

**Wales and West Housing
Association**

**Coal Mining Risk Assessment
Report**

For

Eight Avenue, Wrexham

February 2022

REPORT NO: 21WWH006/CMRA

- *Desk Studies and Site Walkovers*
- *Intrusive Contaminated Land Investigations*
- *Geotechnical Appraisals and Ground Investigations*
- *Landfill Gas Assessments and Remedial Design*
- *Remediation Design and Implementation*
- *Remediation Project Management and Supervision*
- *Site Abnormal Assessments (Foundations and Contaminated Land)*

GEOTECHNICAL - CONTAMINATED LAND - FLOOD RISK

© Betts Geo Environmental Ltd 2022

DOCUMENT ISSUE RECORD

Contract No: 21WWH006
Client: Wales and West Housing Association
Contract: Eighth Avenue, Wrexham
Document: Coal Mining Risk Assessment Report

Prepared by:  L Hayes
Checked by:  B Lewis
Approved by:  M Fawcett
Date: February 2022

REVISION RECORD

Revision	Date	Description	Prepared by
0	Feb 22	Draft for issue and comments	LH



CONTENTS

1	EXECUTIVE SUMMARY	2
2	SITE DESCRIPTION	3
	2.1 Introduction	
	2.2 Site Location	
	2.3 Site Description	
3	SITE HISTORY	5
	3.1 Site History from Ordnance Survey Maps	
	3.2 Summary of Site History	
4	GEOLOGY	9
	4.1 Published Geology	
	4.2 Geological Features	
5	COAL MINING	13
6	REFERENCES	16

APPENDIX A

- i) Historical Mapping
- ii) Coal Mine Plans

APPENDIX B

- i) Groundsure Report
- ii) Coal Mining Report

APPENDIX C

- i) Notes on Limitations

1 EXECUTIVE SUMMARY

Note – The following summary is not exhaustive and is to be used for guidance purposes only. The full report should be consulted for full details.

Site Location

The site is located off Eighth Avenue, Llay, Wrexham, LL12 0TT. The coordinates on the National Grid Reference is 333511, 355725. The site is approximately 0.47 hectares in total.

Proposed Development

Proposed construction of new residential dwellings with associated infrastructure, gardens and public open space.

Site Description

On Site

A site walkover was carried out via Google Street view. The site is occupied by a housing facility and car park. There is an electrical substation along the north / north eastern boundary which appears to be well maintained and there is a small garage adjacent to the substation. Therefore, there are services present on site which are assumed to be live and the housing facility is deemed to be occupied.

Published Geology

The BGS map shows the geology (1:10,000) beneath the site as the following:

- Artificial Ground – none recorded, Google Maps suggests Made Ground is present
- Superficial Deposits:
 - North western edge - Till – Devensian
 - Majority of the site – Glaciofluvial Deposits – sand and gravel
- Bedrock Deposits
 - Salop Formation – mudstone, sandstone and conglomerate

Coal Mining

The site is underlain by multiple worked coal seams, however these are at considerable depth (>600m). as such any movement from these seams will have long since ceased. There is a **Low** risk of recorded and unrecorded shallow workings across the site. No additional work regarding coal mining risk is deemed necessary.

2 SITE DESCRIPTION

2.1 Introduction

This investigation was carried out on the instruction of Wales and West Housing Association. The purpose of the work was to carry out a Coal Mining Risk Assessment Report to provide preliminary geotechnical risk assessment information to support a planning application for the proposed construction of new residential dwellings with associated infrastructure, gardens and public open space. The site boundary can be seen below;



2.2 Site Location

The site is located off Eighth Avenue, Llay, Wrexham, LL12 0TT. The coordinates on the National Grid Reference is 333511, 355725. The site is approximately 0.47 hectares in total

2.3 Site Description

2.3.1 On Site

A site walkover was carried out via Google Street view. The site is occupied by a housing facility and car park. There is an electrical substation along the north / north eastern boundary which appears to be well maintained and there is a small garage adjacent to the substation. Therefore there are services present on site which are assumed to be live and the housing facility is deemed to be occupied.

2.3.2 Surrounding Area

Surrounding land uses for the site are as follows:

- **North** – 0 – 500 m N residential, 100 – 300 m N is Nant-y-gaer Wood
- **East** – 0 – 100 m E is residential housing, 100 – 500 m E is open space and Nant-y-gaer Wood
- **South** – 0 – 500 m S is residential housing

- **West** – 0 – 500 m W is residential housing

3 SITE HISTORY

3.1 Site History from Ordnance Survey Maps

A search of available historic maps was undertaken to establish the land use history of the site. Extracts of the maps are discussed below and can be found in full in Appendix A of this report. All maps are Ordnance Survey unless otherwise stated. All distances quoted on OS maps are taken from the site boundary, which is marked on the map.

