage: 0.0</p> <p>Issue Date: 18/10/2000 Effective Date: - Modified: 26/11/2002 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Transfer Station Correspondence Address: Plot 1, Cillefwr Industrial Estate, Johnstown, Carmarthen, Carmarthenshire, SA31 3RB</p>
Not shown	843	SE	238981 218936	<p>Site Address: Plot 1, Cillefwr Ind Est, Johnstown, Carmarthen, Carmarthenshire, SA31 3RB Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CRE001 EPR reference: ZP3298FV/V002 Operator: Carmarthen Recycling & Environmental Services Ltd Waste Management licence No: 34181 Annual Tonnage: 24999.0</p> <p>Issue Date: 18/10/2000 Effective Date: - Modified: 26/11/2002 Surrendered Date: 0 Expiry Date: 0 Cancelled Date: 0 Status: Modified Site Name: Transfer Station Correspondence Address: -</p>

ID	Distance (m)	Direction	NGR	Details
Not shown	843	SE	238980 218935	<p>Site Address: Transfer Station, Johnstown, Carmarthen, Carmarthenshire, SA31 3RB Type: - Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: ZP3298FV EPR reference: - Operator: Carmarthen Recycling & Environmental Services Ltd Waste Management licence No: 0 Annual Tonnage: 24999.0</p> <p>Issue Date: 18/10/2000 Effective Date: 18/10/2000 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Effective Site Name: - Correspondence Address: -</p>
Not shown	843	SE	238980 218935	<p>Site Address: Plot 1, Cillefwr Ind Est, Johnstown, Carmarthen, Carmarthenshire, SA31 3RB Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CRE001 EPR reference: ZP3298FV/V002 Operator: Carmarthen Recycling & Environmental Services Ltd Waste Management licence No: 34181 Annual Tonnage: 24999.0</p> <p>Issue Date: 18/10/2000 Effective Date: - Modified: 26/11/2002 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Transfer Station Correspondence Address: -</p>
Not shown	843	SE	238980 218935	<p>Site Address: Transfer Station, Johnstown, Carmarthen, Carmarthenshire, SA31 3RB Type: Household, Commercial & Industrial Waste T Stn Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: ZP3298FV EPR reference: - Operator: - Waste Management licence No: 34181 Annual Tonnage: 24999.0</p> <p>Issue Date: 18/10/2000 Effective Date: 18/10/2000 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Effective Site Name: - Correspondence Address: -</p>
Not shown	1092	E	239500 219500	<p>Site Address: Amex Park, Llansteffan Road, Johnstown, Carmarthenshire, SA31 3NF Type: Biological Treatment Facility Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: MEK001 EPR reference: - Operator: Mekatek Ltd Waste Management licence No: 34045 Annual Tonnage: 0.0</p> <p>Issue Date: 22/06/1992 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Mekatek Ltd Correspondence Address: Amex Park, Llansteffan Road, Johnstown, Carmarthenshire, SA31 3NF</p>
Not shown	1200	E	239557 219206	<p>Site Address: Unit 2, Alltynap Rd, Johnstown, Carmarthen, Carmarthenshire, SA31 3RA Type: Material Recycling Treatment Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CWM013 EPR reference: EA/EPR/VP3698FD/V002 Operator: C W M Environmental Ltd Waste Management licence No: 34218 Annual Tonnage: 24999.0</p> <p>Issue Date: 18/02/2004 Effective Date: - Modified: 26/10/2007 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Transfer Station / Recycling Centre Correspondence Address: -</p>

ID	Distance (m)	Direction	NGR	Details
Not shown	1200	E	239557 219206	<p>Site Address: Transfer Station / Recycling Centre, Johnstown, Carmarthen, Carmarthenshire, SA31 3RA Type: - Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: VP3698FD EPR reference: - Operator: Carmarthenshire Recycling Company Limited Waste Management licence No: 0 Annual Tonnage: 24999.0</p> <p>Issue Date: 18/02/2004 Effective Date: 18/02/2004 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Effective Site Name: - Correspondence Address: -</p>
Not shown	1200	E	239557 219206	<p>Site Address: Transfer Station / Recycling Centre, Johnstown, Carmarthen, Carmarthenshire, SA31 3RA Type: Material Recycling Treatment Facility Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: VP3698FD EPR reference: - Operator: - Waste Management licence No: 34218 Annual Tonnage: 24999.0</p> <p>Issue Date: 18/02/2004 Effective Date: 18/02/2004 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Effective Site Name: - Correspondence Address: -</p>
Not shown	1200	E	239558 219207	<p>Site Address: Unit 2, Alltynap Rd, Johnstown, Carmarthen, Carmarthenshire, SA31 3RA Type: Material Recycling Treatment Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: CWM013 EPR reference: VP3698FD/V002 Operator: Carmarthenshire Recycling Company Limited Waste Management licence No: 34218 Annual Tonnage: 24999.0</p> <p>Issue Date: 18/02/2004 Effective Date: - Modified: 26/10/2007 Surrendered Date: 0 Expiry Date: 0 Cancelled Date: 0 Status: Modified Site Name: Transfer Station / Recycling Centre Correspondence Address: -</p>
Not shown	1331	E	239659 219097	<p>Site Address: Cillefwr Depot, Johnstown, Carmarthen, Carmarthenshire, SA31 3QZ Type: Household, Commercial & Industrial Waste T Stn Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: VP3898FP EPR reference: - Operator: - Waste Management licence No: 34214 Annual Tonnage: 4999.0</p> <p>Issue Date: 01/04/2004 Effective Date: 01/04/2004 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Effective Site Name: - Correspondence Address: -</p>
Not shown	1331	E	239659 219097	<p>Site Address: Cillefwr Depot, Johnstown, Carmarthen, Carmarthenshire, SA31 3QZ Type: - Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: VP3898FP EPR reference: - Operator: Carmarthenshire County Council Waste Management licence No: 0 Annual Tonnage: 4999.0</p> <p>Issue Date: 01/04/2004 Effective Date: 01/04/2004 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Effective Site Name: - Correspondence Address: -</p>

ID	Distance (m)	Direction	NGR	Details
Not shown	1332	E	239660 219098	<p>Site Address: Cillefwr Depot, Alltynap Road, Johnstown, Carmarthen, Carmarthenshire, SA31 3QZ</p> <p>Type: Household, Commercial & Industrial Waste T Stn</p> <p>Size: < 25000 tonnes</p> <p>Environmental Permitting Regulations (Waste) Licence Number: CCC001</p> <p>EPR reference: VP3898FP/V002</p> <p>Operator: Carmarthenshire County Council</p> <p>Waste Management licence No: 34214</p> <p>Annual Tonnage: 4999.0</p> <p>Issue Date: 01/04/2004</p> <p>Effective Date: -</p> <p>Modified: 31/07/2009</p> <p>Surrendered Date: 0</p> <p>Expiry Date: 0</p> <p>Cancelled Date: 0</p> <p>Status: Modified</p> <p>Site Name: Cillefwr Depot</p> <p>Correspondence Address: -</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: 11

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

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1A	0	On Site	Tank	238233 219639	SA31	Tanks (Generic)	Industrial Features
2A	0	On Site	Tank	238238 219638	SA31	Tanks (Generic)	Industrial Features
3B	0	On Site	Tank	238349 219609	SA31	Tanks (Generic)	Industrial Features
4B	0	On Site	Tank	238357 219610	SA31	Tanks (Generic)	Industrial Features
5	0	On Site	Electricity Sub Station	238370 219597	SA31	Electrical Features	Infrastructure and Facilities
6C	0	On Site	Tank	238361 219576	SA31	Tanks (Generic)	Industrial Features
7C	0	On Site	Tank	238361 219569	SA31	Tanks (Generic)	Industrial Features
8C	0	On Site	Tank	238362 219561	SA31	Tanks (Generic)	Industrial Features
9D	0	On Site	Celtic Pride	238248 219532	Llysonnen Mill, Llysonnen Road, Carmarthen, SA31 3SG	Fish, Meat and Poultry Products	Foodstuffs
10D	0	On Site	Wynnstay Group Plc	238248 219532	Llysonnen Mill, Llysonnen Road, Carmarthen, SA31 3SG	Agricultural Machinery and Goods	Industrial Products
11	106	SE	Tank	238489 219486	SA31	Tanks (Generic)	Industrial Features

4.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site: 0

Database searched and no data found.

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
GFDUD-XSV	GLACIOFLUVIAL DEPOSITS, DEVENSIAN	SAND AND GRAVEL

5.3 Bedrock and Solid Geology

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

Lex Code	Description	Rock Type
TTRA-MDST	TETRAGRAPTUS BEDS	MUDSTONE

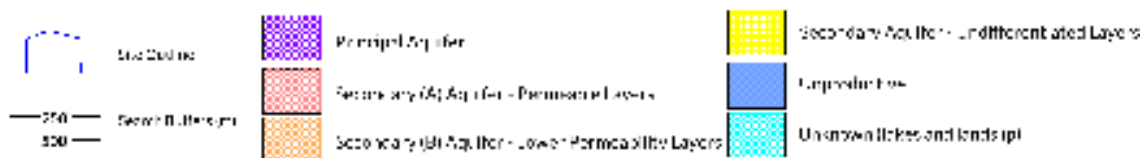
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

6 Hydrogeology and Hydrology

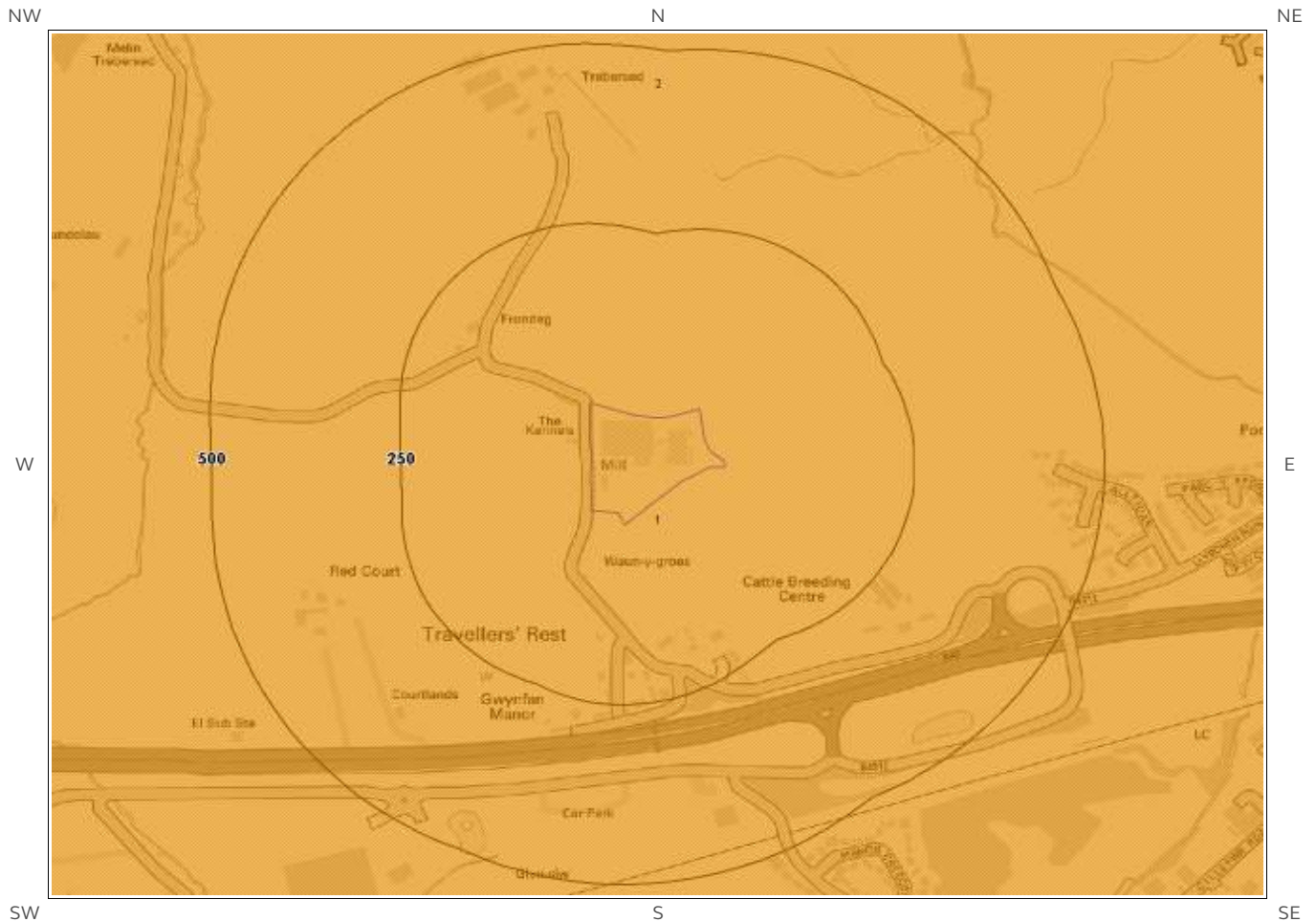
6a. Aquifer Within Superficial Geology



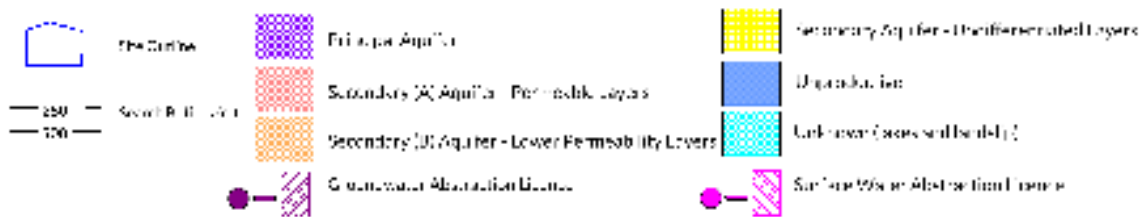
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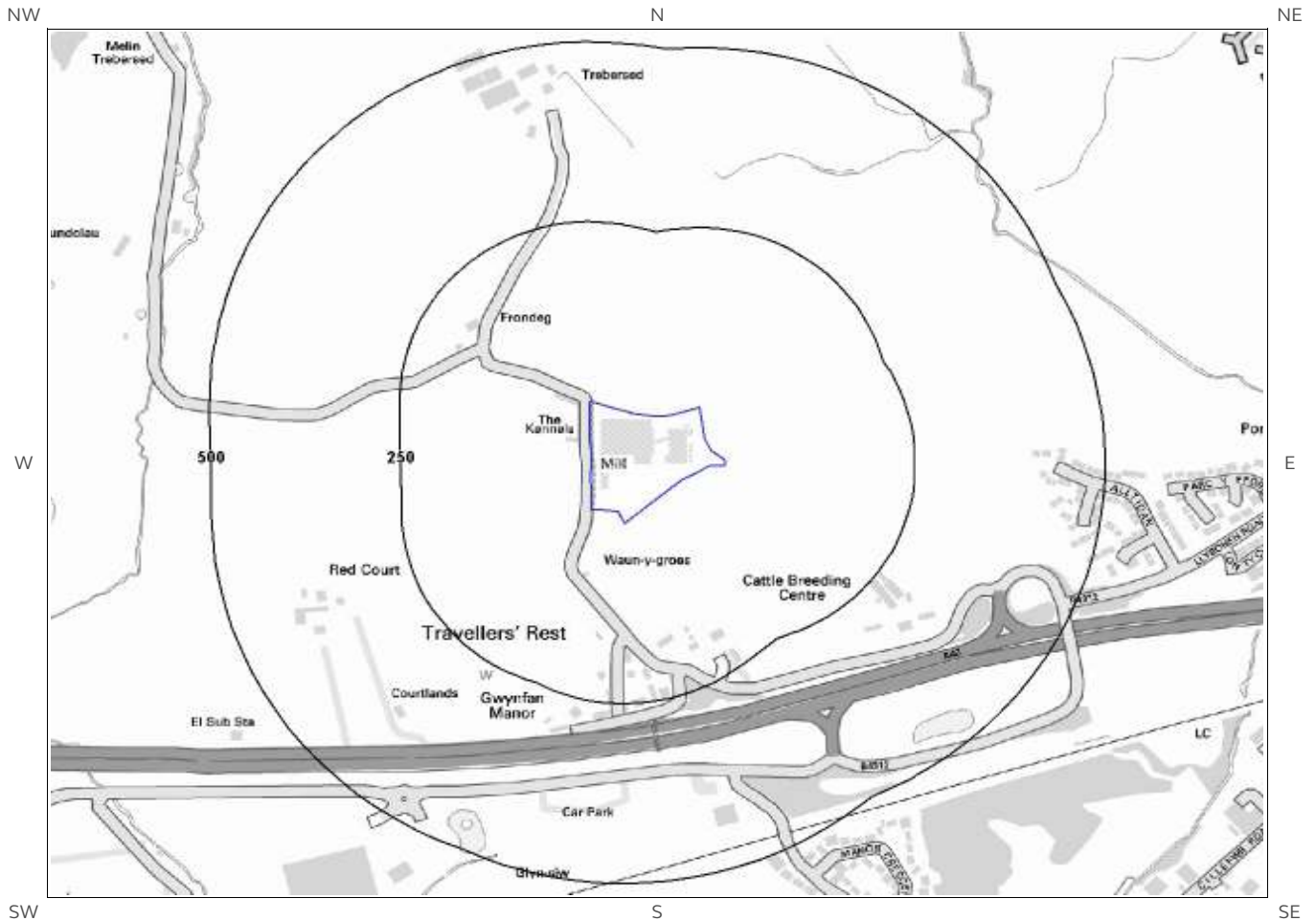
6b. Aquifer Within Bedrock Geology and Abstraction Licenses



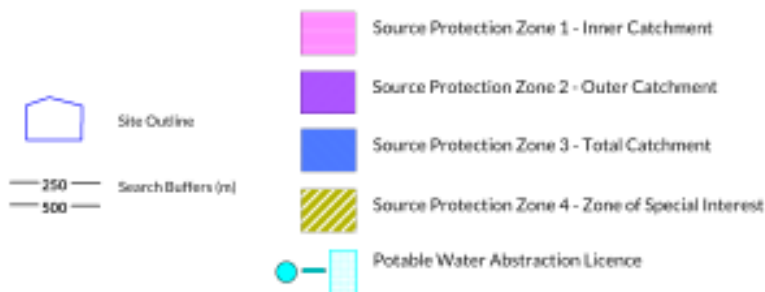
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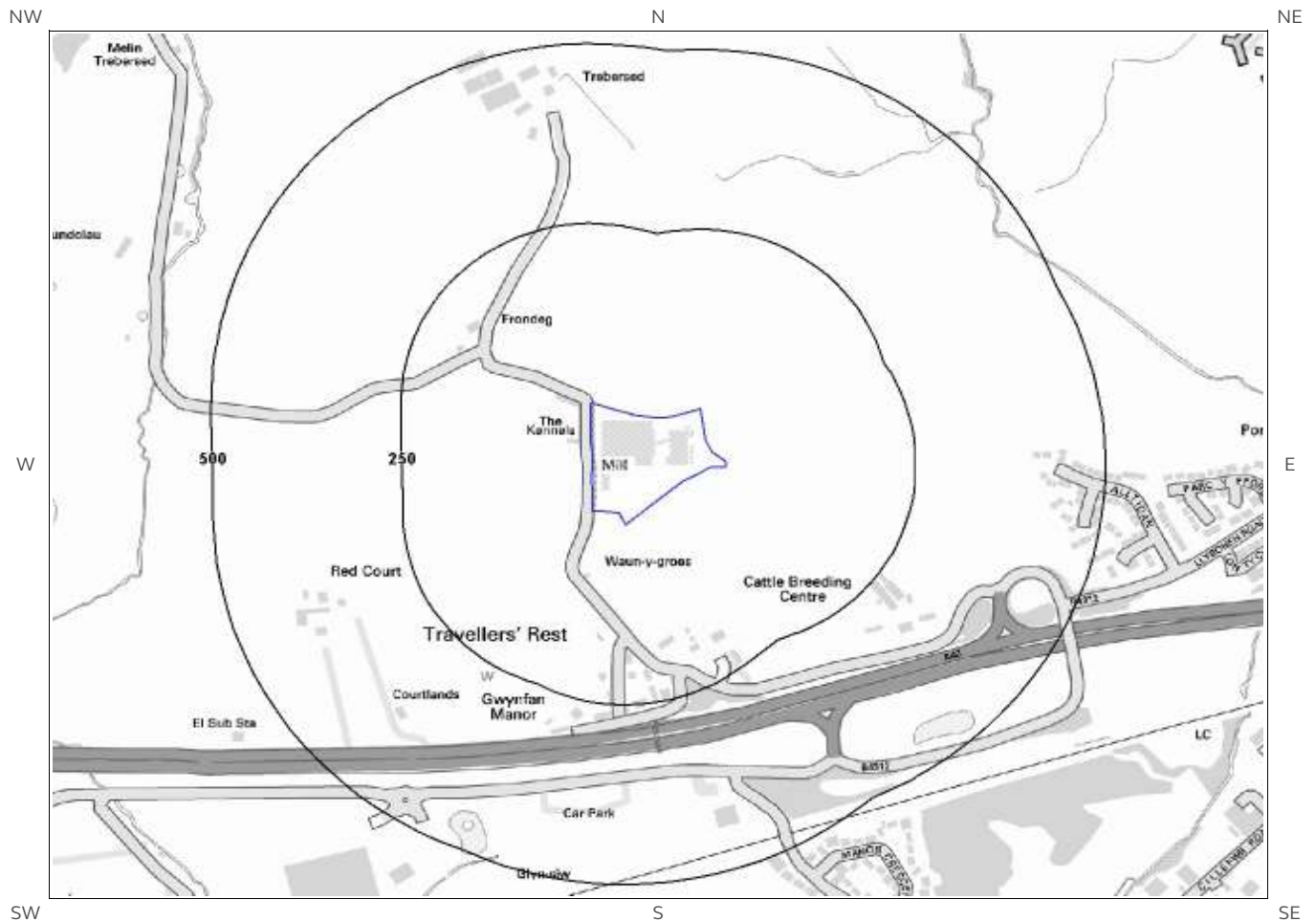
6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licenses



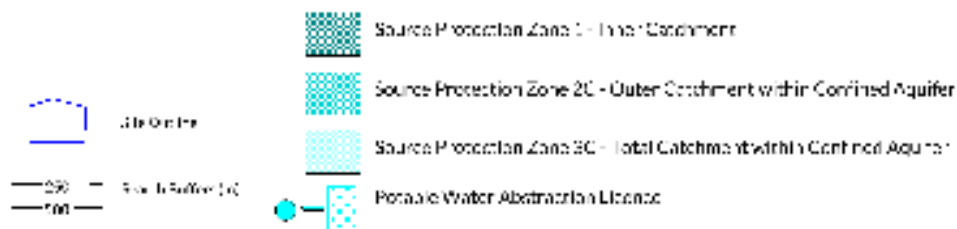
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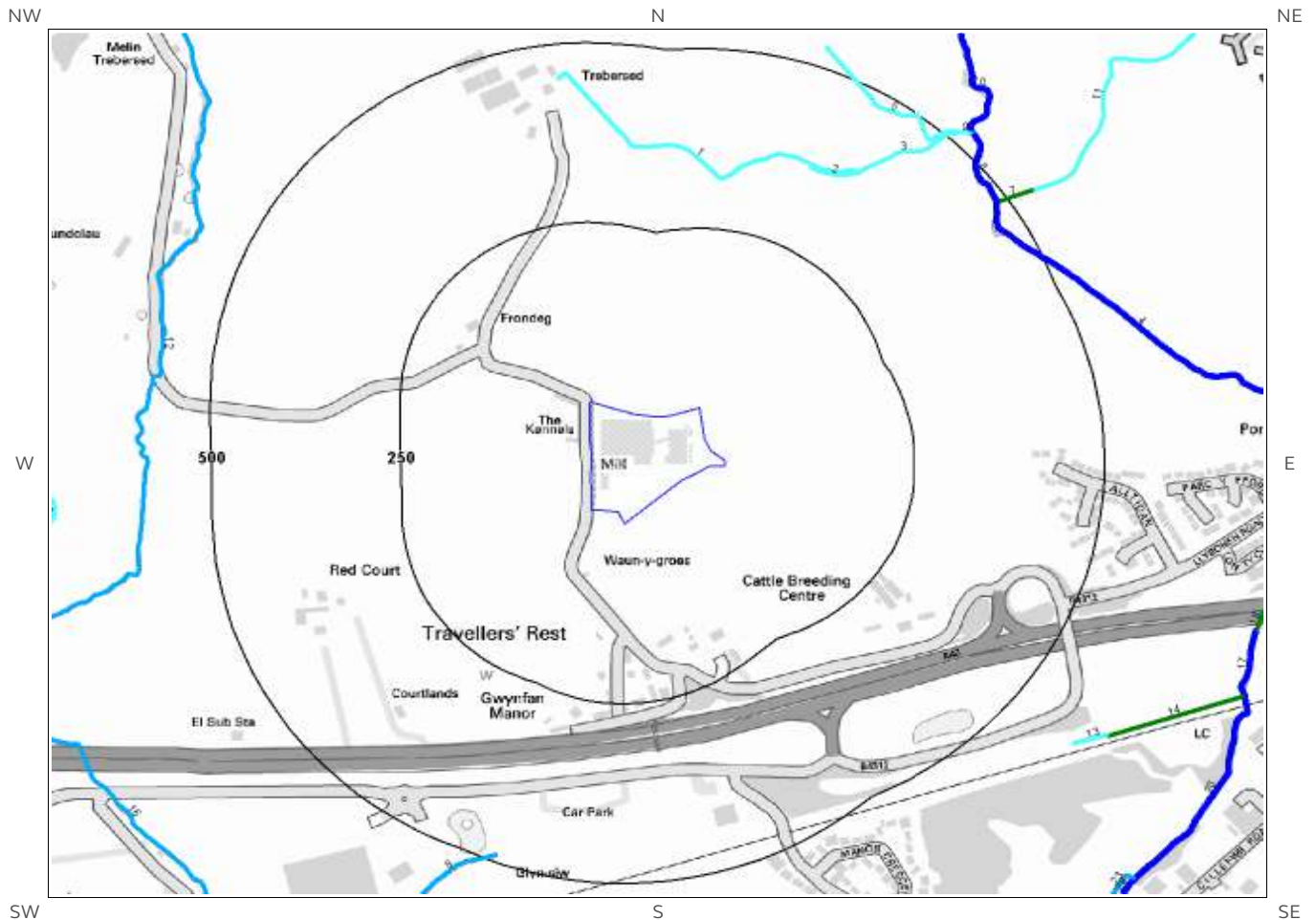
6d. Hydrogeology – Source Protection Zones within confined aquifer



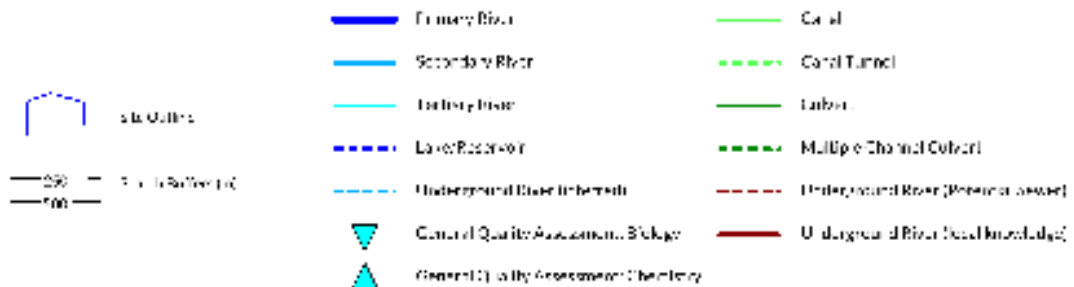
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6e. Hydrology – Detailed River Network and River Quality



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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/Natural Resources Wales'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 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	114	NW	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
5	358	N	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
2	365	N	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

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/Natural Resources Wales'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 Bedrock Geology Map (6b):

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers
2	357	N	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-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
Not shown	1677	E	240060 219260	Status: Active Licence No: 22/60/3/0022 Details: Effluent/Slurry Dilution Direct Source: Eaw Groundwater Point: Well In The Community Of Johnstown Used For Bottling Data Type: Point Name: Mekatek Ltd Annual Volume (m ³): 318226 Max Daily Volume (m ³): 1391.1 Original Application No: - Original Start Date: 23/6/1997 Expiry Date: - Issue No: 100 Version Start Date: 1/1/2007 Version End Date:
Not shown	1677	E	240060 219260	Status: Active Licence No: 22/60/3/0022 Details: Water Bottling Direct Source: Eaw Groundwater Point: Well In The Community Of Johnstown Used For Bottling Data Type: Point Name: Mekatek Ltd Annual Volume (m ³): 318226 Max Daily Volume (m ³): 1391.1 Original Application No: - Original Start Date: 23/6/1997 Expiry Date: - Issue No: 100 Version Start Date: 1/1/2007 Version End Date:
Not shown	1677	E	240060 219260	Status: Historical Licence No: 22/60/3/0022 Details: Effluent/Slurry Dilution Direct Source: Eaw Groundwater Point: Well In The Community Of Johnstown Data Type: Point Name: Mekatek Ltd Annual Volume (m ³): 318226 Max Daily Volume (m ³): 1391.1 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 23/6/1997 Version End Date:
Not shown	1677	E	240060 219260	Status: Historical Licence No: 22/60/3/0022 Details: Effluent/Slurry Dilution Direct Source: Eaw Groundwater Point: Well In The Community Of Johnstown Used For Bottling Data Type: Point Name: Mekatek Ltd Annual Volume (m ³): 318226 Max Daily Volume (m ³): 1391.1 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 23/6/1997 Version End Date:
Not shown	1677	E	240060 219260	Status: Historical Licence No: 22/60/3/0022 Details: Water Bottling Direct Source: Eaw Groundwater Point: Well In The Community Of Johnstown Data Type: Point Name: Mekatek Ltd Annual Volume (m ³): 318226 Max Daily Volume (m ³): 1391.1 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 23/6/1997 Version End Date:
Not shown	1736	E	240120 219260	Status: Active Licence No: 22/60/3/0022 Details: Effluent/Slurry Dilution Direct Source: Eaw Groundwater Point: Well In The Community Of Johnstown Data Type: Point Name: Mekatek Ltd Annual Volume (m ³): 318226 Max Daily Volume (m ³): 1391.1 Original Application No: - Original Start Date: 23/6/1997 Expiry Date: - Issue No: 100 Version Start Date: 1/1/2007 Version End Date:

ID	Distance (m)	Direction	NGR	Details
Not shown	1736	E	240120 219260	Status: Active Licence No: 22/60/3/0022 Details: Water Bottling Direct Source: Eaw Groundwater Point: Well In The Community Of Johnstown Data Type: Point Name: Mekatek Ltd Annual Volume (m ³): 318226 Max Daily Volume (m ³): 1391.1 Original Application No: - Original Start Date: 23/6/1997 Expiry Date: - Issue No: 100 Version Start Date: 1/1/2007 Version End Date:

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	1722	E	240130 219500	Status: Active Licence No: 22/60/3/0021 Details: Effluent/Slurry Dilution Direct Source: Eaw Surface Water Point: Tawelan Brook Data Type: Point Name: Mekatek Ltd Annual Volume (m ³): 340956 Max Daily Volume (m ³): 1491.09 Application No: WR1/143 Original Start Date: 23/6/1997 Expiry Date: - Issue No: 100 Version Start Date: 1/1/2007 Version End Date:
Not shown	1722	E	240130 219500	Status: Historical Licence No: 22/60/3/0021 Details: Effluent/Slurry Dilution Direct Source: Eaw Surface Water Point: Tawelan Brook Data Type: Point Name: Mekatek Ltd Annual Volume (m ³): 340956 Max Daily Volume (m ³): 1491.09 Application No: WR1/143 Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 23/6/1997 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	1677	E	240060 219260	Status: Historical Licence No: 22/60/3/0022 Details: Water Bottling Direct Source: Eaw Groundwater Point: Well In The Community Of Johnstown Data Type: Point Name: Mekatek Ltd Annual Volume (m ³): 318226 Max Daily Volume (m ³): 1391.1 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: Version End Date:

ID	Distance (m)	Direction	NGR	Details
Not shown	1677	E	240060 219260	Status: Active Licence No: 22/60/3/0022 Details: Water Bottling Direct Source: Eaw Groundwater Point: Well In The Community Of Johnstown Used For Bottling Data Type: Point Name: Mekatek Ltd Annual Volume (m ³): 318226 Max Daily Volume (m ³): 1391.1 Original Application No: - Original Start Date: 23/6/1997 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:
Not shown	1736	E	240120 219260	Status: Active Licence No: 22/60/3/0022 Details: Water Bottling Direct Source: Eaw Groundwater Point: Well In The Community Of Johnstown Data Type: Point Name: Mekatek Ltd Annual Volume (m ³): 318226 Max Daily Volume (m ³): 1391.1 Original Application No: - Original Start Date: 23/6/1997 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? No

Database searched and no data found.

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/Natural Resources Wales 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	Minor Aquifer/Intermediate Leaching Potential	I1	Soils which can possibly transmit a wide range of pollutants.

6.9 River Quality

Is there any Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site? Yes

6.9.1 Biological Quality:

Biological Quality data describes water quality in terms of 83 groups of macroinvertebrates, some of which are pollution sensitive. The results are graded from A ('Very Good') to F ('Bad').

The following Biological Quality records are shown on the Hydrology Map (6e):

ID	Distance (m)	Direction	NGR	River Quality Grade	Biological Quality Grade				
					2005	2006	2007	2008	2009
Not shown	892	E	239300 219600	River Name: Tawelan Brook Reach: Tidal Limit - Conf.llanllwch Str. End/Start of Stretch: Start of Stretch NGR	B	B	B	B	B

6.9.2 Chemical Quality:

Chemical quality data is based on the General Quality Assessment Headline Indicators scheme (GQAH). In England, each chemical sample is measured for ammonia and dissolved oxygen. In Wales, the samples are measured for biological oxygen demand (BOD), ammonia and dissolved oxygen. The results are graded from A ('Very Good') to F ('Bad').

The following Chemical Quality records are shown on the Hydrology Map (6e):

ID	Distance (m)	Direction	NGR	River Quality Grade	Chemical Quality Grade				
					2005	2006	2007	2008	2009
Not shown	892	E	239300 219600	River Name: Tawelon Reach: Tidal Limit - Conf.llanllwch Str. End/Start of Stretch: Start of Stretch NGR	A	A	A	A	-
Not shown	1429	E	239835 219644	River Name: Tawelon Reach: Tidal Limit - Conf.llanllwch Str. End/Start of Stretch: Sample Point NGR	A	A	A	A	-

6.10 Detailed River Network

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

The following Detailed River Network records are represented on the Hydrology Map (6e):

ID	Distance (m)	Direction	Details	
1	321	N	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined

ID	Distance (m)	Direction	Details	
2	366	NE	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
3	387	NE	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
4	468	NE	River Name: Tawelan Brook Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
5	481	NE	River Name: - Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
6	485	NE	River Name: Tawelan Brook Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
7	485	NE	River Name: - Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined
8	489	S	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined

6.11 Surface Water Features

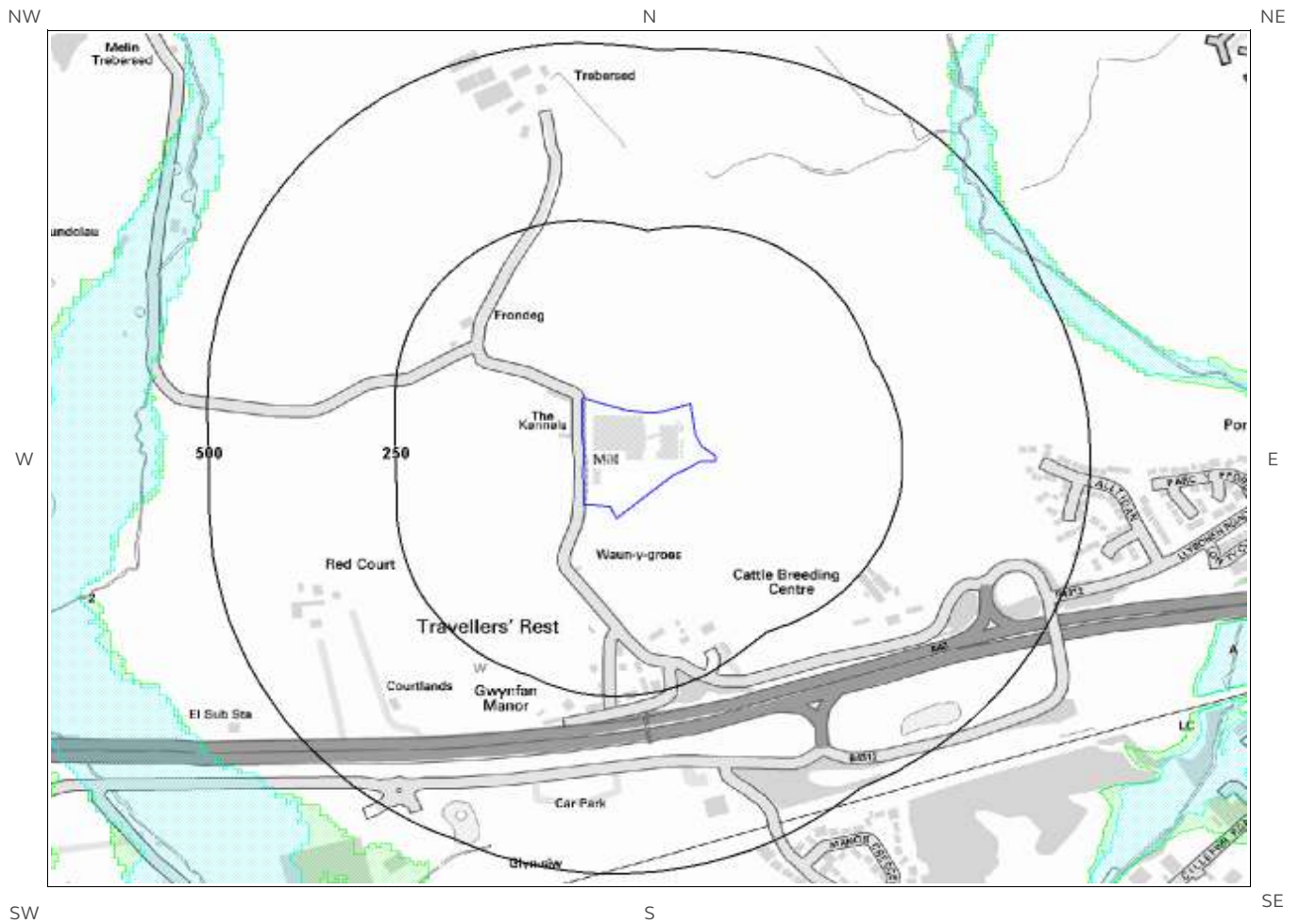
Are there any surface water features within 250m of the study site?

Yes

The following surface water records are not represented on mapping:

Distance (m)	Direction
154	S

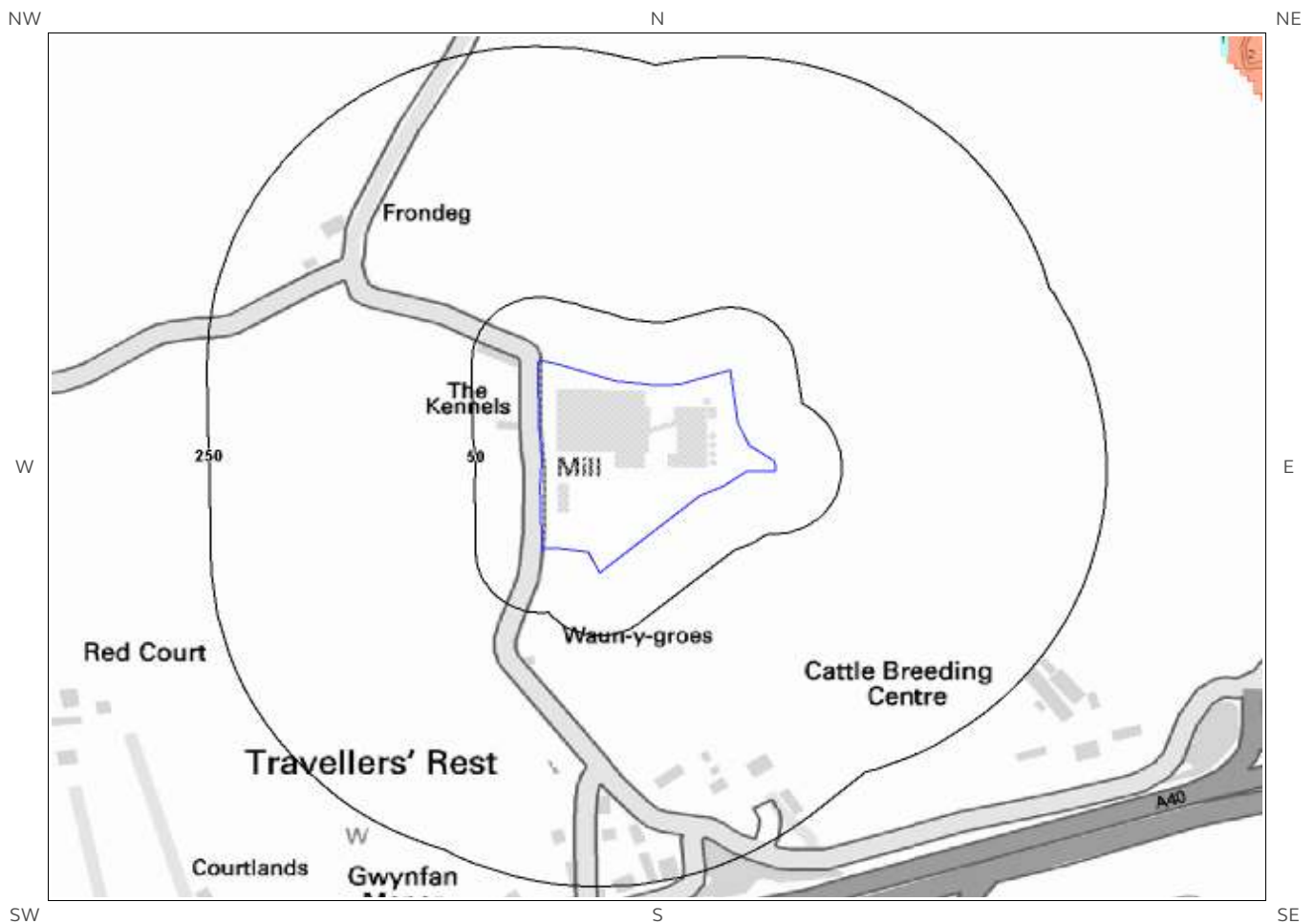
7a. Environment Agency/Natural Resources Wales Flood Map for Planning (from rivers and the sea)



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7b. Environment Agency/Natural Resources Wales 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/Natural Resources Wales Zone 2 floodplain? No

Environment Agency/Natural Resources Wales 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/Natural Resources Wales 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/Natural Resources Wales 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?

Limited potential

Where limited potential for groundwater flooding to occur is indicated, this means that although given the geological conditions there may be a groundwater flooding hazard, unless other relevant information, e.g. records of previous flooding, suggests groundwater flooding has occurred before in this area, you need take no further action in relation to groundwater flooding hazard.

7.8 Groundwater Flooding Confidence Areas

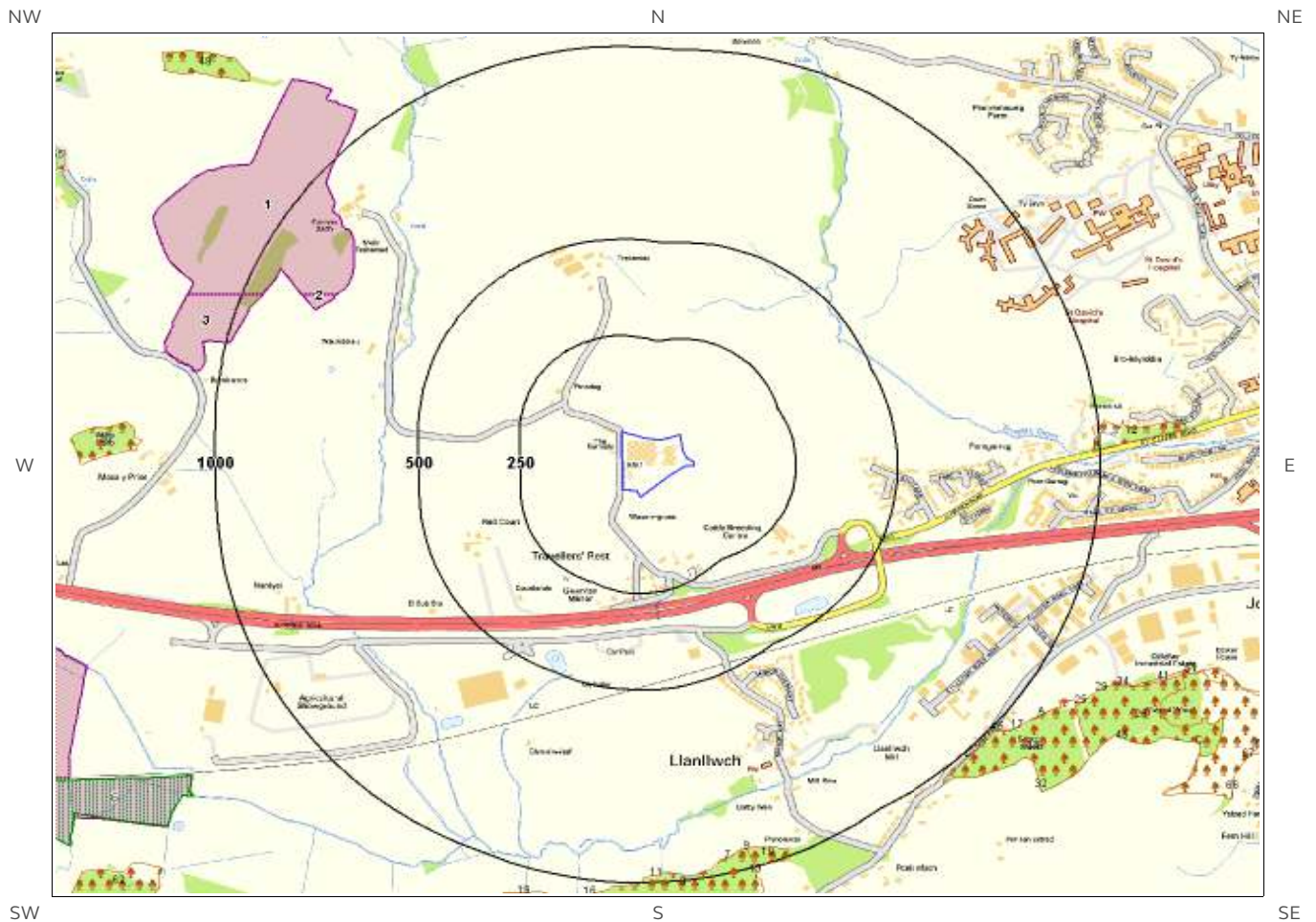
What is the British Geological Survey confidence rating in this result?

High

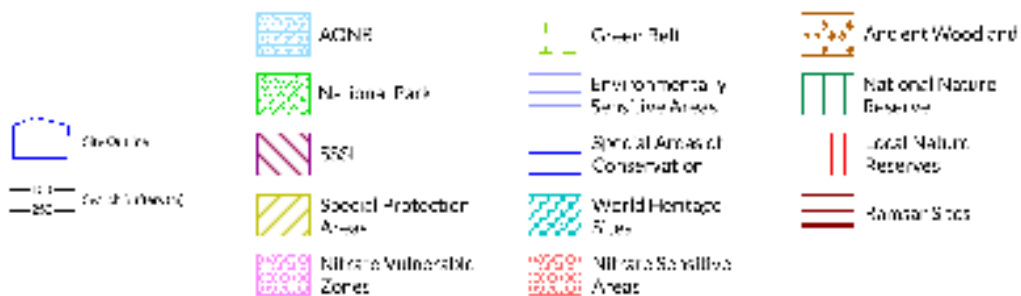
Notes: Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

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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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:

5

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
1	773	NW	MAESYPRIOR	Natural Resources Wales
2	787	NW	MAESYPRIOR	Natural Resources Wales
3	952	W	MAESYPRIOR	Natural Resources Wales
4	1292	SW	CORS GOCH, LLANLLWCH	Natural Resources Wales
Not shown	1711	W	MAESYPRIOR	Natural Resources Wales

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

1

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

ID	Distance (m)	Direction	NNR Name	Data Source
6	1292	SW	CORS GOCH, LLANLLWCH	Natural Resources Wales

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

0

Database searched and no data found.

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:

69

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
7	945	S	ALLT WAUN-CORNGAM	Ancient Replanted Woodland
8	946	S	Unknown	Ancient Replanted Woodland
9	947	S	ALLT WAUN-CORNGAM	Ancient Replanted Woodland
10	948	S	Unknown	Ancient Replanted Woodland
11	981	S	ALLT WAUN-CORNGAM	Ancient Replanted Woodland
12	982	E	Unknown	Restored Ancient Woodland Site
13	995	S	ALLT WAUN-CORNGAM	Ancient Replanted Woodland
14	1006	SE	Unknown	Restored Ancient Woodland Site
15	1009	SE	YSTRAD WOOD	Ancient Replanted Woodland
16	1025	S	ALLT WAUN-CORNGAM	Ancient Replanted Woodland
17	1036	SE	YSTRAD WOOD	Ancient Replanted Woodland
18A	1059	SE	YSTRAD WOOD	Ancient Replanted Woodland
19	1062	S	ALLT WAUN-CORNGAM	Ancient Replanted Woodland
Not shown	1070	S	ALLT WAUN-CORNGAM	Ancient Replanted Woodland
21	1077	S	ALLT WAUN-CORNGAM	Ancient Replanted Woodland
Not shown	1083	S	Unknown	Restored Ancient Woodland Site
23A	1087	SE	YSTRAD WOOD	Ancient Replanted Woodland
Not shown	1105	S	ALLT WAUN-CORNGAM	Ancient Replanted Woodland
25	1126	SE	YSTRAD WOOD	Ancient Replanted Woodland
26	1127	SE	Unknown	Ancient Replanted Woodland
Not shown	1129	S	ALLT WAUN-CORNGAM	Ancient Replanted Woodland
Not shown	1135	S	ALLT WAUN-CORNGAM	Ancient Replanted Woodland
29	1141	SE	YSTRAD WOOD	Ancient Replanted Woodland
Not shown	1152	S	Unknown	Restored Ancient Woodland Site
Not shown	1165	SW	Unknown	Restored Ancient Woodland Site
32	1171	SE	YSTRAD WOOD	Ancient Replanted Woodland
Not shown	1171	SW	Unknown	Ancient and Semi-Natural Woodland
34	1172	SE	YSTRAD WOOD	Ancient Replanted Woodland
Not shown	1175	SW	Unknown	Ancient and Semi-Natural Woodland
36	1179	W	Unknown	Restored Ancient Woodland Site
Not shown	1182	SW	Unknown	Ancient Replanted Woodland
Not shown	1186	SW	Unknown	Ancient and Semi-Natural Woodland
39	1210	SE	YSTRAD WOOD	Ancient Replanted Woodland
Not shown	1218	S	ALLT WAUN-CORNGAM	Ancient Replanted Woodland

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
41	1226	SE	Unknown	Ancient Replanted Woodland
42B	1232	SE	YSTRAD WOOD	Ancient Replanted Woodland
43B	1237	SE	YSTRAD WOOD	Ancient Replanted Woodland
Not shown	1242	SW	Unknown	Ancient and Semi-Natural Woodland
45	1248	SE	YSTRAD WOOD	Ancient Replanted Woodland
Not shown	1263	S	ALLT WAUN-CORNGAM	Ancient Replanted Woodland
Not shown	1264	S	Unknown	Ancient and Semi-Natural Woodland
48	1291	NW	Unknown	Restored Ancient Woodland Site
Not shown	1296	NW	Unknown	Restored Ancient Woodland Site
50	1303	SE	Unknown	Restored Ancient Woodland Site
51	1314	SE	Unknown	Restored Ancient Woodland Site
Not shown	1346	SW	Unknown	Ancient and Semi-Natural Woodland
Not shown	1358	SW	Unknown	Ancient and Semi-Natural Woodland
54	1361	SE	YSTRAD WOOD	Ancient Replanted Woodland
Not shown	1376	NW	FFYNNON-Y-SAINT WOOD	Ancient and Semi-Natural Woodland
Not shown	1403	NW	FFYNNON-Y-SAINT WOOD	Ancient and Semi-Natural Woodland
57C	1429	SE	YSTRAD WOOD	Ancient Replanted Woodland
58	1432	SE	YSTRAD WOOD	Ancient Replanted Woodland
Not shown	1444	SW	Unknown	Ancient and Semi-Natural Woodland
60C	1448	SE	YSTRAD WOOD	Ancient Replanted Woodland
Not shown	1488	SW	Unknown	Ancient and Semi-Natural Woodland
62	1498	SW	BERTH LWYD WOOD	Ancient and Semi-Natural Woodland
Not shown	1504	SW	Unknown	Ancient and Semi-Natural Woodland
Not shown	1508	SW	Unknown	Ancient and Semi-Natural Woodland
65	1535	NW	Unknown	Restored Ancient Woodland Site
66	1554	SE	YSTRAD WOOD	Ancient Replanted Woodland
67	1554	SE	YSTRAD WOOD	Ancient Replanted Woodland
68	1562	SE	Unknown	Restored Ancient Woodland Site
Not shown	1567	SE	YSTRAD WOOD	Ancient Replanted Woodland
Not shown	1579	SW	Unknown	Ancient and Semi-Natural Woodland
Not shown	1637	NW	Unknown	Ancient and Semi-Natural Woodland

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
Not shown	1777	SW	Unknown	Restored Ancient Woodland Site
Not shown	1894	N	Unknown	Ancient and Semi-Natural Woodland
Not shown	1939	E	Unknown	Ancient and Semi-Natural Woodland
Not shown	1984	N	Unknown	Ancient and Semi-Natural Woodland

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

0

Database searched and no data found.