3.2 Summary of Site History

3.2.1 On Site

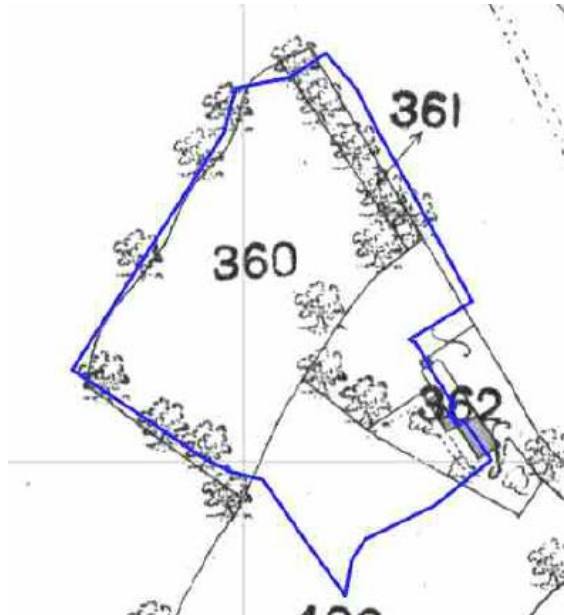
The earliest available map is the Tithe map which shows site occupying multiple fields. An extract of this map is shown below;

Tithe Map (Unknown year)



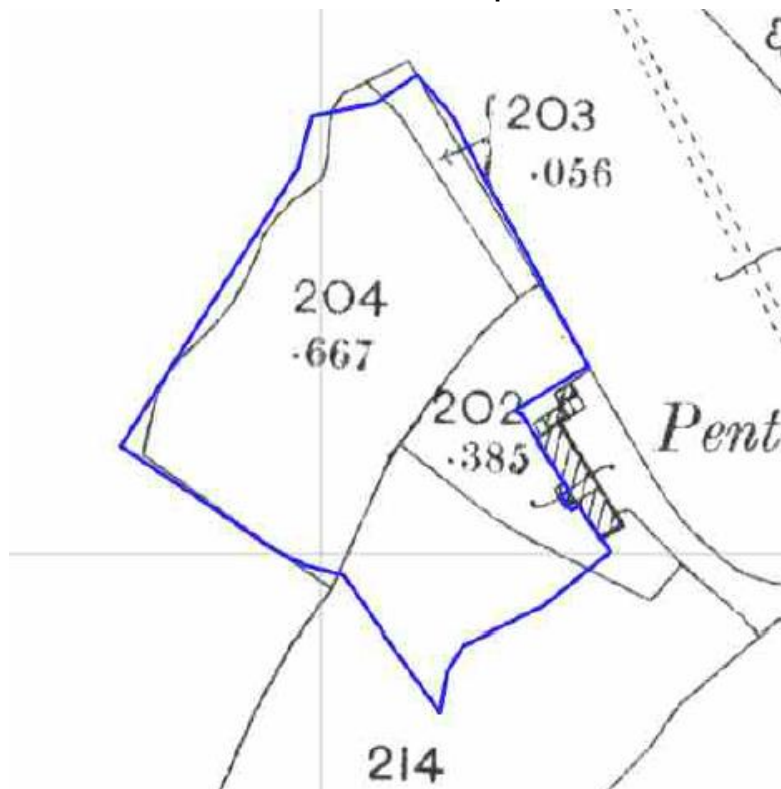
No major changes occur onsite until the 1875 1:2,500 map which shows the plot numbers have changed and there are trees present on site. The building in the south east also overlaps with the site. An extract of this map is shown below;

1875 1:2,500 Map



No further major changes occur onsite until the 1899 1:2,500 map when the plot numbers change and there are no longer trees present on site. An extract of this map is shown below;