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:

0

Database searched and no data found.

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 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? Negligible

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

Hazard
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.

* 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.

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

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 1 and 3% of properties are above the Action Level.

The radon data in this report is supplied by the BGS/Public Health England and is the definitive map of Radon Affected Areas in Great Britain and Northern Ireland. The dataset was created using long-term radon measurements in over 479,000 homes across Great Britain and 23,000 homes across Northern Ireland, combined with geological data. The dataset is considered accurate to 50m to allow for the margin of error in geological lines, and the findings of this report supercede any answer given in the less accurate Indicative Atlas of Radon in Great Britain, which simplifies the data to give the highest risk within any given 1km grid square. As such, the radon atlas is considered indicative, whereas the data given in this report is considered definitive.

9.2.2 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? No 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

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

Groundsure Helpline
Telephone: 08444 159 000
info@groundsure.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

Natural Resources Wales

Ty Cambria
29 Newport Road
Cardiff
CF24 0TP
Tel: 0300 065 3000
Email: enquiries@naturalresourceswales.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: Sir Gaerfyrddin - Carmarthenshire County Council
Phone: 01267 234 567
Web: <http://www.carmarthenshire.gov.uk>
Address: County Hall, Carmarthen, Carmarthenshir, SA31 1JP



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



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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Standard Terms and Conditions

Groundsure's Terms and Conditions can be viewed online at this link:
<https://www.groundsure.com/terms-and-conditions-sept-2016>

APPENDIX C

Groundsure Geo Insight Report

|

Excal Ltd

Capel Hendre, Capel Hendre Ind Est,
Ammanford, SA18 3SJ

Groundsure Reference: HMD-142-4498527

Your Reference: Wynnstay_SCR_-_EC_3254

Report Date 27 Nov 2017

Report Delivery Method: Email - pdf

Geo Insight

Address: WYNNSTAY GROUP PLC, LLYSONNEN MILL, LLYSONNEN ROAD, TRAVELLERS REST,
CARMARTHEN, SA31 3SG

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Geo Insight** as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above Groundsure reference number.

Yours faithfully,



Managing Director
Groundsure Limited

Enc.
Groundsure Geo Insight

Geo Insight

Address: WYNNSTAY GROUP PLC, LLYSONNEN MILL, LLYSONNEN ROAD,
TRAVELLERS REST, CARMARTHEN, SA31 3SG

Date: 27 Nov 2017

Reference: HMD-142-4498527

Client: Excal Ltd

NW N NE



SW S SE

Aerial Photograph Capture date: 04-Jun-2013
Grid Reference: 238376,219559
Site Size: 1.88ha

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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 and 1:10,000 Digital Geological Map of Great Britain, BGS Geosure data; BRITPITS database; Non-coal 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 1:10,000 Scale		
1.1 Artificial Ground	1.1 Is there any Artificial Ground/ Made Ground present beneath the study site at 1:10,000 scale?	No
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site at 1:10,000 scale?*	No
	1.2.2 Are there any records of landslip within 500m of the study site boundary at 1:10,000 scale?	No
1.3 Bedrock, Solid Geology and linear features	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 of linear features within 500m of the study site boundary at 1:10,000 scale?	No
Section 2: Geology 1:50,000 Scale		
2.1 Artificial Ground	2.1.1 Is there any Artificial Ground/ Made Ground present beneath the study site?	No
	2.1.2 Are there any records relating to permeability of artificial ground within the study site*boundary?	No
2.2 Superficial Geology and Landslips	2.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?*	Yes
	2.2.2 Are there any records of permeability of superficial ground within 500m of the study site?	Yes
	2.2.3 Are there any records of landslip within 500m of the study site boundary?	No
	2.2.4 Are there any records relating to permeability of landslips within the study site* boundary?	No

Section 2: Geology 1:50,000 Scale

2.3 Bedrock, Solid Geology and linear features

2.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.

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

Yes

2.3.3 Are there any records of linear features within 500m of the study site boundary?

No

Section 3: Radon

3. Radon

3.1 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 1 and 3% of properties are above the Action Level.

3.2 Radon Protection

No radon protective measures are necessary.

Section 4: Ground Workings

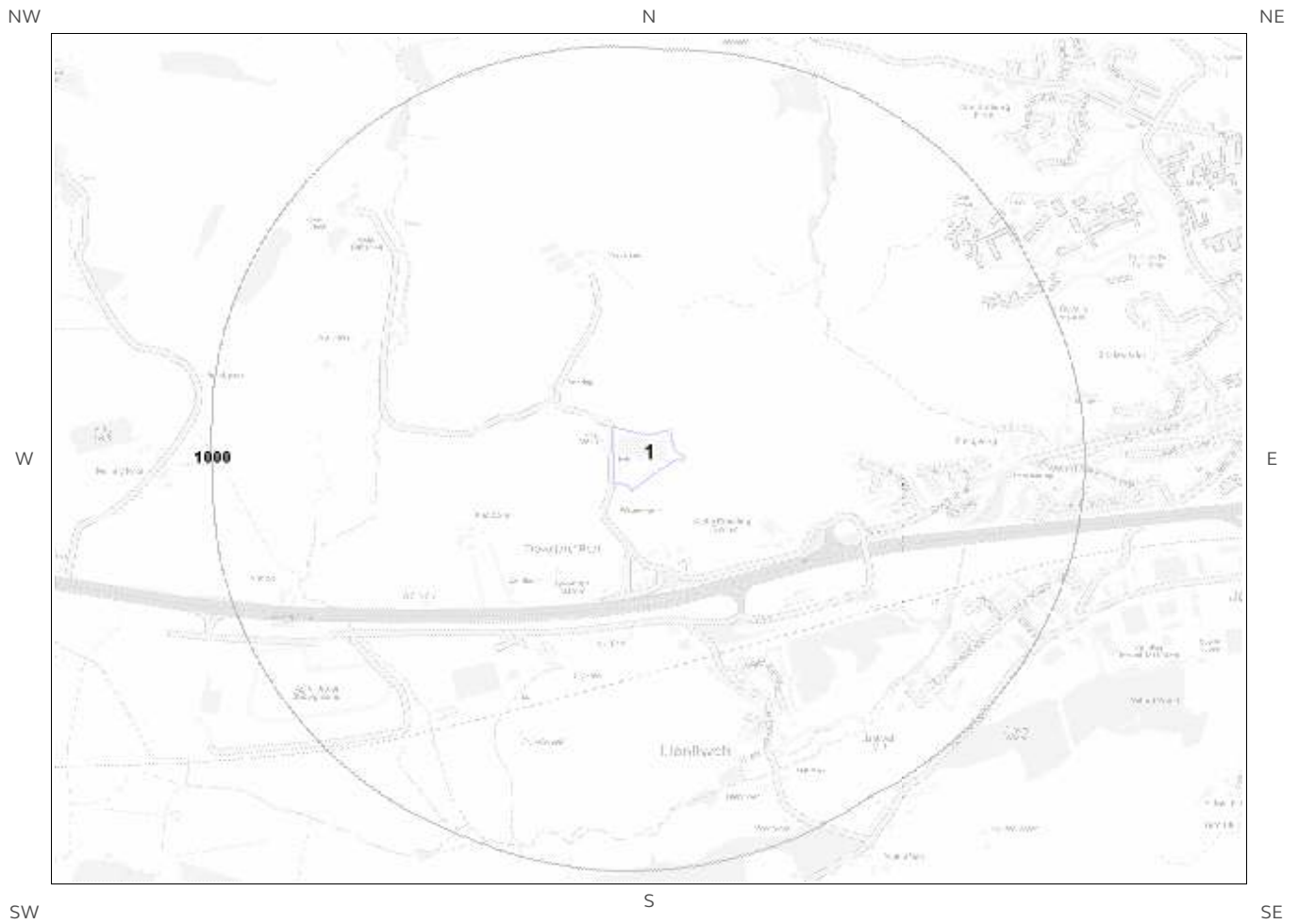
	On-site	0-50m	51-250	251-500	501-1000
4.1 Historical Surface Ground Working Features from Small Scale Mapping	0	0	0	Not Searched	Not Searched
4.2 Historical Underground Workings from Small Scale Mapping	0	0	0	0	0
4.3 Current Ground Workings	0	0	0	0	4

Section 5: Mining, Extraction & Natural Cavities

	On-site	0-50m	51-250	251-500	501-1000
5.1 Historical Mining	0	0	0	0	0
5.2 Coal Mining	0	0	0	0	0
5.3 Johnson Poole and Bloomer Mining Area	0	0	0	0	0
5.4 Non-Coal Mining*	1	0	0	1	0
5.5 Non-Coal Mining Cavities	0	0	0	0	0
5.5 Natural Cavities	0	0	0	0	0

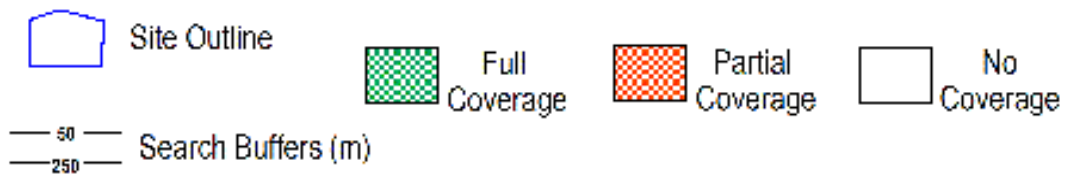
Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.6 Brine Extraction	0	0	0	0	0
5.7 Gypsum Extraction	0	0	0	0	0
5.8 Tin Mining	0	0	0	0	0
5.9 Clay Mining	0	0	0	0	0
Section 6: Natural Ground Subsidence					
On-site					
6.1 Shrink-Swell Clay	Very Low				
6.2 Landslides	Low				
6.3 Ground Dissolution of Soluble Rocks	Negligible				
6.4 Compressible Deposits	Negligible				
6.5 Collapsible Deposits	Very Low				
6.5 Running Sand	Very Low				
Section 7: Borehole Records					
On-site 0-50m 51-250					
7 BGS Recorded Boreholes	0	0	1		
Section 8: Estimated Background Soil Chemistry					
On-site 0-50m 51-250					
8 Records of Background Soil Chemistry	3	1	0		
Section 9: Railways and Tunnels					
On-site 0-50m 51-250 250-500					
9.1 Tunnels	0	0	0	Not Searched	
9.2 Historical Railway and Tunnel Features	0	0	0	Not Searched	
9.3 Historical Railways	0	0	0	Not Searched	
9.4 Active Railways	0	0	0	Not Searched	
9.5 Railway Projects	0	0	0	0	

1:10,000 Scale Availability



1_10,000 Availability Legend

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Availability of 1:10,000 Scale Geology Mapping

The following information represents the availability of the key components of the 1:10,000 scale geological data.

ID	Distance	Artificial Coverage	Superficial Coverage	Bedrock Coverage	Mass Movement Coverage
1	0.0	No deposits are mapped	No coverage	No coverage	No coverage

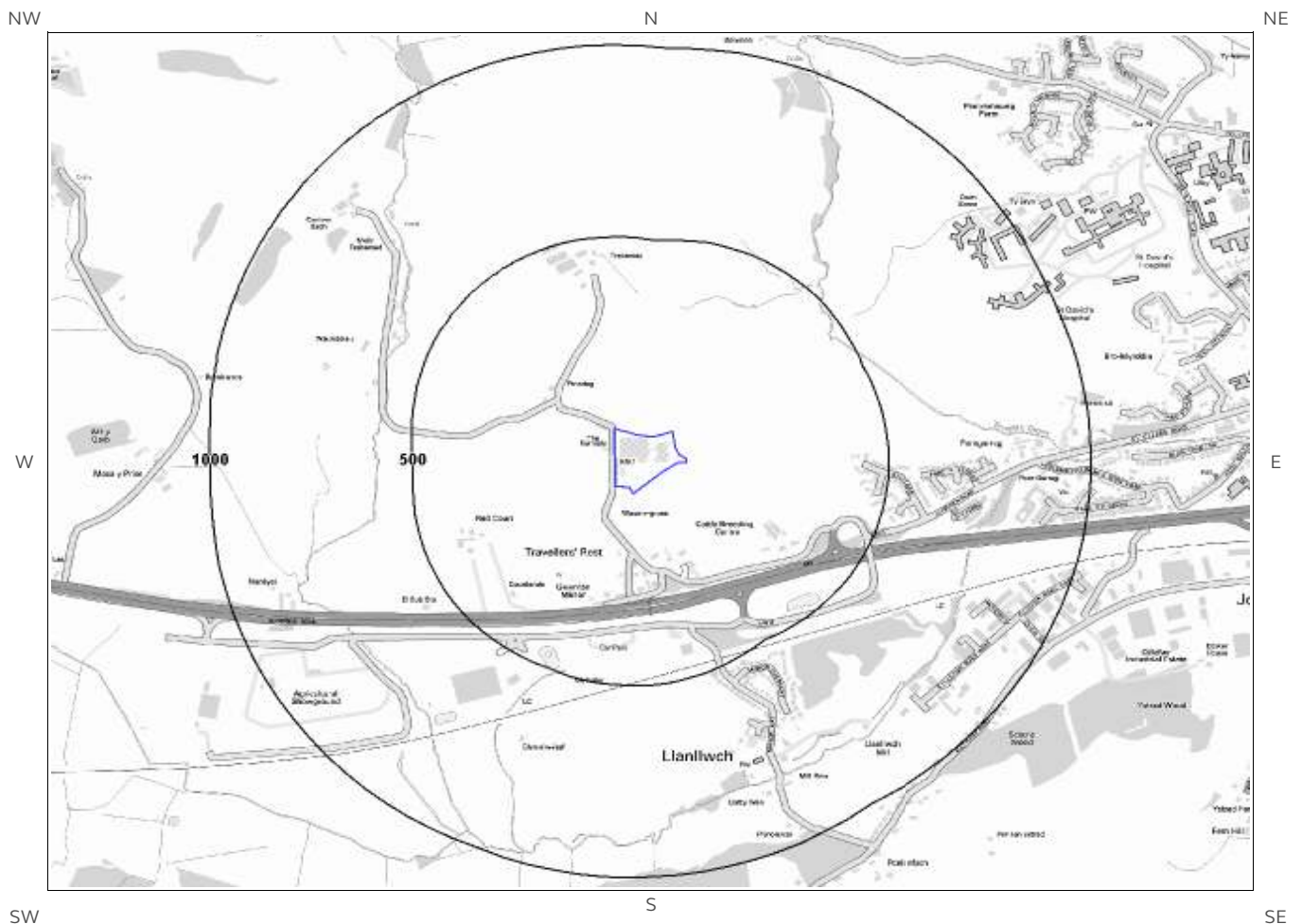
Guidance: The 1:10,000 scale geological interpretation is the most detailed generally available from BGS and is the scale at which most geological surveying is carried out in the field. The database is presented as four types of geology (artificial, mass movement, superficial and bedrock), although not all themes are mapped or available on every map sheet. Therefore a coverage layer showing the availability of the four themes is presented above.

The definitions of coverage are as follows:

Geology	Full Coverage	Partial Coverage	No Coverage
Bedrock	The whole tile has been mapped	Some but not all the tile has been mapped	No coverage
Superficial	The whole tile has been mapped	Some but not all of the tile has been mapped	No coverage
Artificial	Some deposits are mapped on this tile	-	No deposits are mapped
Mass Movement	Some deposits are mapped on this tile	-	No coverage

1 Geology (1:10,000 scale).

1.1 Artificial Ground map (1:10,000 scale)



Artificial Ground Legend

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1. Geology 1:10,000 scale

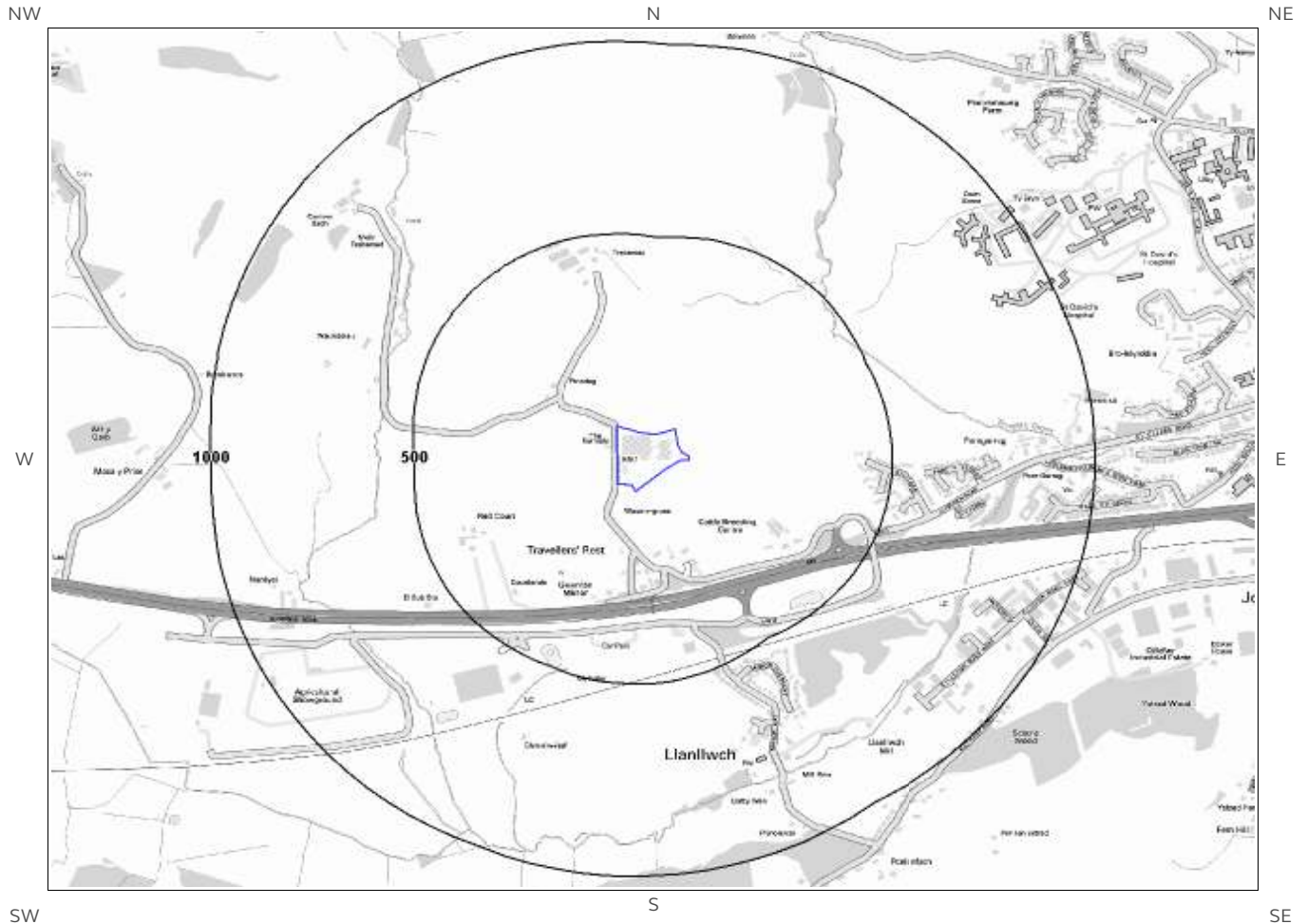
1.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping.

Are there any records of Artificial/ Made Ground within 500m of the study site boundary at 1:10,000 scale? No

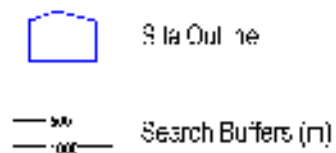
Database searched and no data found.

1.2 Superficial Deposits and Landslips map (1:10,000 scale)



Artificial Ground Legend

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1.2 Superficial Deposits and Landslips

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping

1.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary at 1:10,000 scale? No

Database searched and no data found.

1.2.2 Landslip

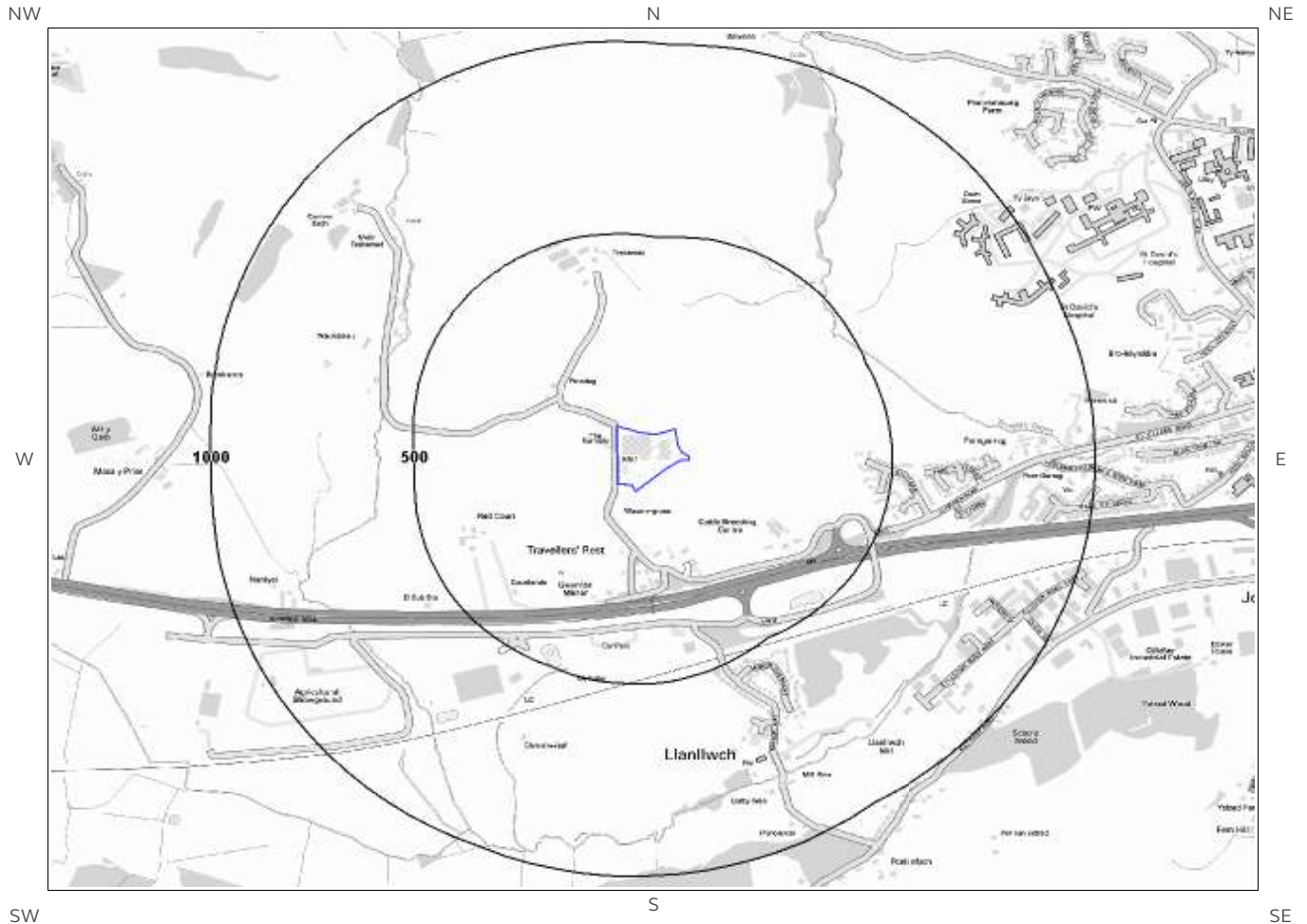
Are there any records of Landslip within 500m of the study site boundary at 1:10,000 scale? No

Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:10,000 scale

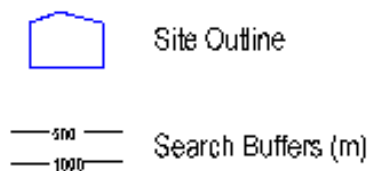
This Geology shows the main components as discrete layers, these are: Artificial / Made Ground, Superficial / Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

1.3 Bedrock and linear features map (1:10,000 scale)



Bedrock and linear features Legend

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1.3 Bedrock and linear features

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping.

1.3.1 Bedrock/ Solid Geology

Records of Bedrock/Solid Geology within 500m of the study site boundary at 1:10,000 scale.

Database searched and no data found at this scale.

1.3.2 Linear features

Are there any records of linear features within 500m of the study site boundary at 1:10,000 scale? No

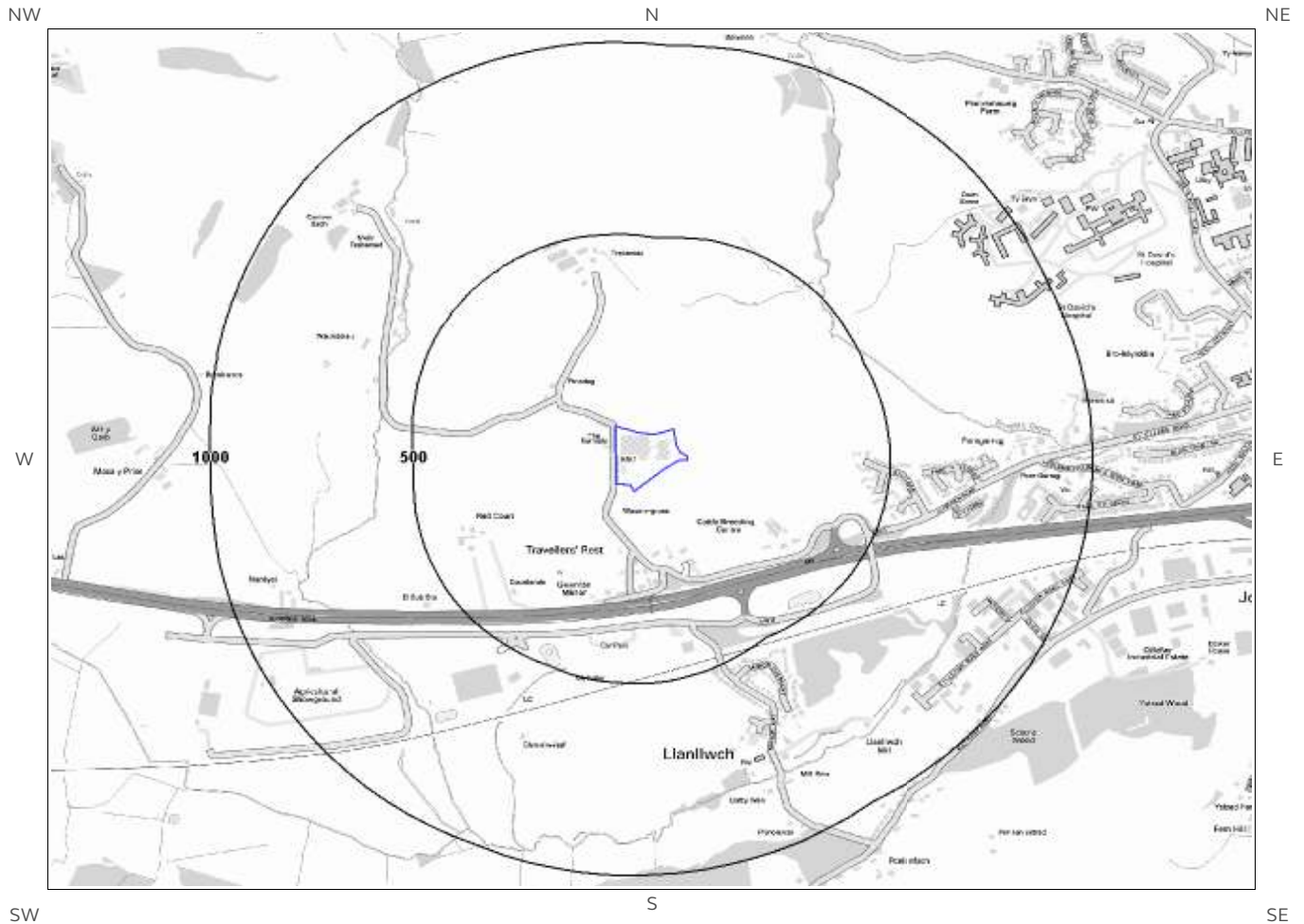
Database searched and no data found at this scale.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of great Britain at 1:10,000 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.

2 Geology 1:50,000 Scale

2.1 Artificial Ground map



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2. Geology 1:50,000 scale

2.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 229

2.1.1 Artificial/ Made Ground

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

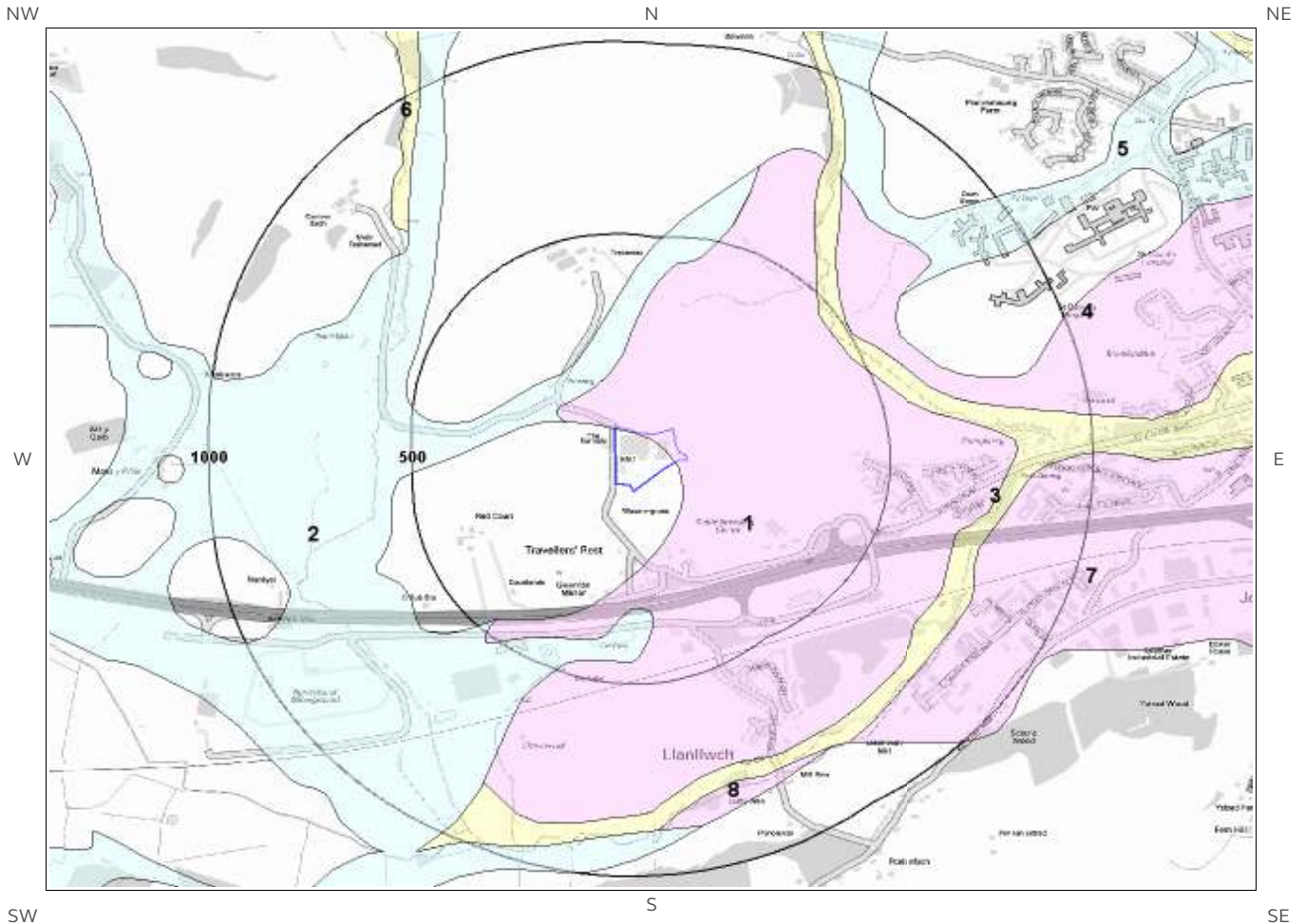
Database searched and no data found.

2.1.2 Permeability of Artificial Ground

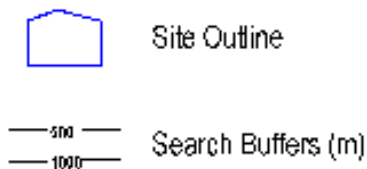
Are there any records relating to permeability of artificial ground within the study site boundary? No

Database searched and no data found.

2.2 Superficial Deposits and Landslips map (1:50,000 scale)



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2.2 Superficial Deposits and Landslips

2.2.1 Superficial Deposits/ Drift Geology

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

ID	Distance	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	GFDUD-XSV	GLACIOFLUVIAL DEPOSITS, DEVENSIAN	SAND AND GRAVEL
2	114.0	NW	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
3	463.0	NE	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL

2.2.2 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	Intergranular	Very High	High

2.2.3 Landslip

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

Database searched and no data found.

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.

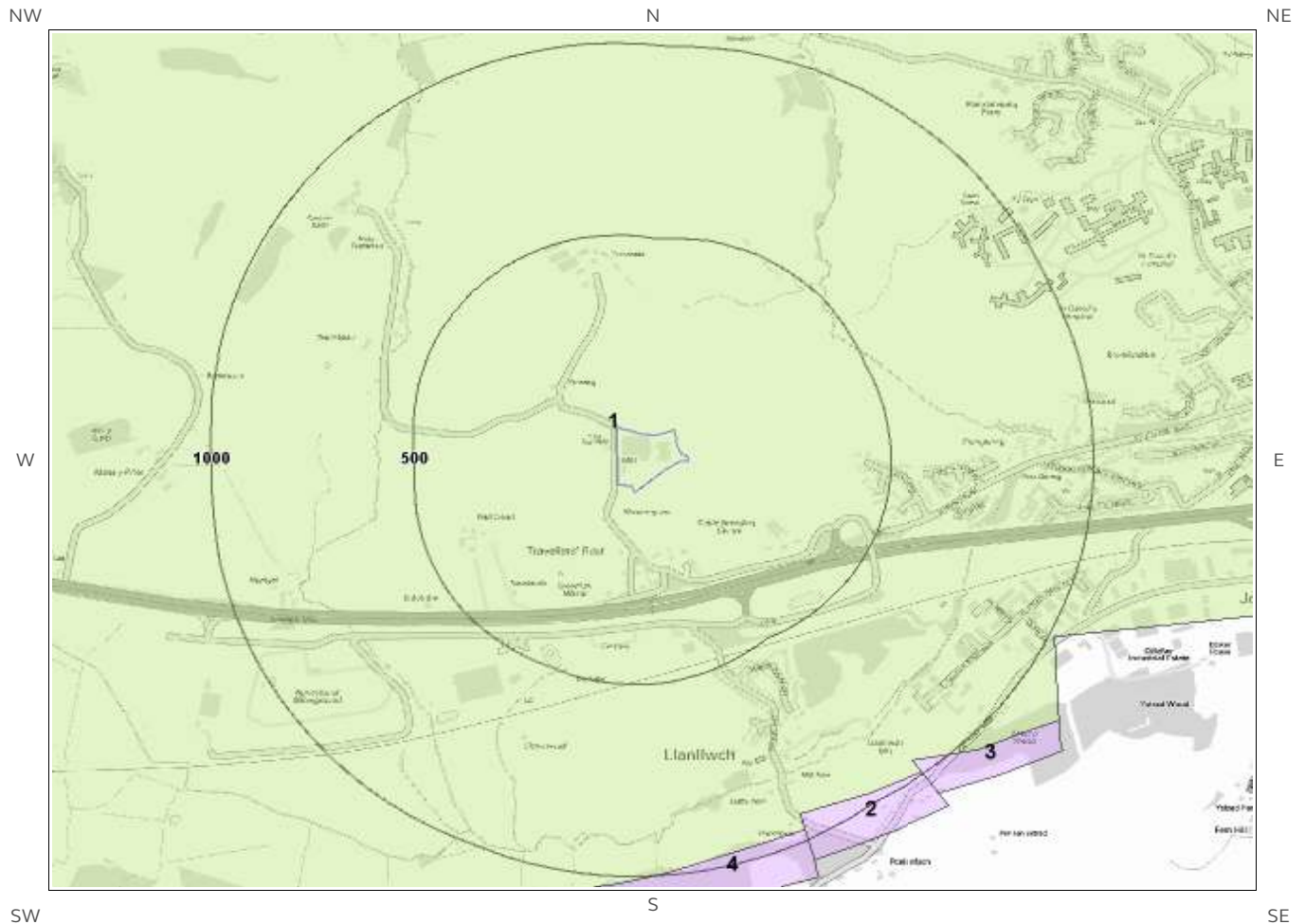
This Geology shows the main components as discrete layers, there are: Artificial/ Made Ground, Superficial/ Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

2.2.4 Landslip Permeability

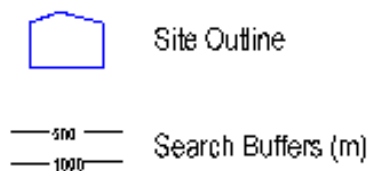
Are there any records relating to permeability of landslips within the study site boundary? No

Database searched and no data found.

2.3 Bedrock and linear features map (1:50,000 scale)



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2.3 Bedrock, Solid Geology & linear features

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 229

2.3.1 Bedrock/Solid Geology

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

ID	Distance	Direction	LEX Code	Rock Description	Rock Age
1	0.0	On Site	TTRA-MDST	TETRAGRAPTUS BEDS - MUDSTONE	-

2.3.2 Permeability of Bedrock Ground

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

Distance	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Fracture	Low	Low

2.3.3 Linear features

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

Database searched and no data found.

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 nation wide coverage.

3 Radon Data

3.1 Radon Affected Areas

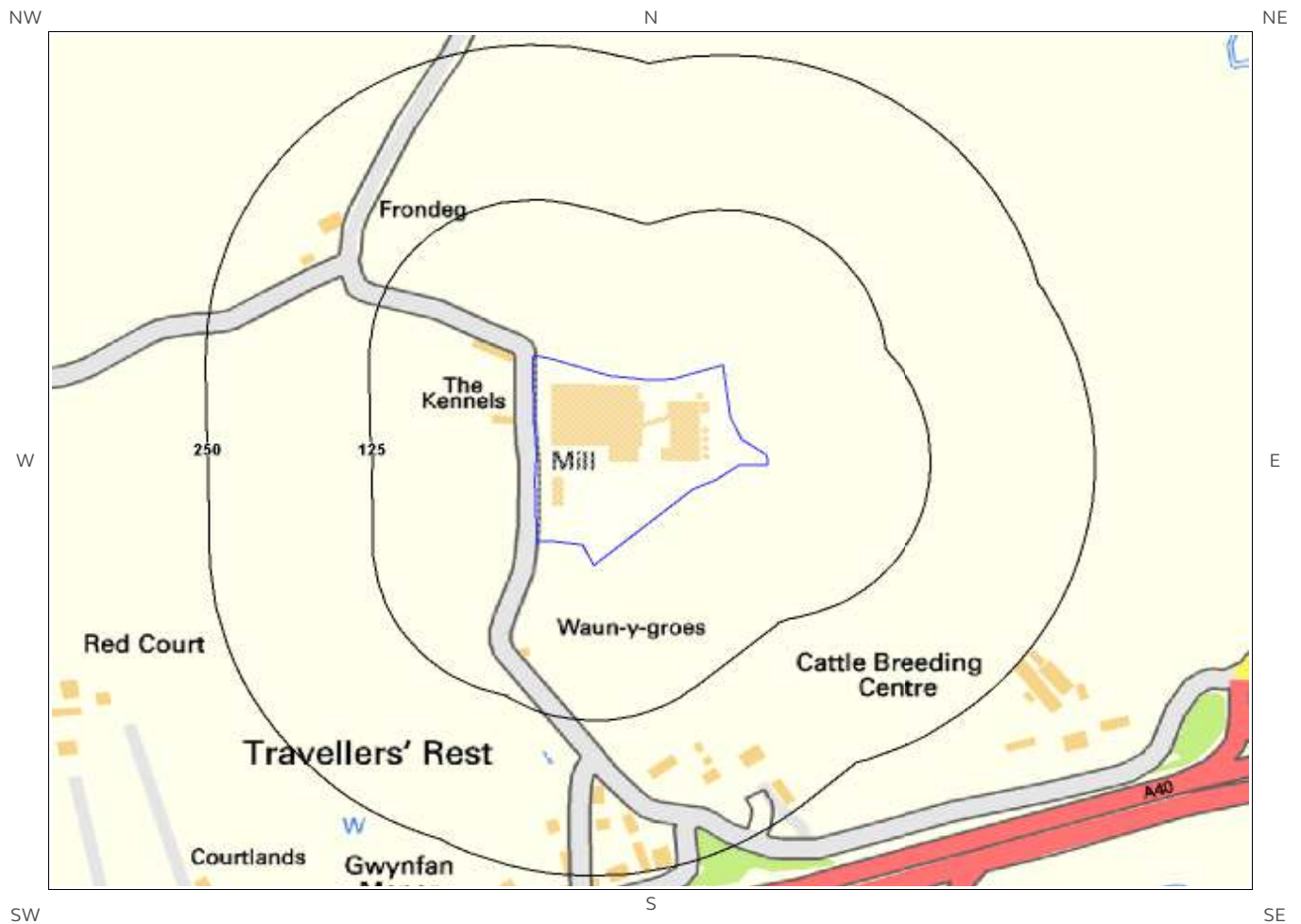
Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level.

The radon data in this report is supplied by the BGS/Public Health England and is the definitive map of Radon Affected Areas in Great Britain and Northern Ireland. The dataset was created using long-term radon measurements in over 479,000 homes across Great Britain and 23,000 homes across Northern Ireland, combined with geological data. The dataset is considered accurate to 50m to allow for the margin of error in geological lines, and the findings of this report supercede any answer given in the less accurate Indicative Atlas of Radon in Great Britain, which simplifies the data to give the highest risk within any given 1km grid square. As such, the radon atlas is considered indicative, whereas the data given in this report is considered definitive.

3.2 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? No radon protective measures are necessary.

4 Ground Workings map



Ground Workings Legend

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-  Site Outline
-  Historic Surface Ground Workings
-  Search Buffers (m)
-  Historic Underground Workings
-  Current Ground Workings

4 Ground Workings

4.1 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? No

Database searched and no data found.

4.2 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.

4.3 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
Not shown	657.0	SE	238757 218998	Sand & Gravel	Mill Pond	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	945.0	N	238676 220530	Clay & Shale	Dawelan	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	957.0	NW	237857 220524	Clay & Shale	Trebersed	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	990.0	E	239381 219746	Sand & Gravel	Pentre-sil	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

5 Mining, Extraction & Natural Cavities map



Mining, Extraction and Natural Cavities Legend

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5 Mining, Extraction & Natural Cavities

5.1 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.

5.2 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.

5.3 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.

5.4 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
2	357.0	N	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

5.5 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? No

Database searched and no data found.

5.6 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? No

Database searched and no data found.

5.7 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.

5.8 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.

5.9 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? No

Database searched and no data found.

5.10 Clay Mining

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

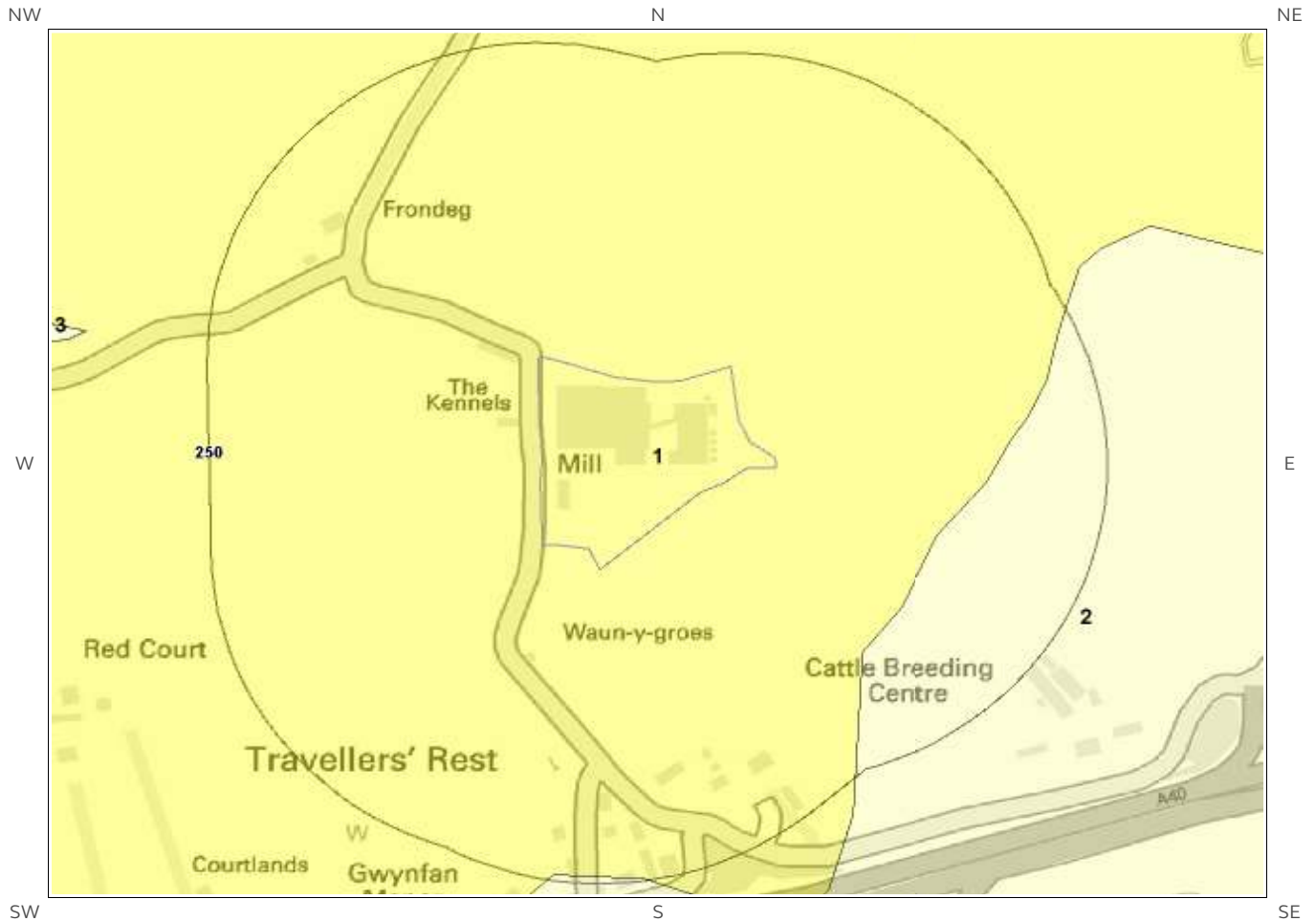
Are there any Clay Mining areas within 1000m of the study site boundary?

No

Database searched and no data found.