1899 1:2,500 Map



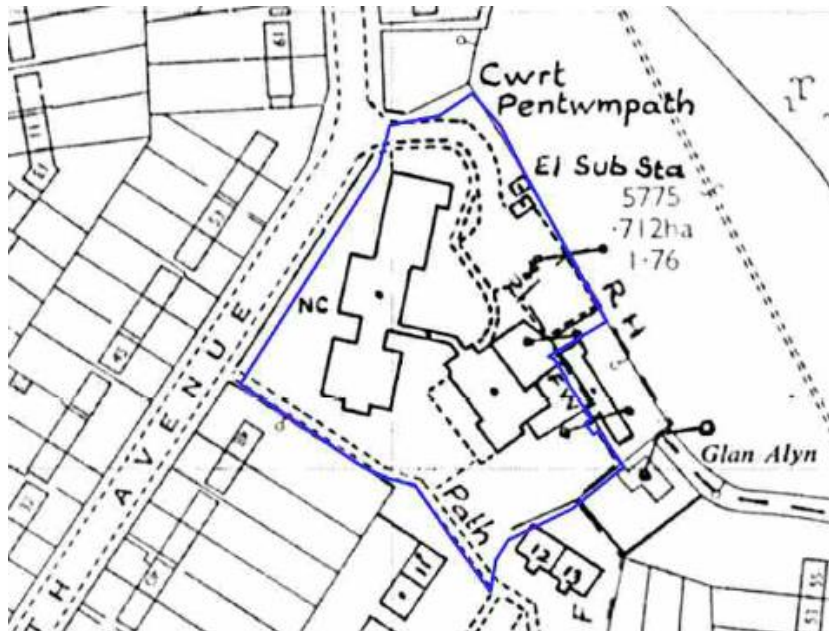
No further major changes occur onsite until 1962 1:2,500 map when the building in the south east no longer overlaps with site. Also there are now telegraph poles on site. An extract of this map is shown below;

1962 1:2,500 Map



No further major changes occur onsite until 1980 1:2,500 map when there is a large building present across most of the site and a substation along the eastern boundary. An extract of this map is shown below;

1980 1:2,500 Map



No further major changes occur onsite up to present.

3.2.2 Surrounding Area

The following table summarises the significant changes in historical use surrounding the site:

Date First Shown	Land Uses
Tithe Map	All around – fields, small buildings and surface water feature
1873	200 m NE and 150 m SW – wells, no longer present by 1938 250 m NW – pond, no longer present by 1938
1900	300 – 400 m N – earthworks, no longer present in 1981
1938	150 – 200 m NE – Gravel pit, no longer labelled by 1964 0 – 500 m E, S, W – residential housing, expands until 1968
1981	200 – 400 m NE – residential housing, still present today
1992	300 – 500 m NW – residential housing, still present today
2001	200 m S – depot, still present today

4 GEOLOGY

The following section details the published and available geological data available for the site and the surrounding area. All data is taken from the Groundsure Data report located in Appendix B unless otherwise stated. This report should be referred to for full details.

4.1 Published Geology

The following section details the published and available geological data available for the site and the surrounding area. All data is taken from the Groundsure Data report located in Appendix B unless otherwise stated. This report should be referred to for full details.

The documented geology of the site is summarised on the British Geological Survey map principally, with further site-specific details detailed below.

Geology	Artificial Ground & Land Slip	Drift	Solid
1:10,000	None recorded	North western edge - Till – Devensian Majority of the site – Glaciofluvial Deposits – sand and gravel	Salop Formation - Mudstone, Sandstone and Conglomerate

Superficial Geology

ID	Location	LEX Code	Description	Rock description
1	On site	GFDU-XSV	Glaciofluvial Deposits - Sand And Gravel	Sand And Gravel
2	On site	TILL-DMTN	Till - Diamicton	Diamicton

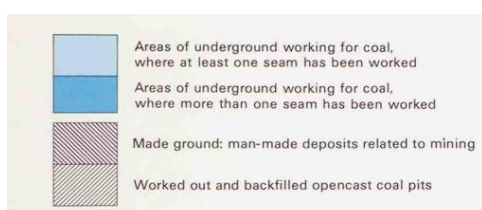
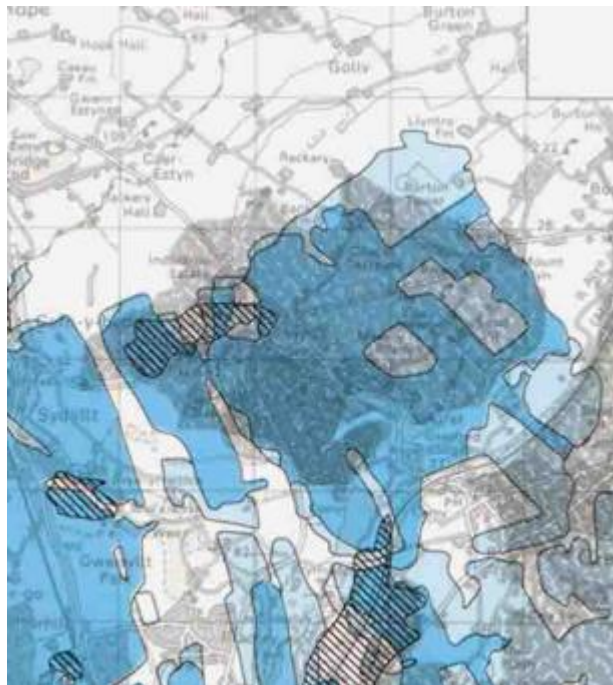