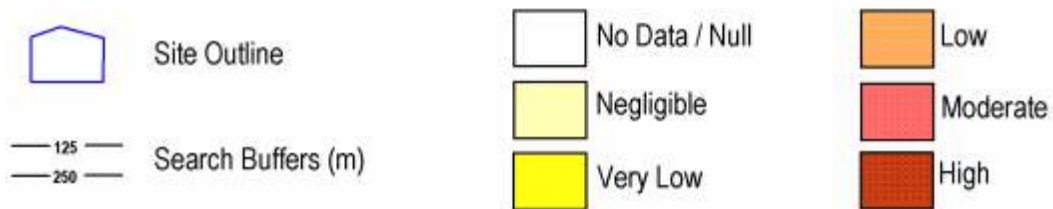
6 Natural Ground Subsidence

6.1 Shrink-Swell Clay map

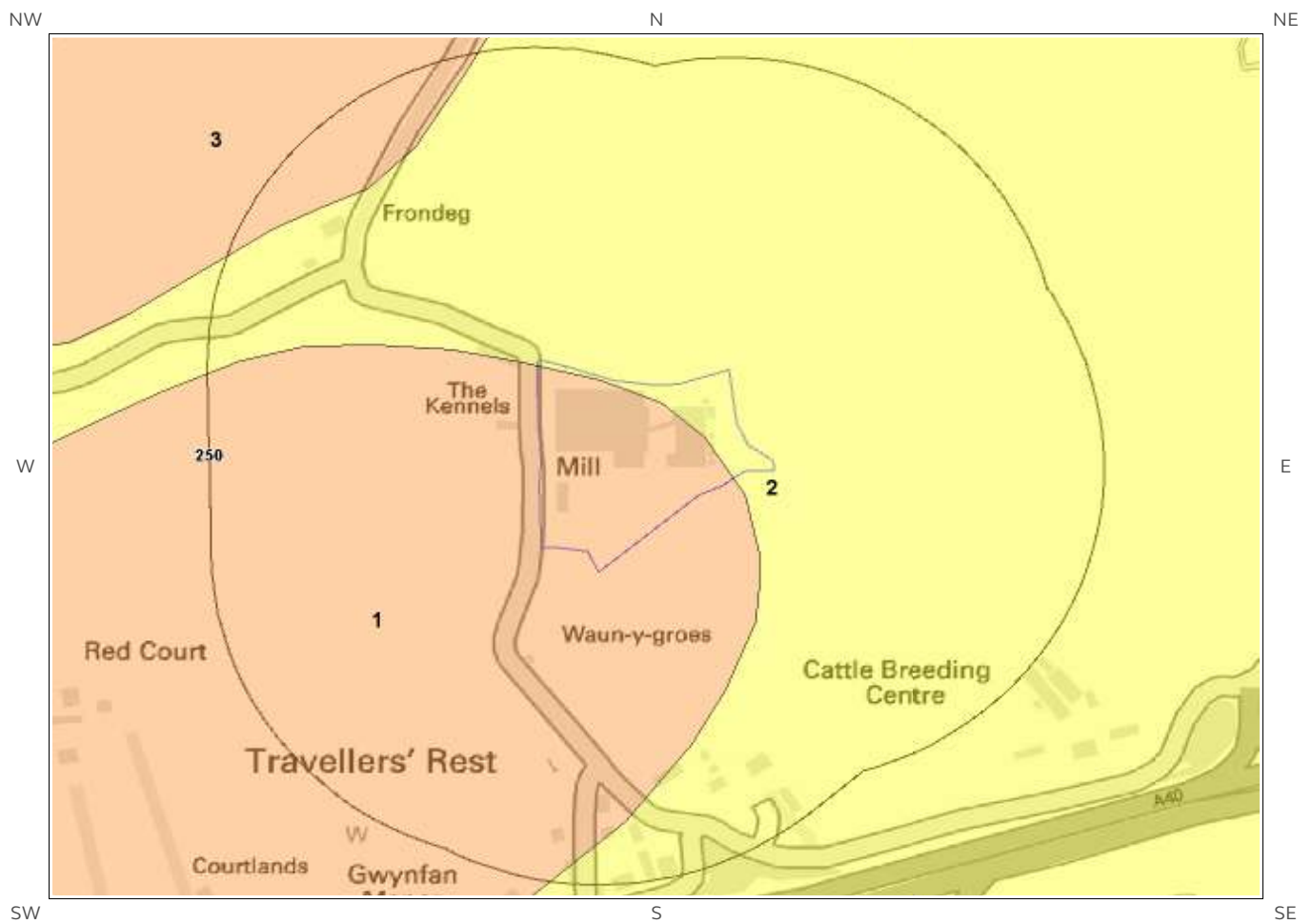


Shrink Swell Clay Legend

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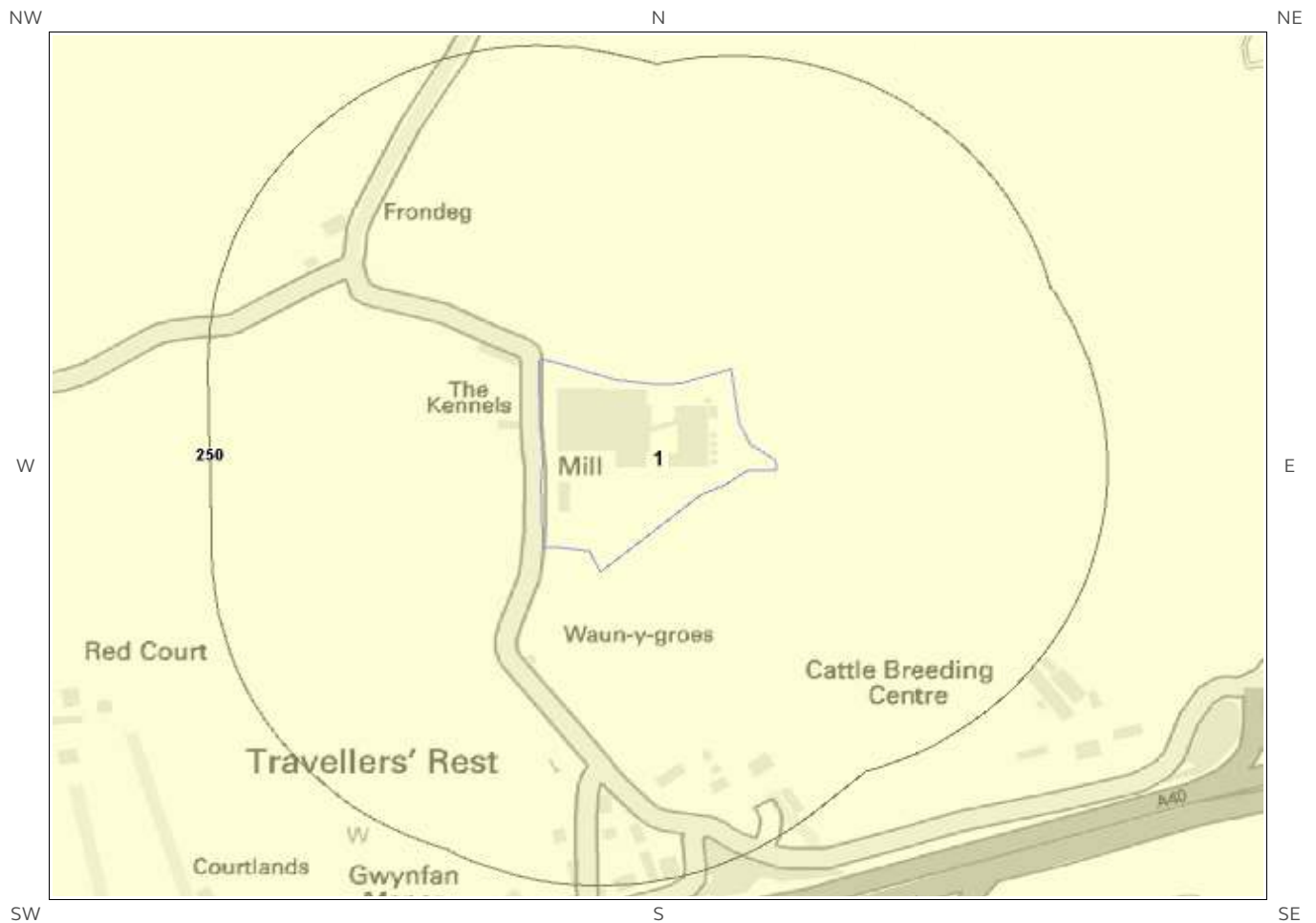
6.2 Landslides map



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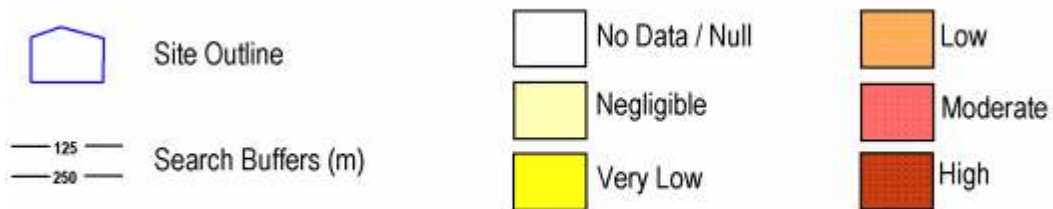


6.3 Ground Dissolution of Soluble Rocks map

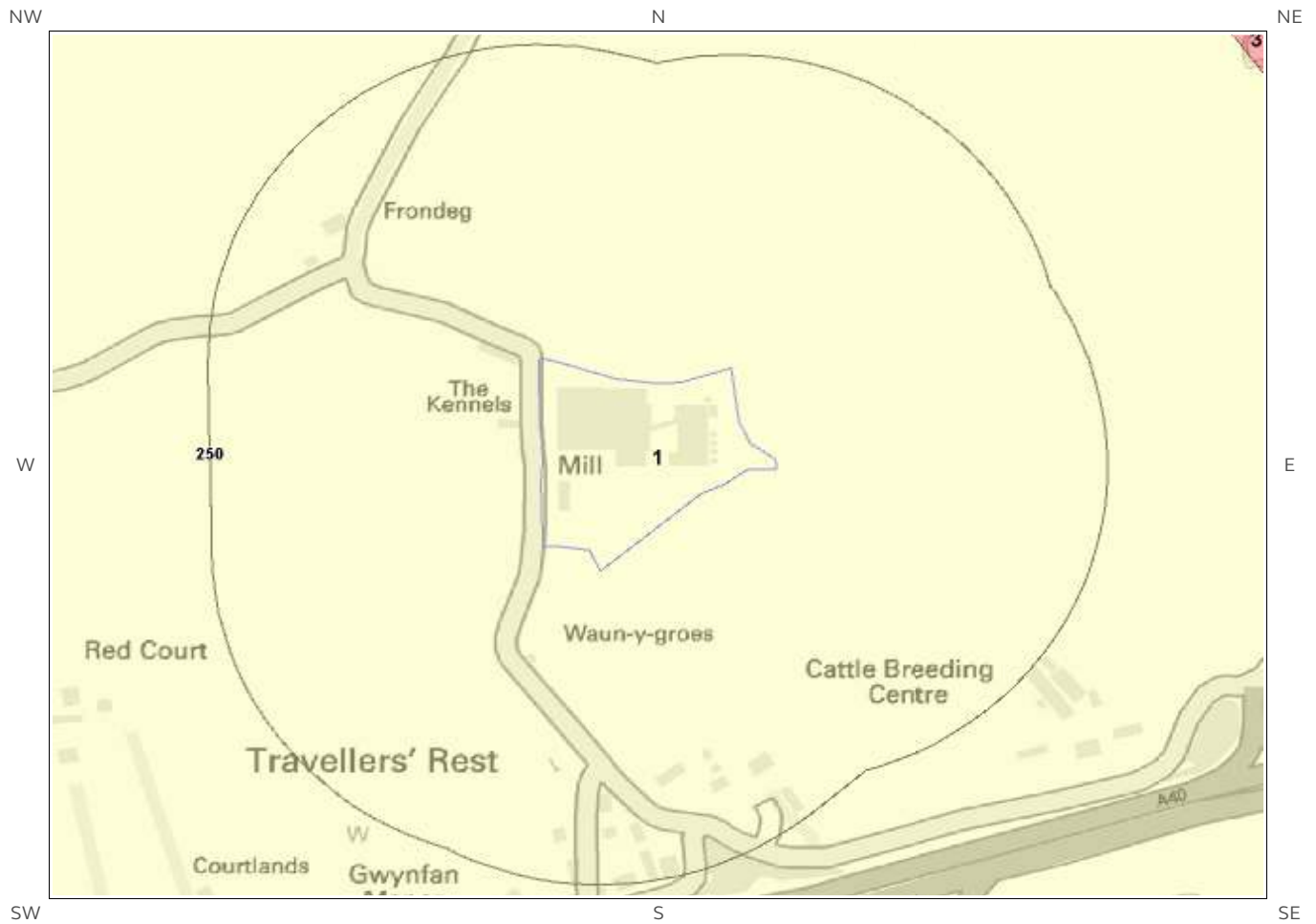


Ground Dissolution Soluble Rocks Legend

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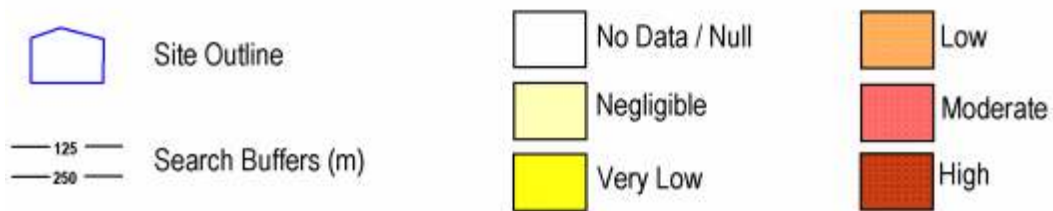


6.4 Compressible Deposits map

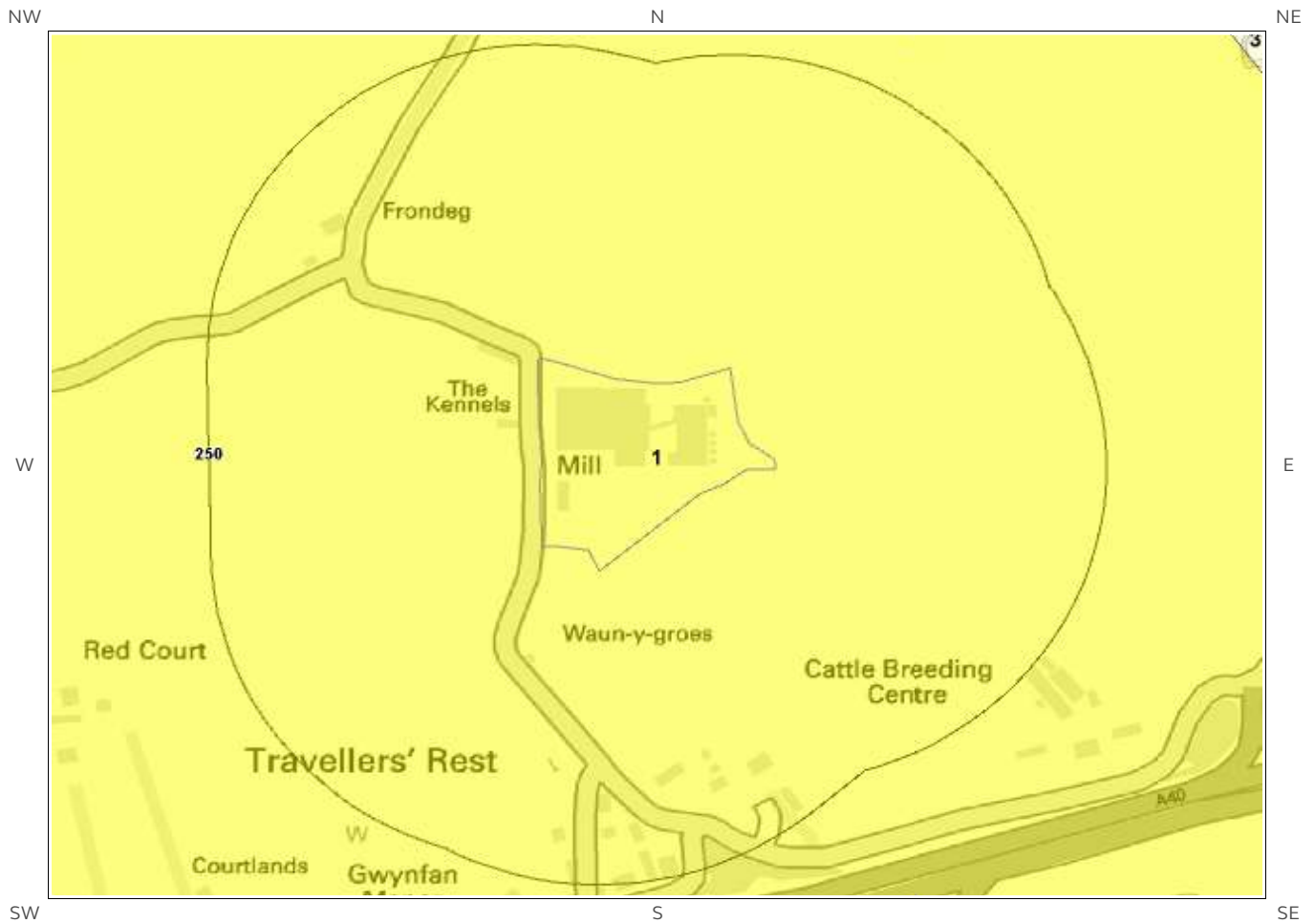


Compressible Deposits Legend

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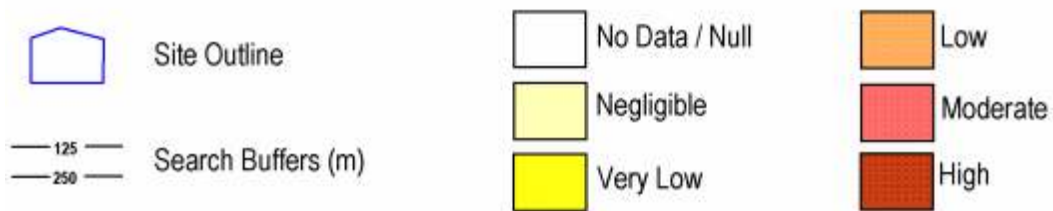


6.5 Collapsible Deposits map

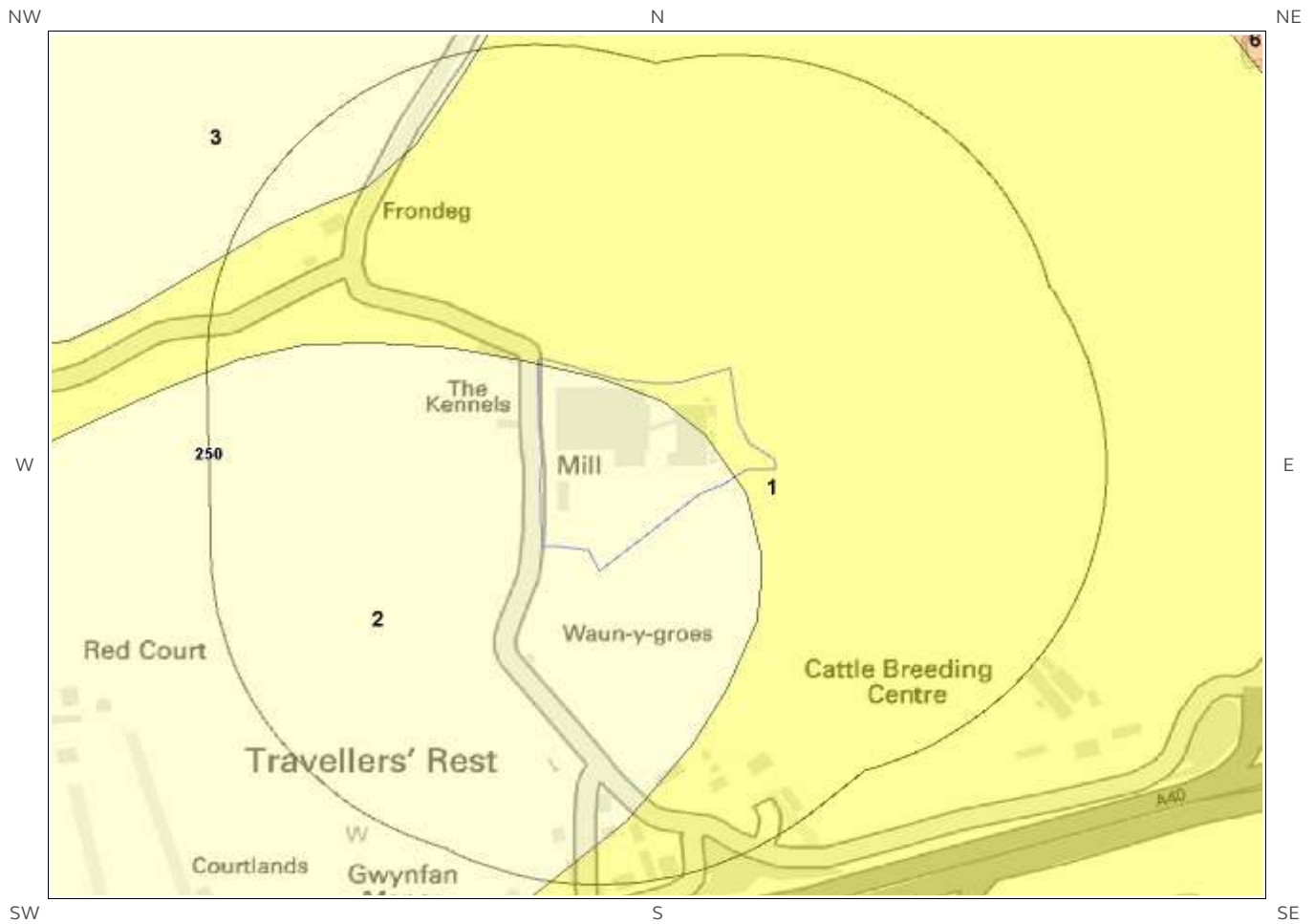


Collapsible Deposits Legend

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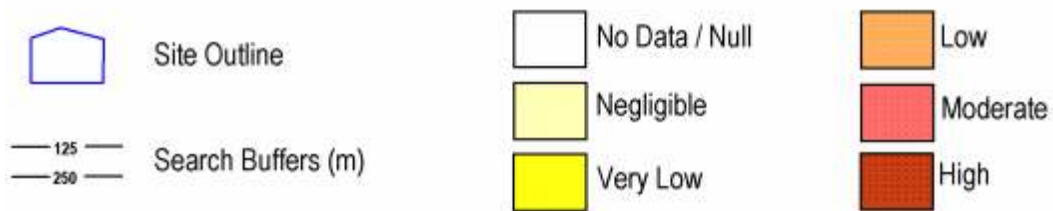


6.6 Running Sand map



Running Sand Legend

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6 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

6.1 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	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.

6.2 Landslides

The following Landslides information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	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 drainage or excavations take place. Possible increase in construction cost to reduce potential slope stability problems. Existing property - no significant increase in insurance risk due to natural slope instability problems.
2	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

6.3 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.

6.4 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 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.

6.5 Collapsible Deposits

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

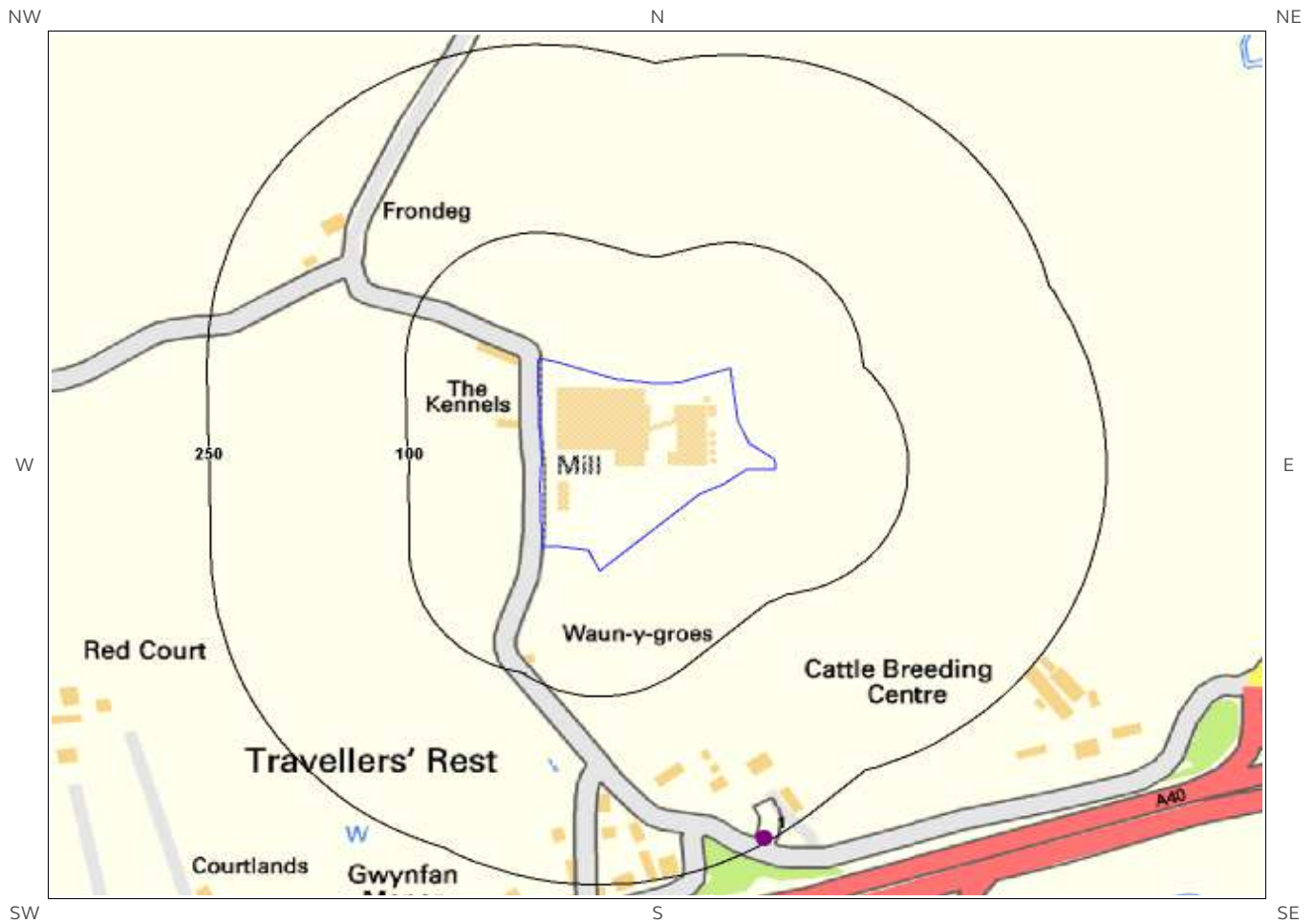
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible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

6.6 Running Sands

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



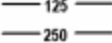
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased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

7 Borehole Records map



Borehole Records Legend

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-  Site Outline
-  Borehole Locations
-  Search Buffers (m)

7 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: 1

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1	247.0	SE	238400 219260	SN31NE73	3.0	A40 TRAVELLERS REST TP 19

The borehole records are available using the hyperlinks below: Please note that if the donor of the borehole record has requested the information be held as commercial-in-confidence, the additional data will be held separately by the BGS and a formal request must be made for its release.

#1: scans.bgs.ac.uk/sobi_scans/boreholes/253761



8 Estimated Background Soil Chemistry

Records of background estimated soil chemistry within 250m of the study site boundary:

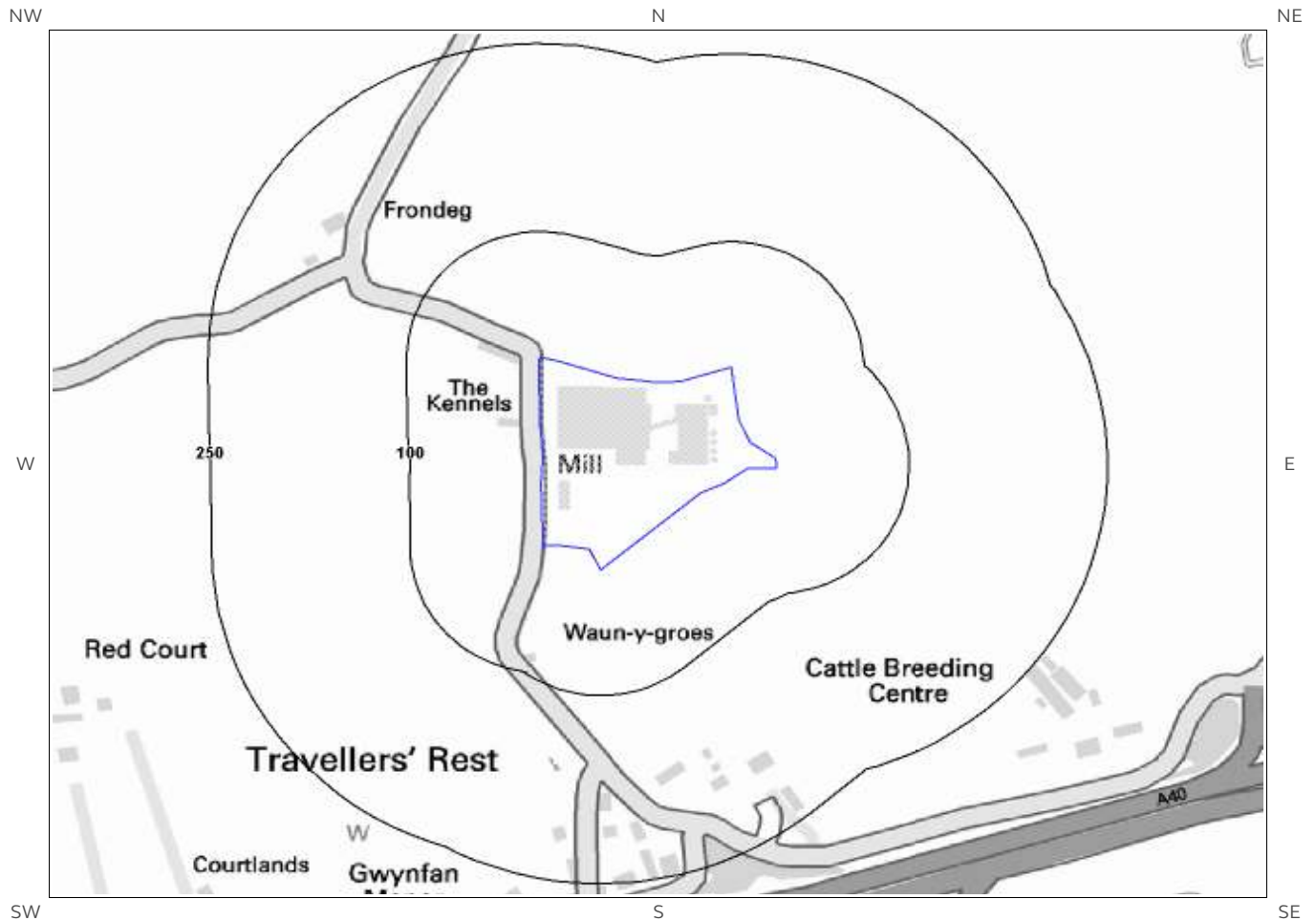
4

For further information on how this data is calculated and limitations upon its use, please see the Groundsure Geo Insight User Guide, available on request.

Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
49.0	SE	Sediment	<15 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg

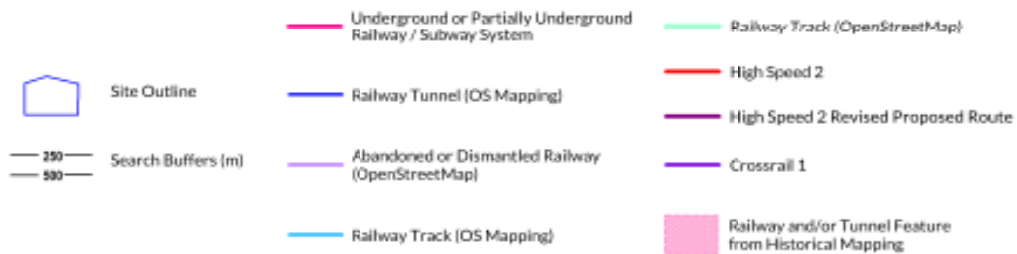
*As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.

9 Railways and Tunnels map



Railways and Tunnels Legend

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 © OpenStreetMapContributors



9 Railways and Tunnels

9.1 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.

9.2 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.

9.3 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.

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.

9.4 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.

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.

9.5 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.

Please note that this assessment takes account of both the original Phase 2b proposed route and the amended route proposed in 2016. As the Phase 2b route is still under consultation, Groundsure are providing information on both options until the final route is formally confirmed. Practitioners should take account of this uncertainty when advising clients.

Contact Details

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Email: enquiries@bgs.ac.uk
Web: www.bgs.ac.uk

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The Coal Authority

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



Public Health England

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<https://www.gov.uk/government/organisations/public-health-england>
Email: enquiries@phe.gov.uk
Main switchboard: 020 7654 8000



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|

APPENDIX D

Historical Maps

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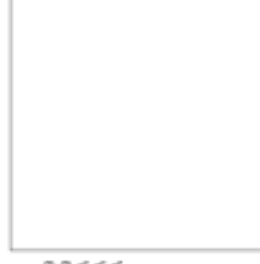
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Report Ref: HMD-142-4498528
Grid Ref: 238319, 219558

Map Name: County Series

Map date: 1889

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1869
 Revised 1889
 Edition N/A
 Copyright N/A
 Licensed N/A

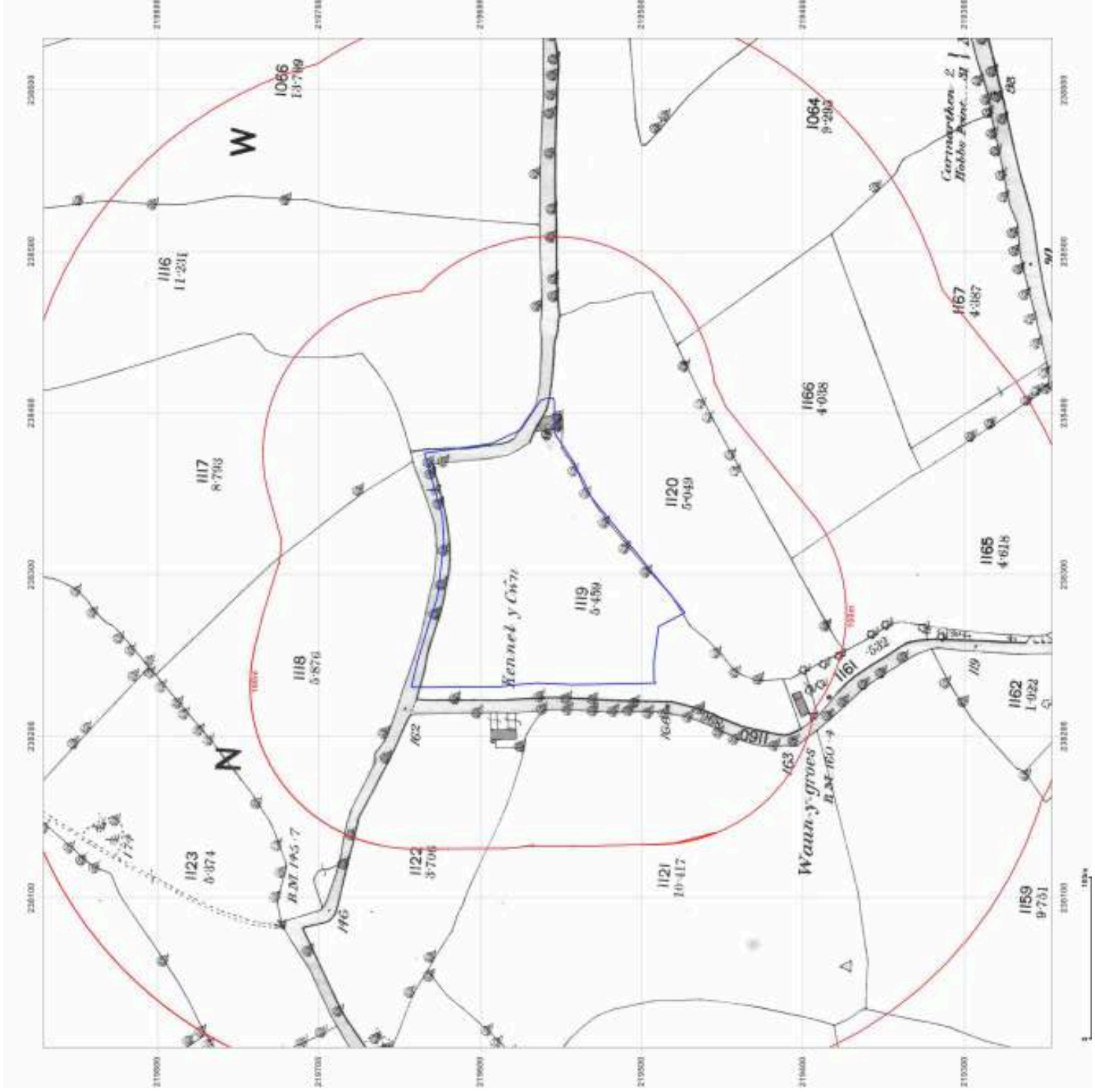


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Site Details:

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 CARMARTHEN, SA31 3SG

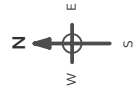
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Grid Ref: 238319, 219558

Map Name: County Series

Map date: 1906

Scale: 1:2,500

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Surveyed 1906
 Revised 1906
 Edition N/A
 Copyright N/A
 Labelled N/A

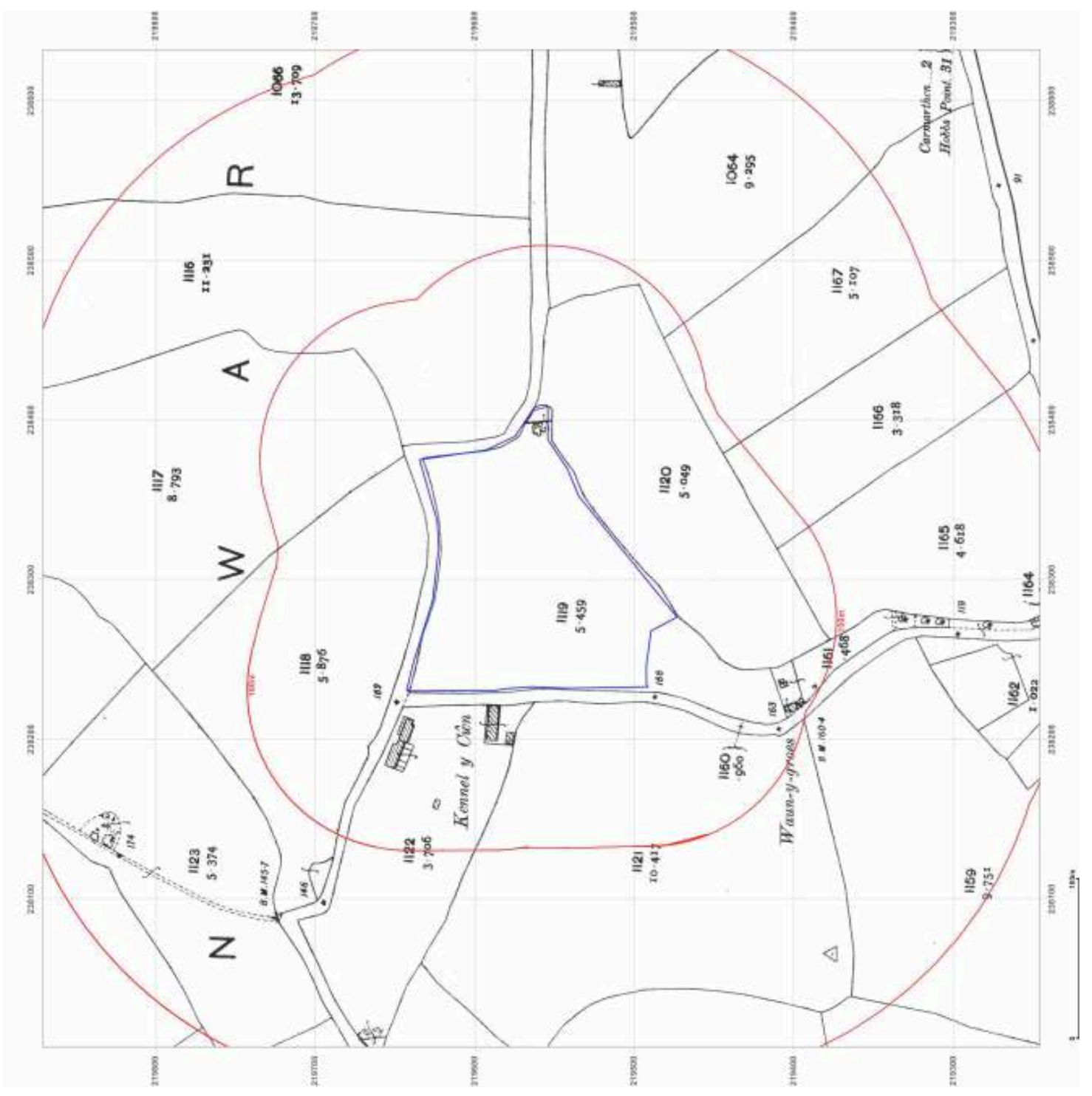


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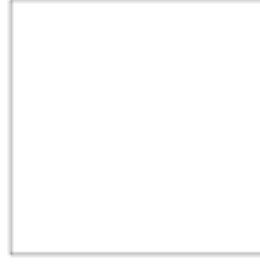
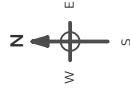
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Grid Ref: 238319, 219558

Map Name: National Grid

Map date: 1968

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1929
 Revised 1955
 Edition N/A
 Copyright 1929
 Levelling 1954

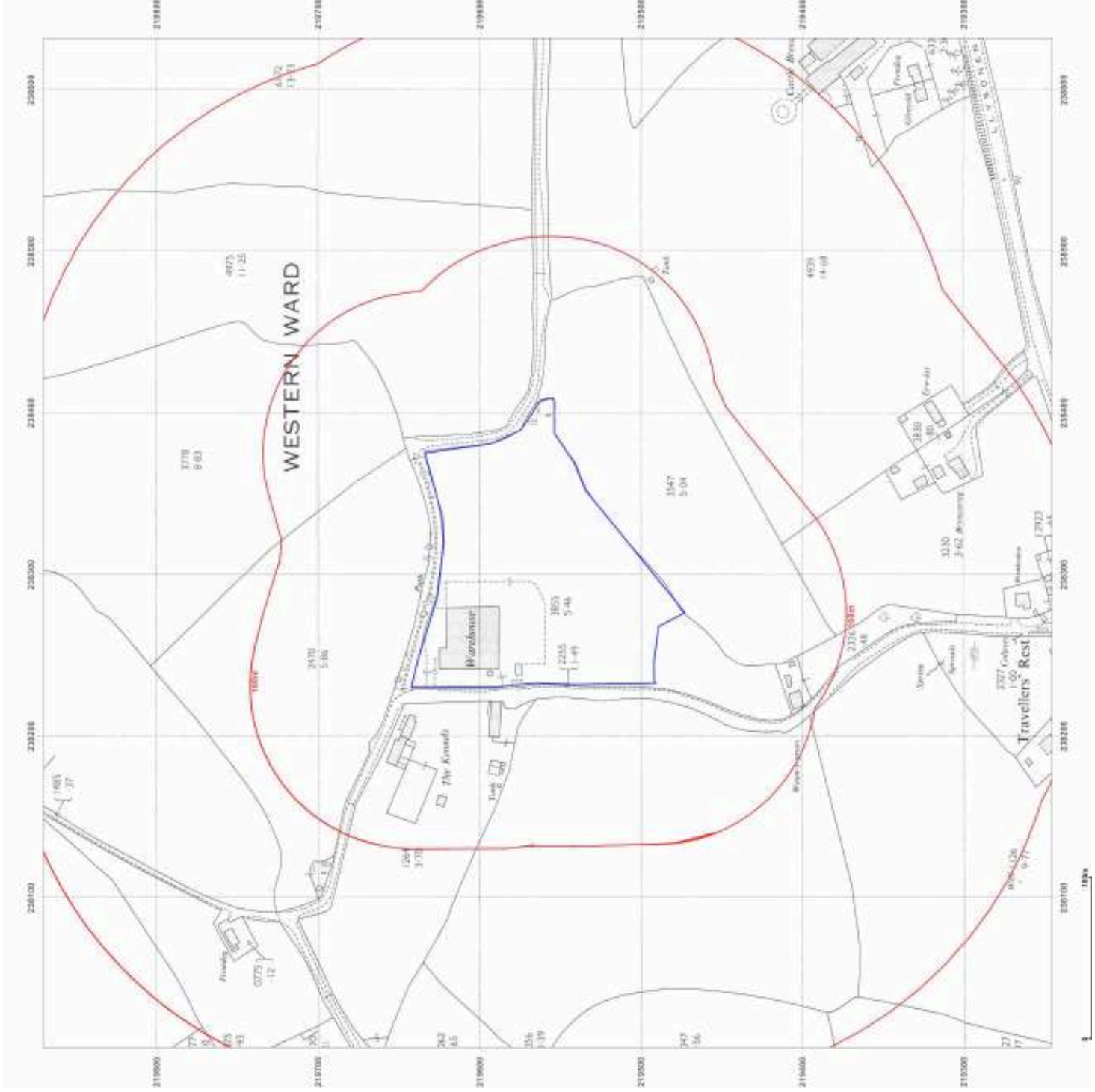


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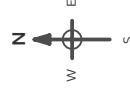
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Map Name: National Grid

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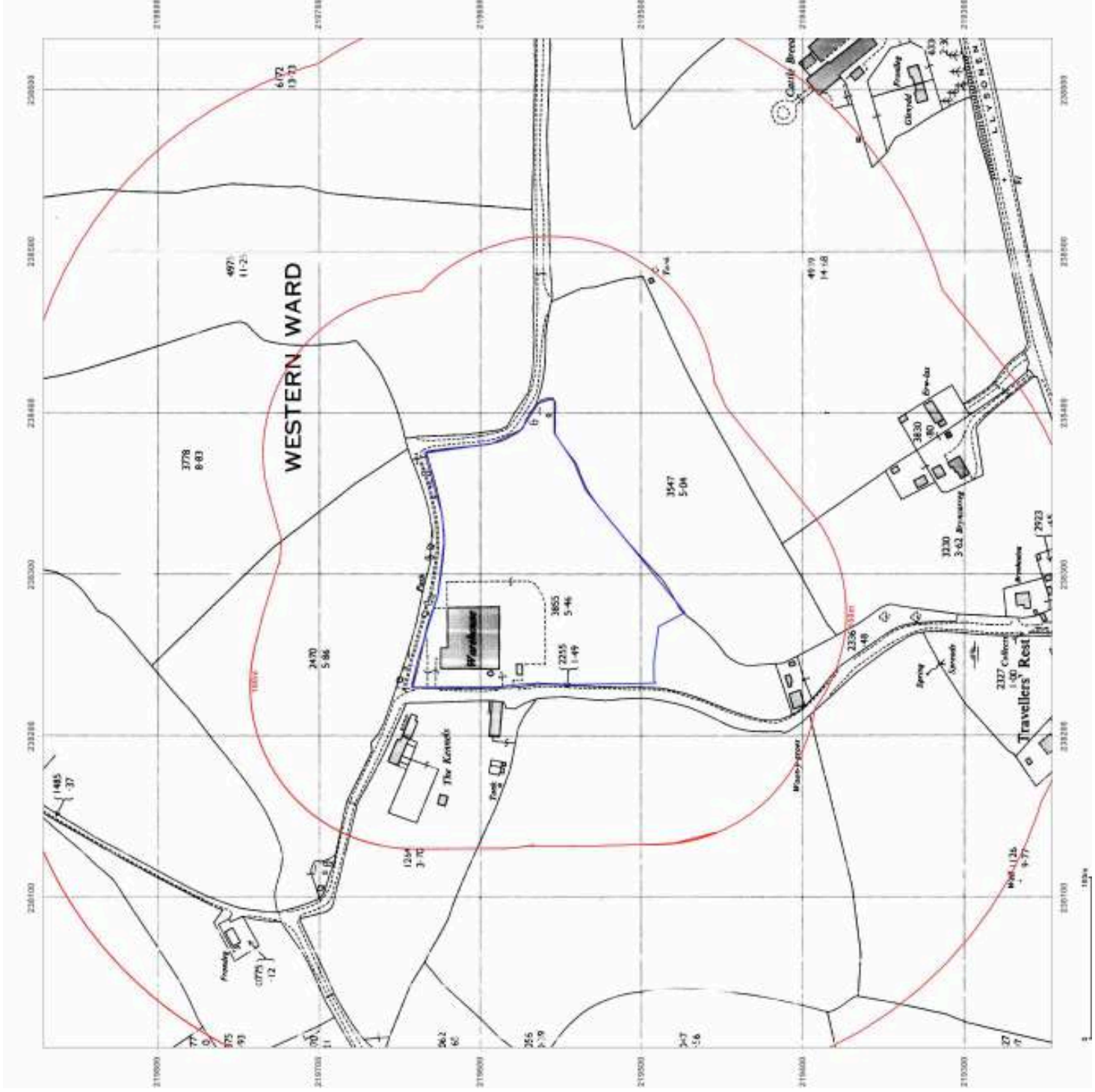


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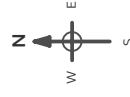
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Map Name: National Grid

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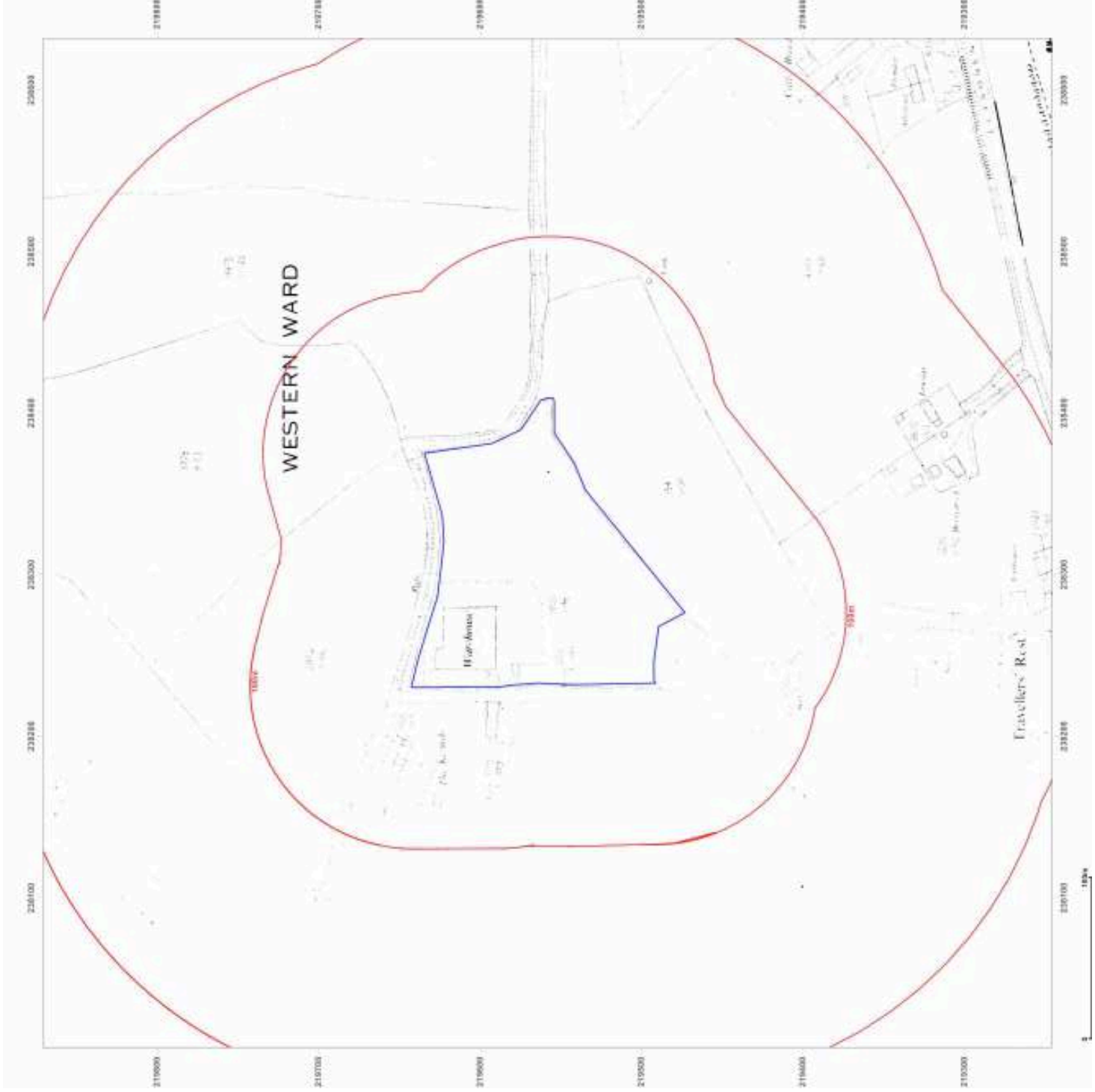


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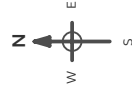
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Map Name: National Grid

Map date: 1975

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Printed at: 1:2,500



Surveyed 1975
 Revised 1975
 Edition N/A
 Copyright 1977
 Landed 1954

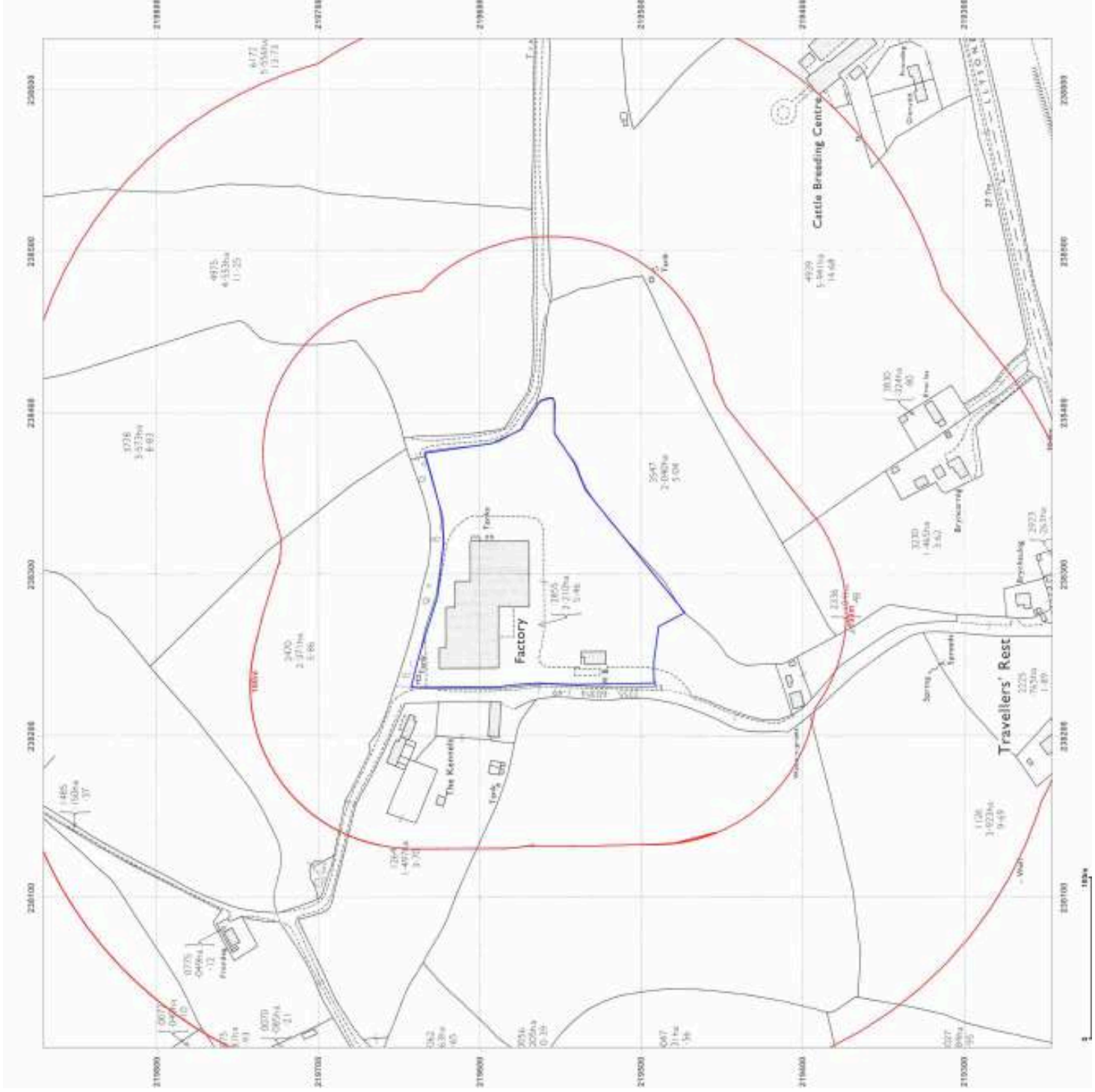


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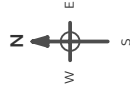
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Screened 0276
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 Edition N/A
 Copyright 1987
 Levelled 1976