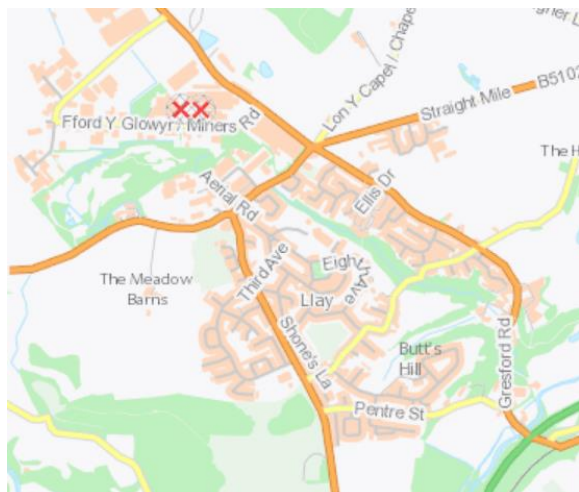
Bedrock Geology

ID	Location	LEX Code	Description	Rock age
1	On site	SAL-MDSC	Salop Formation - Mudstone, Sandstone And Conglomerate	Cisuralian Epoch - Westphalian D Sub-age



TECHNICAL REPORT WA/91/4 Applied geological mapping in the Wrexham area: geology and land use planning <http://nora.nerc.ac.uk/id/eprint/510077/1/WA91004.pdf> identifies the area to have been worked by various seams and depths.





The coal authority interactive viewer shows the area not to be in a high risk area and the only shafts (Mine Entry Reference: 332356-031 and Reference: 332356-032) being those belonging to Llay Main Colliery to the north west by 1 km away. These shafts identify a drift deposit >50m thick before encountering bedrock and a further 18m deeper before any sign of coal seams.

4.1.1 Linear Features

There are no linear features within 250 m of site.

4.1.2 Historic Borehole Records

There are no borehole records within 250 m of the site.

4.2 Geological Features

The table below summarises the presence/absence of recorded mining, extraction and natural cavities records within 500m of site. If entries are present within 250m, further details are provided in the relevant section below.

Data Type	On Site	0 – 50m	50 – 250m	250 – 500m
Geological				
Natural Cavities	-	-	-	-
BritPits	2	-	-	4
Surface Ground Workings	26	20	53	-
Underground Workings	3	-	1	11
Historic Mineral Planning Areas	-	-	-	-
Non Coal Mining	1	-	-	-
Mining Cavities	-	-	-	-

4.2.1 Surface Ground Workings

The Groundsure report shows there are 6 No. surface ground workings within 250 m of site. An extract is provided below:

ID	Location	Land Use	Year of mapping	Mapping scale
A	168m E	Gravel Pit	1909	1:10560
A	169m E	Gravel Pit	1938	1:10560
A	169m E	Gravel Pit	1949	1:10560
B	207m SW	Unspecified Pit	1968	1:10560
B	207m SW	Unspecified Pit	1960	1:10560
C	211m S	Gravel Hole	1872	1:10560

5 COAL MINING

The data contained within the Groundsure report is somewhat vague and as such a more detailed report was requested.

The site lies within an area affected by historical coal mining and a Coal Authority Report was obtained; the full report is available in Appendix B however, extracts are shown below;