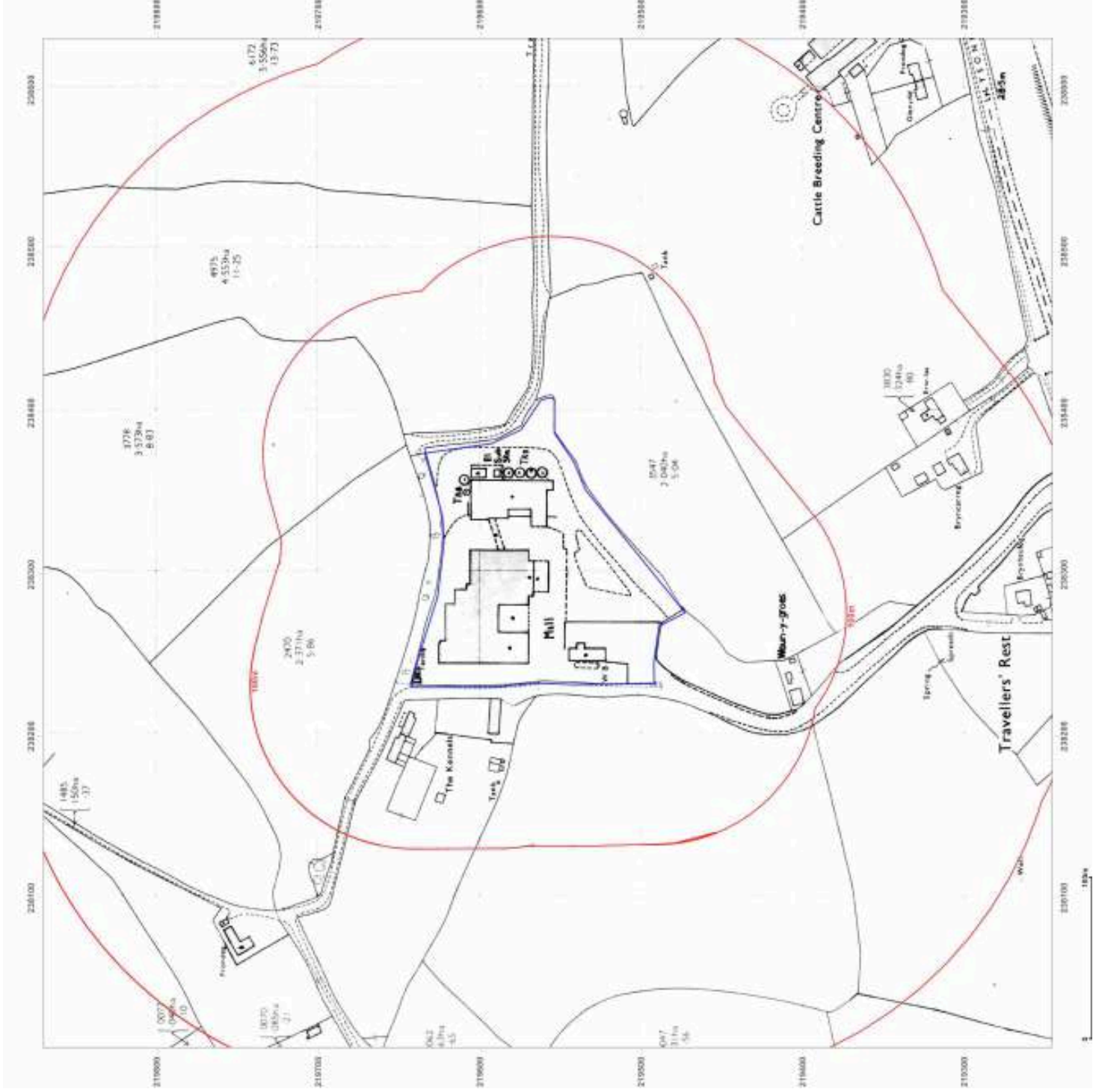


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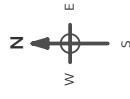
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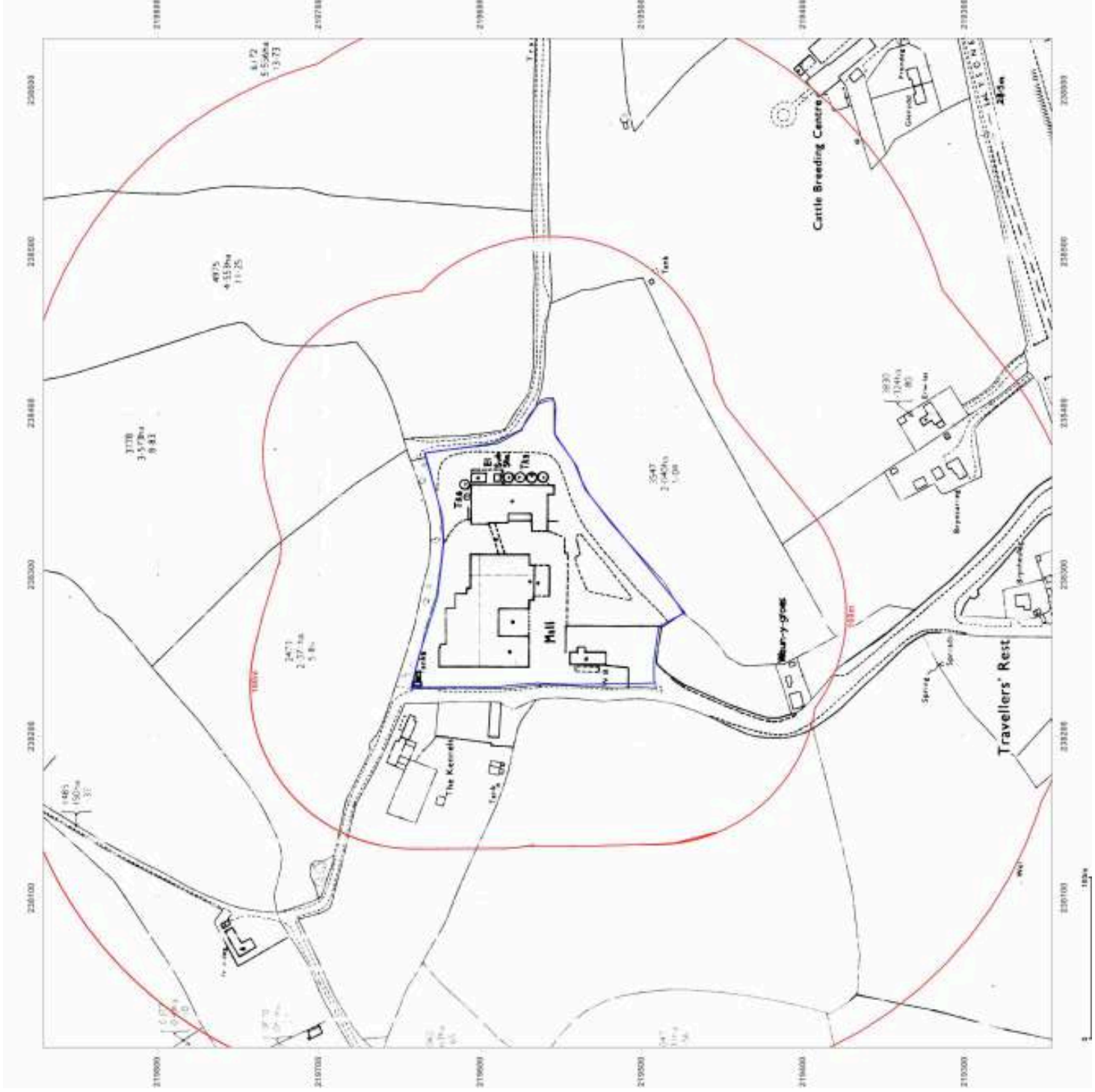


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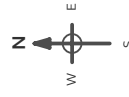
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Map Name: National Grid

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Printed at: 1:2,500

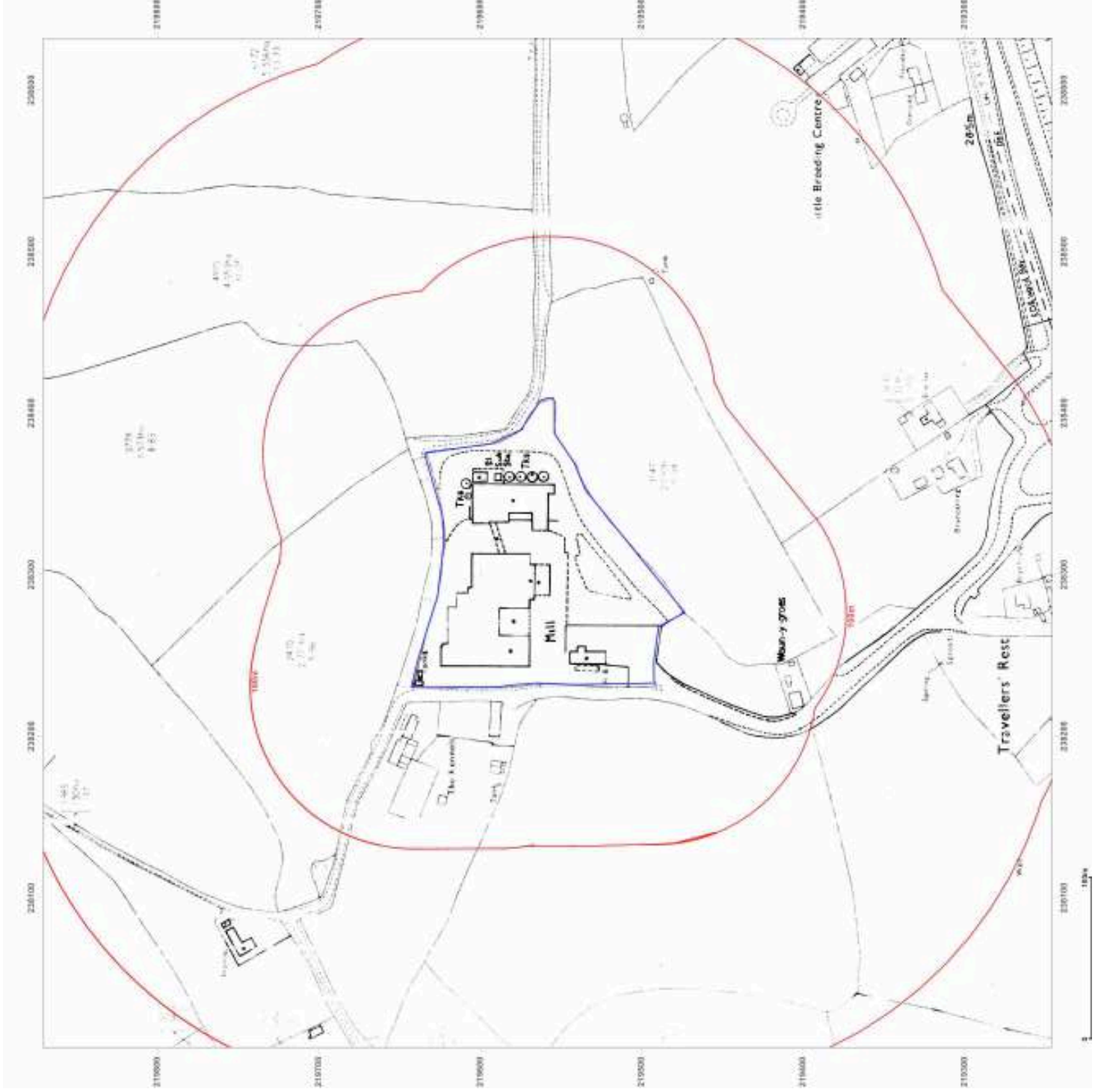


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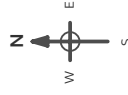
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Grid Ref: 238319, 219558

Map Name: National Grid

Map date: 1993

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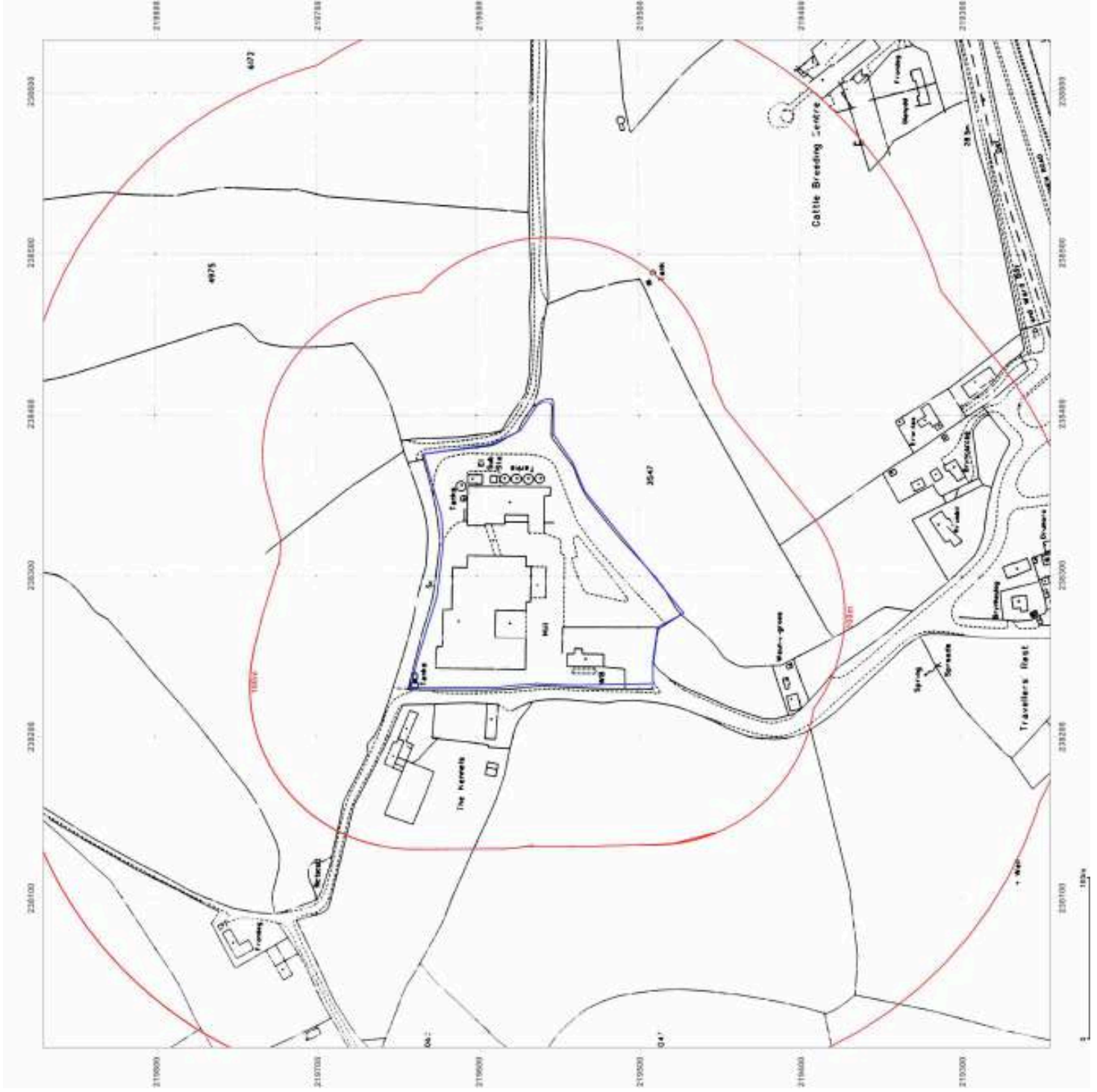


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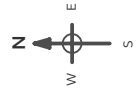
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Map date: 1886-1887

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1886 Revised 1886 Edition N/A Copyright N/A Levelled N/A	Surveyed 1887 Revised 1887 Edition N/A Copyright N/A Levelled N/A
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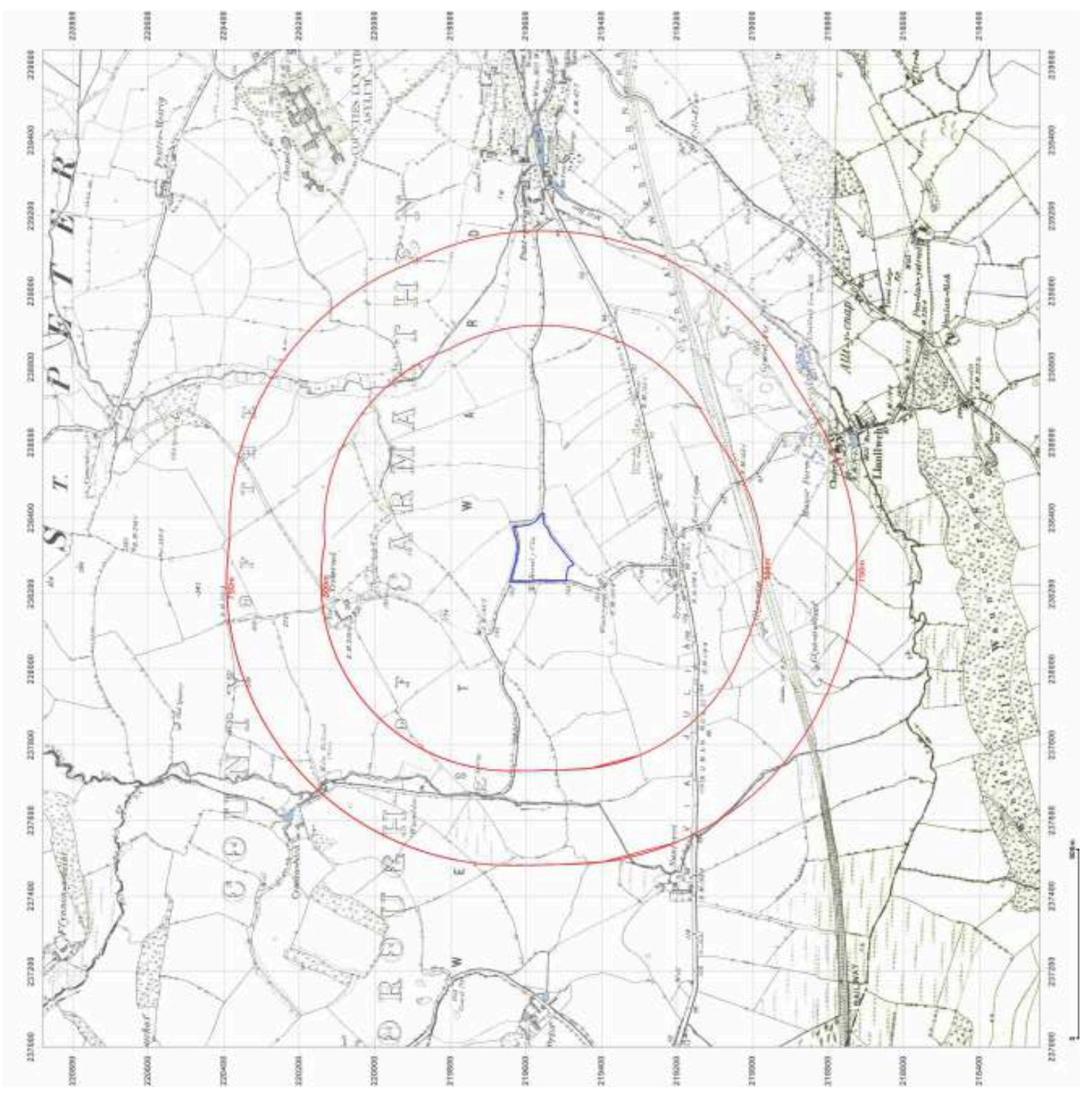


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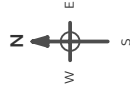
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Grid Ref: 238319, 219558

Map Name: County Series

Map date: 1905-1907

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1886 Revised 1905 Edition N/A Copyright N/A Levelled N/A	Surveyed 1886 Revised 1907 Edition 1907 Copyright N/A Levelled N/A
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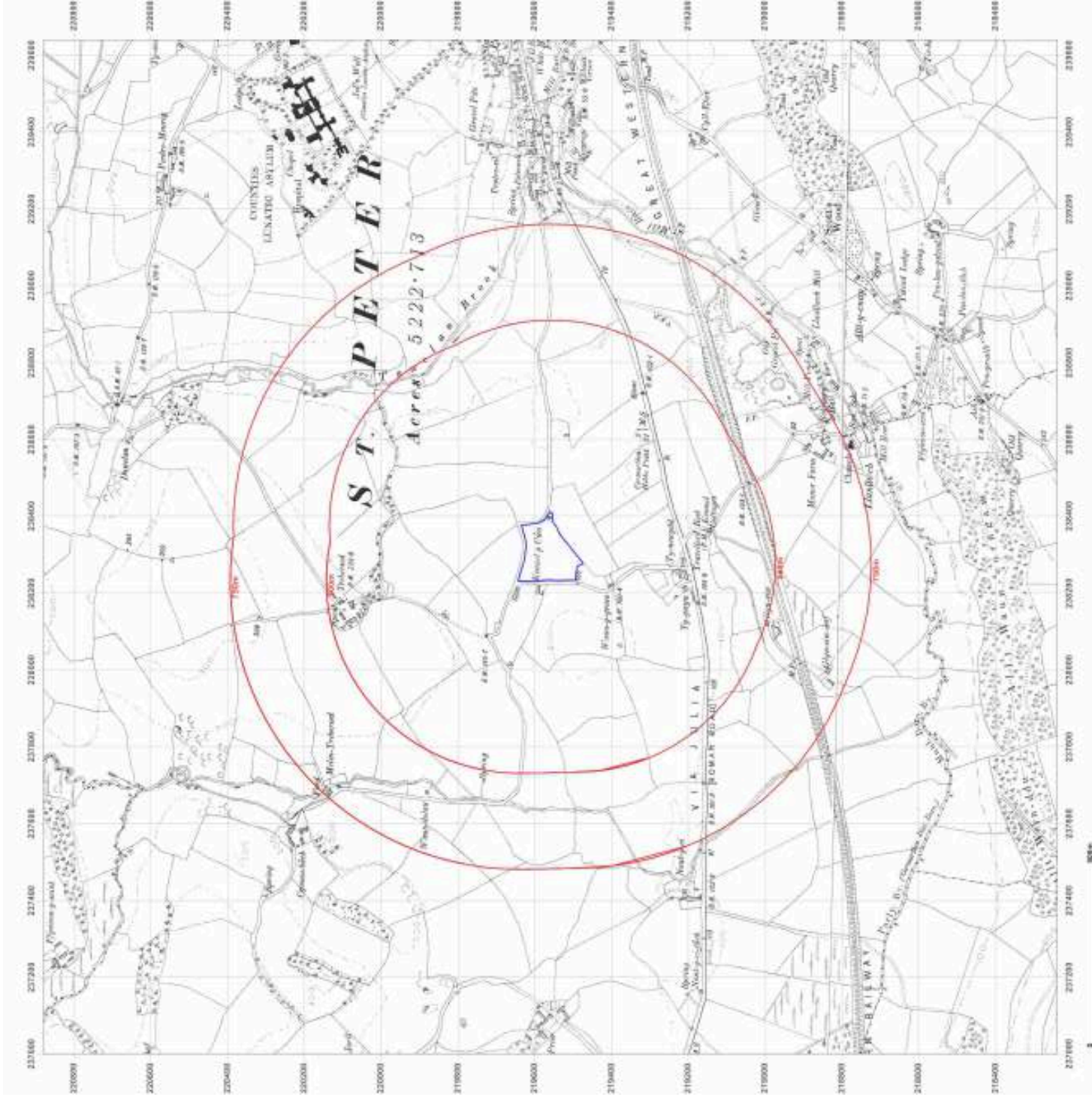


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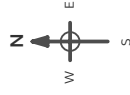
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Grid Ref: 238319, 219558

Map Name: County Series

Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1886
 Revised 1938
 Edition 1003
 Copyright NVA
 Levelled NVA

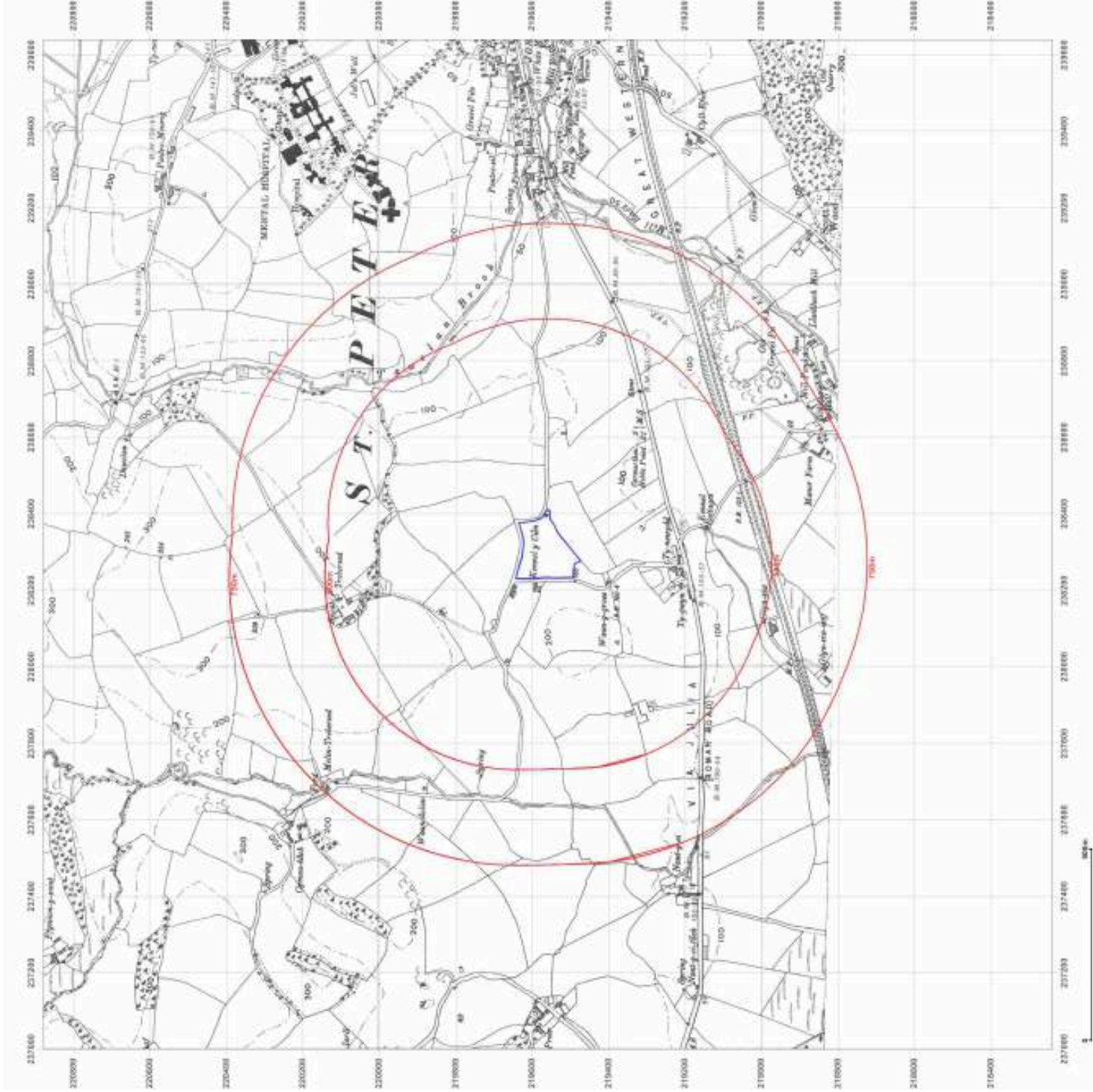


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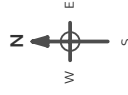
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Map Name: County Series

Map date: 1948

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1886 Revised 1948 Edition N/A Copyright N/A Levelled N/A	Surveyed 1886 Revised 1948 Edition N/A Copyright N/A Levelled N/A
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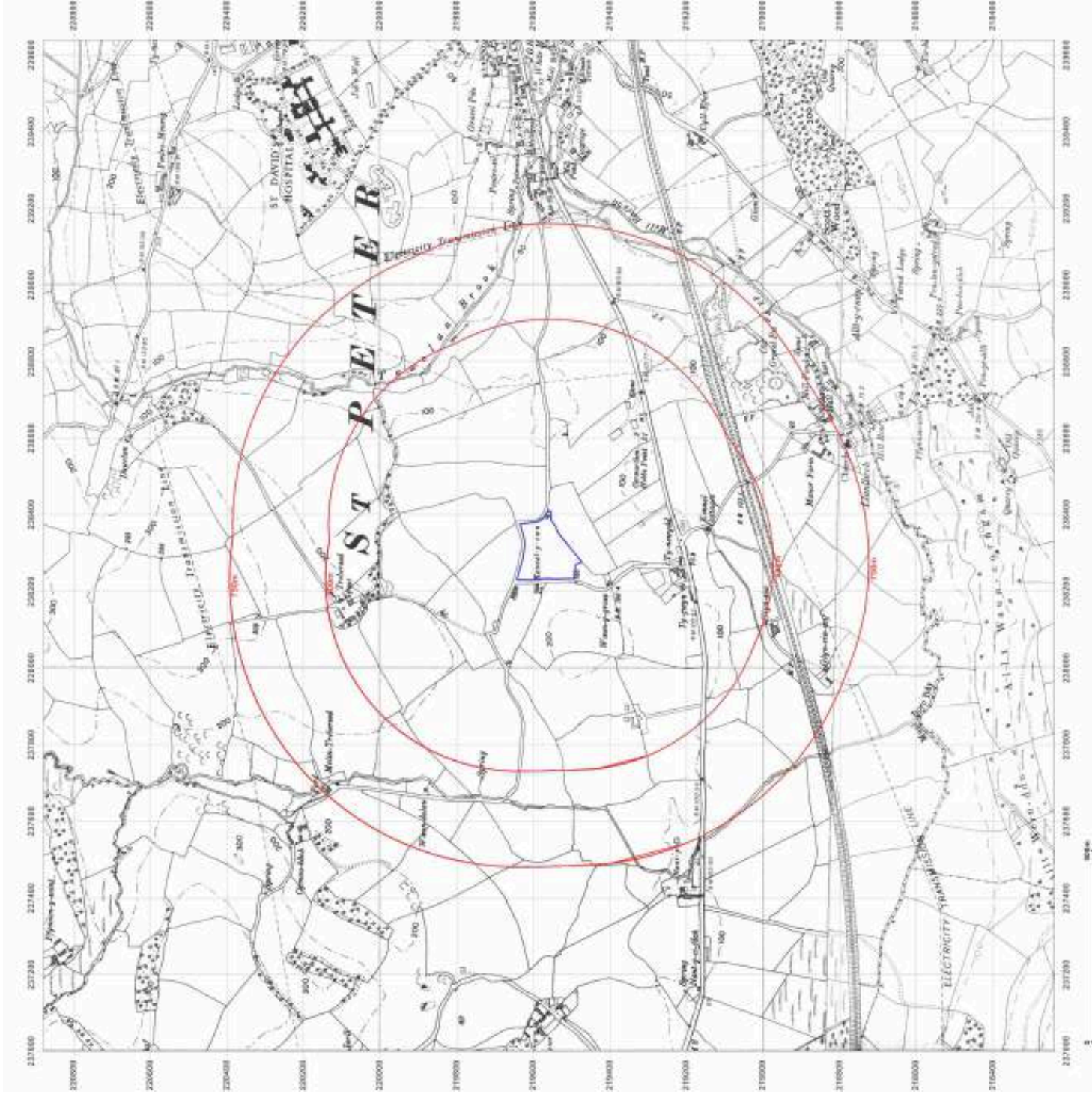


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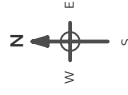


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Map Name: Provisional
Map date: 1963
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 Copyright N/A
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Surveyed N/A
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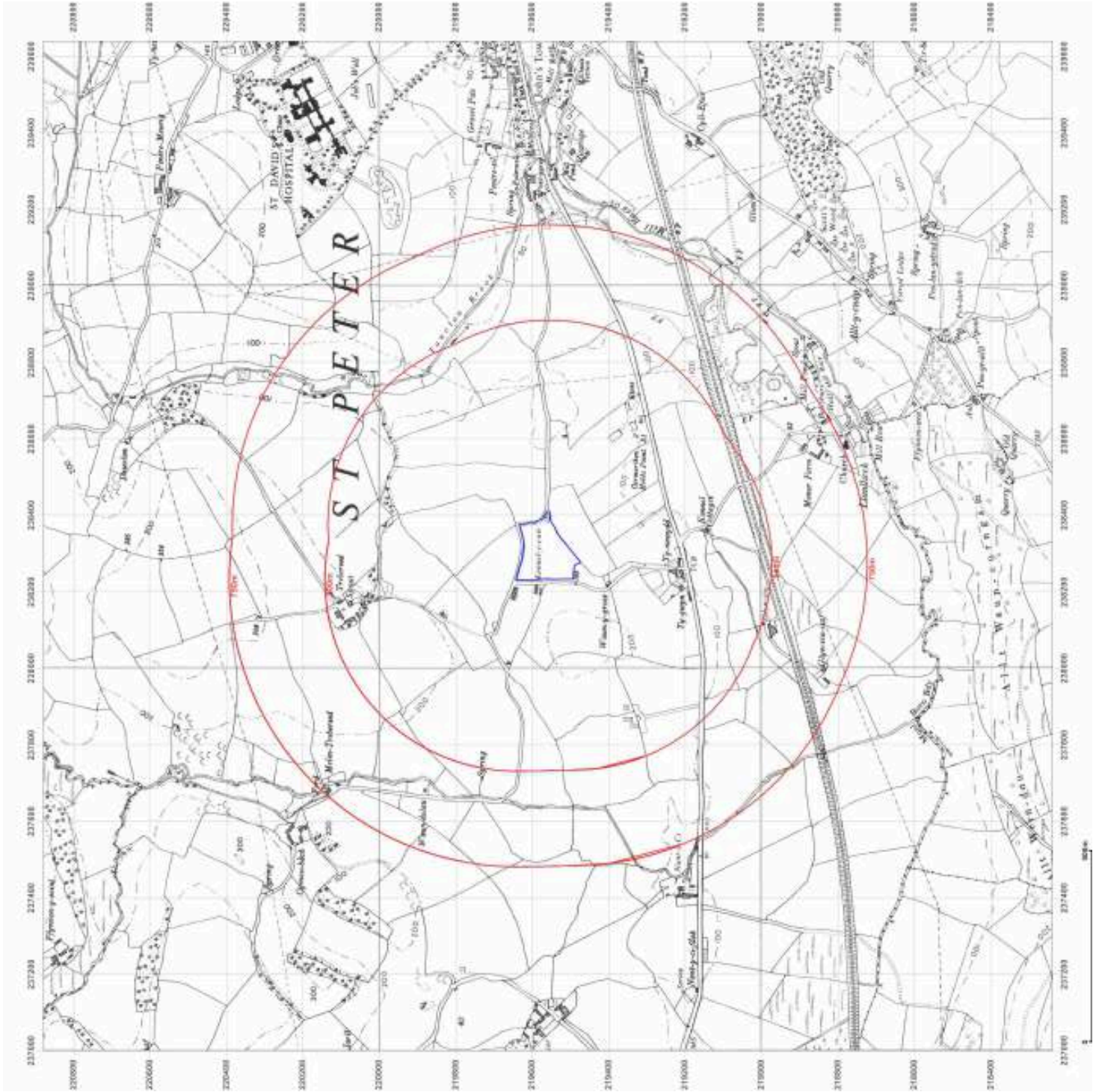


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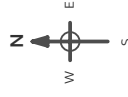
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Grid Ref: 238319, 219558

Map Name: National Grid

Map date: 1975

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Surveyed 1970
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 Edition N/A
 Copyright 1975
 Levelled N/A



Surveyed 1970
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 Edition N/A
 Copyright 1975
 Levelled 1972

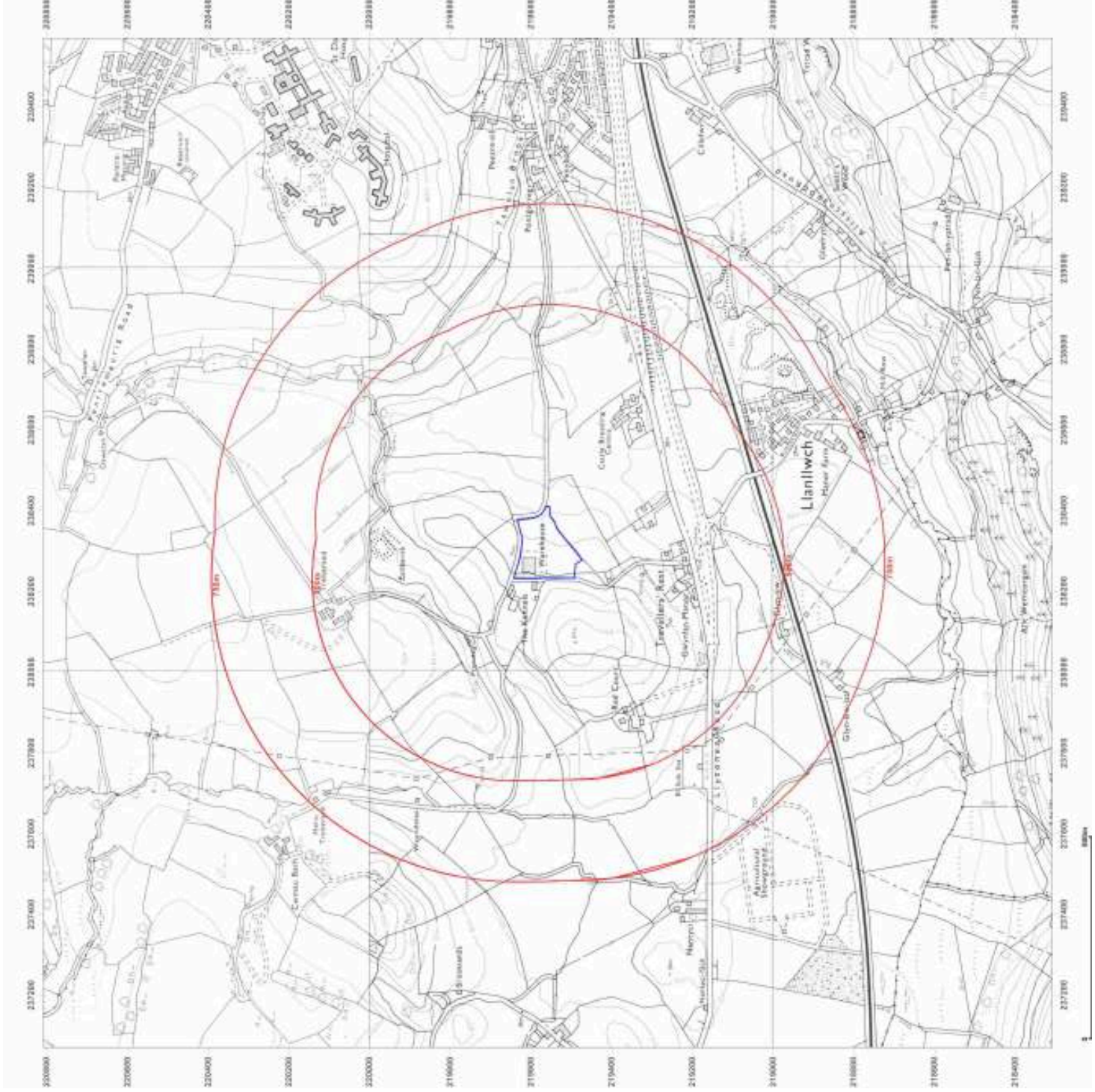


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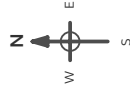
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Grid Ref: 238319, 219558

Map Name: National Grid

Map date: 1992

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1870
 Revised 1992
 Edition N1A
 Copyright NIA
 Licensed NIA

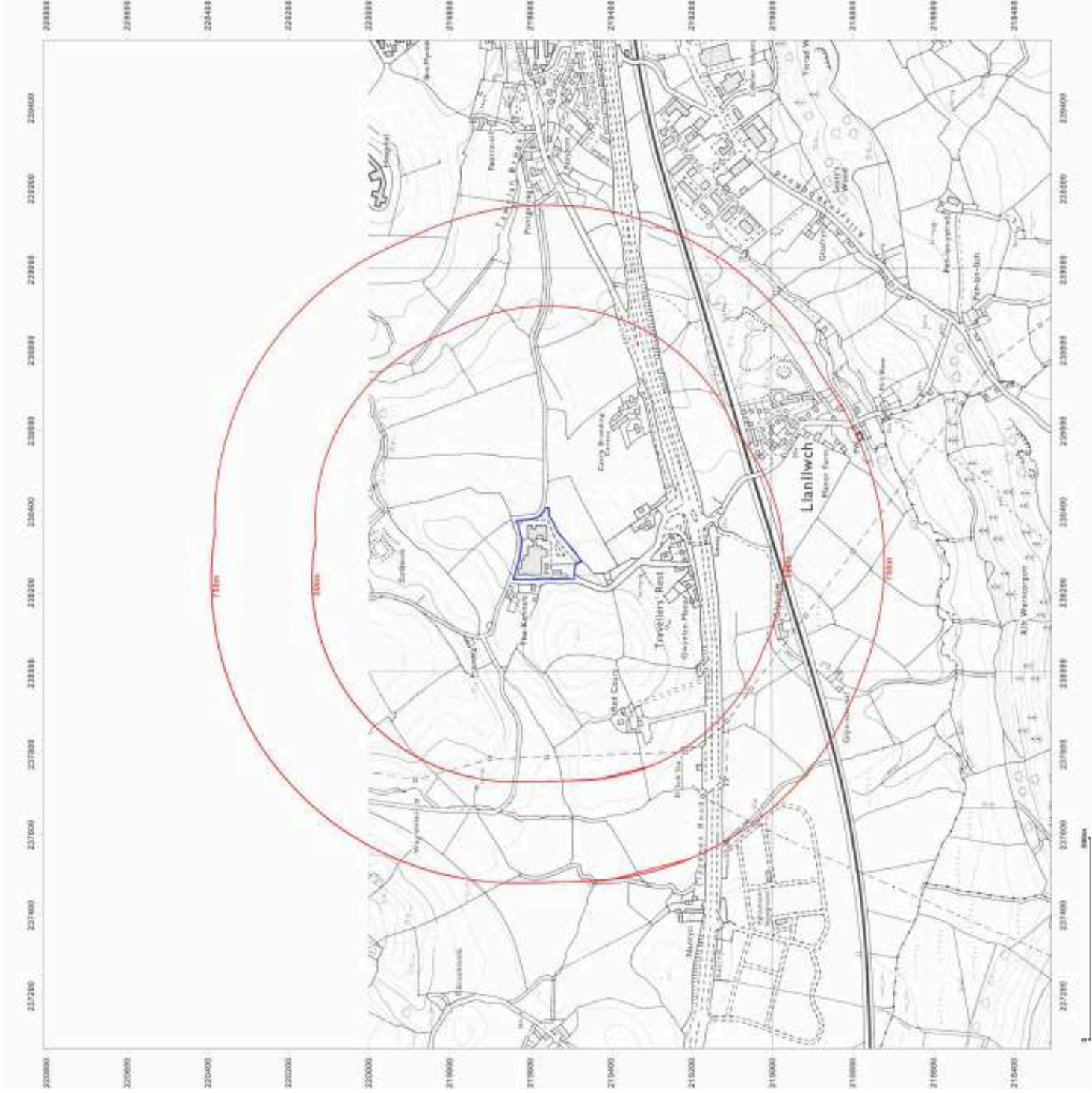


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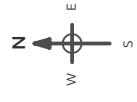
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Map Name: 1:10,000 Raster

Map date: 2002

Scale: 1:10,000

Printed at: 1:10,000

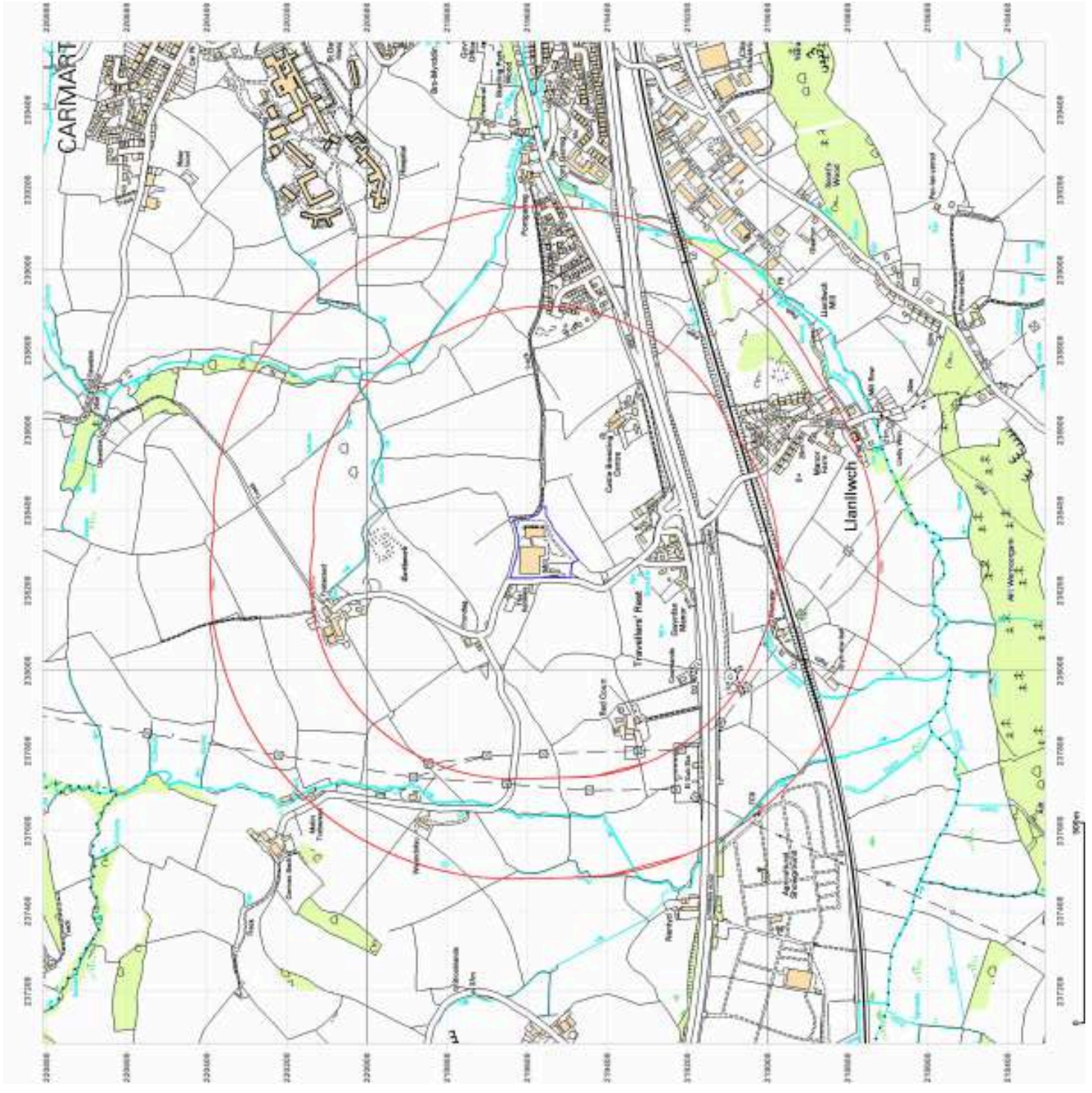


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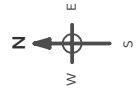
Site Details:

WYNNSTAY GROUP PLC
 LLYSONNEN MILL, LLYSONNEN
 ROAD, TRAVELLERS REST,
 CARMARTHEN, SA31 3SG

Client Ref: Wynnstay_SCR_-_EC_3254
Report Ref: HMD-142-4498528
Grid Ref: 238319, 219558

Map Name: National Grid

Map date: 2010
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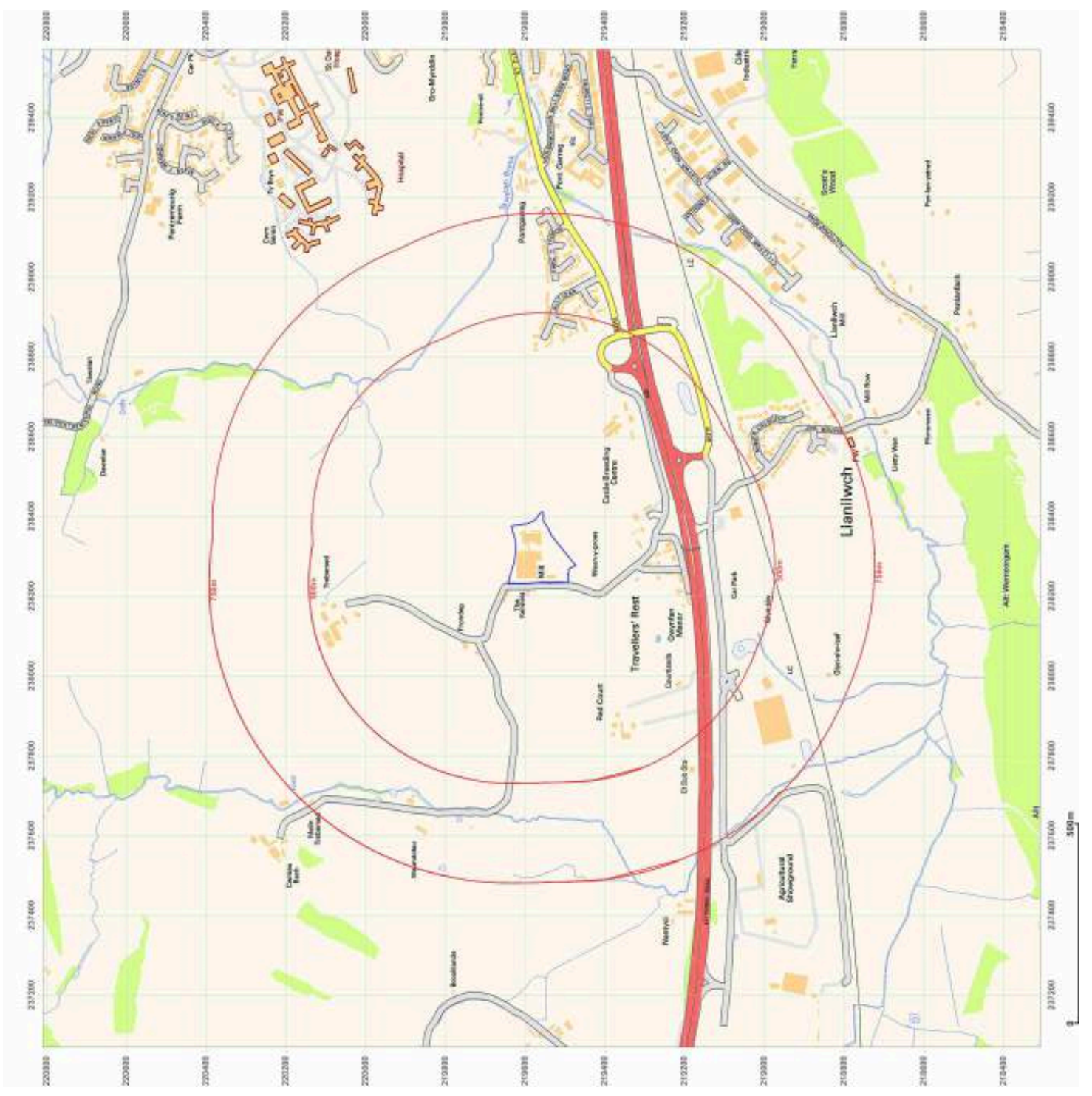


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Site Details:

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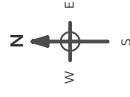
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Report Ref: HMD-142-4498528
Grid Ref: 238319, 219558

Map Name: National Grid

Map date: 2014

Scale: 1:10,000

Printed at: 1:10,000



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