Past underground mining

Colliery	Seam	Mineral	Coal Authority reference	Depth (m)	Direction to working	Dipping rate of seam worked (degrees)	Dipped direction of seam worked	Extraction thickness (cm)	Year last mined
unnamed	TWO YARD	Coal	3AD5	682	South-West	12.3	North-East	150	1932
unnamed	TWO YARD	Coal	3A61	687	North-West	10.0	East	150	1931
unnamed	MAIN	Coal	39Y9	687	West	8.0	North-East	200	1960
unnamed	MAIN	Coal	39XZ	696	West	15.0	East	200	1960
unnamed	QUAKER	Coal	3A4G	716	South-West	11.0	North-East	120	1962
unnamed	TWO YARD	Coal	3A62	721	North-West	10.0	East	150	1955
unnamed	MAIN	Coal	39YV	731	South	6.8	East	202	1946
unnamed	MAIN	Coal	39YU	733	South	10.0	North-East	240	1960
unnamed	QUAKER	Coal	3A4F	735	South	11.0	North-East	120	1962
unnamed	QUAKER	Coal	3A4P	748	Beneath Property	6.0	North-East	180	1962
unnamed	QUAKER	Coal	3A4E	761	South-East	11.0	North-East	120	1962
unnamed	MAIN	Coal	39Y6	781	Beneath Property	8.0	North-East	230	1960
unnamed	MAIN	Coal	39Y8	781	Beneath Property	8.0	North-East	230	1960
unnamed	RUABON YARD (SOFT S QTRS)	Coal	3A4V	785	West	21.3	North-East	100	1966
unnamed	WALL AND BENCH	Coal	3A28	786	West	20.7	North-East	80	1941
unnamed	MAIN	Coal	39Y0	800	North-West	13.4	South-East	200	1960
unnamed	MAIN	Coal	39Y7	804	North-West	8.0	North-East	230	1960
unnamed	RUABON YARD (SOFT S QTRS)	Coal	3A4U	838	South-West	10.0	North-East	100	1966
unnamed	RUABON YARD (SOFT S QTRS)	Coal	3A4T	854	South	10.8	North-East	100	1966
unnamed	RUABON YARD (SOFT S QTRS)	Coal	3A56	878	Beneath Property	9.6	North-East	100	1966
unnamed	RUABON YARD (SOFT S QTRS)	Coal	3A58	909	North-West	8.9	East	100	1966

It should be noted that the coal seams above which are possibly beneath site are at significant depths below

site and have relatively thin extraction thicknesses.

Probable unrecorded shallow workings

None.

Spine roadways at shallow depth

No spine roadway recorded at shallow depth.

Mine entries

None recorded within 100 metres of the enquiry boundary.

Abandoned mine plan catalogue numbers

The following abandoned mine plan catalogue numbers intersect with some, or all, of the enquiry boundary:

11815	12911	NW528
NW550	NW529	

Please contact us on 0345 762 6848 to determine the exact abandoned mine plans you require based on your needs.

Outcrops

No outcrops recorded.

Geological faults, fissures and breaklines

No faults, fissures or breaklines recorded.

Opencast mines

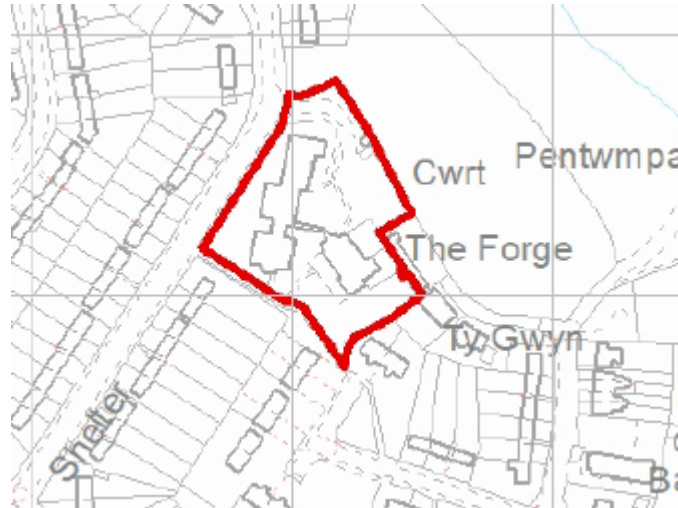
None recorded within 500 metres of the enquiry boundary.

Coal Authority managed tips

None recorded within 500 metres of the enquiry boundary.

5.1.1 Coal Seams

Coal Authority Mapping



The Coal Authority Plan provided as part of the Coal Authority report suggests that there are no coal seams outcropping on site.

5.1.2 Coal Mining Plans

Given the depths of seams and no shafts or outcrops noted it is deemed unnecessary to obtain the coal plans which relate to significantly deeper worked seam.

5.1.3 Conclusion

The site is underlain by multiple worked coal seams, however these are at considerable depth (>600m). as such any movement from these seams will have long since ceased. There is a **Low** risk of recorded and unrecorded shallow workings across the site. No additional work regarding coal mining risk is deemed necessary.

Notes on the limitations of this report can be found in Appendix C.

6 REFERENCES

- 6.1** BS 5930:2015 Code of Practice for Ground Investigation.
- 6.2** Historic Coal Mining Plans Supplied by the Coal Authority (26/11/2021)
- 6.3** BGS 1:10,000 geology map
- 6.4** CIRIA . Abandoned mine workings manual (C758D)

APPENDIX A

(i) Historical Mapping

Site Details:

CWRT PENTWMPATH, EIGHTH AVENUE, LLAY, WREXHAM, LL12 0TT

Client Ref: 22WWH006_-_BG4516
Report Ref: GS-8516774
Grid Ref: 333507, 355727

Map Name: County Series

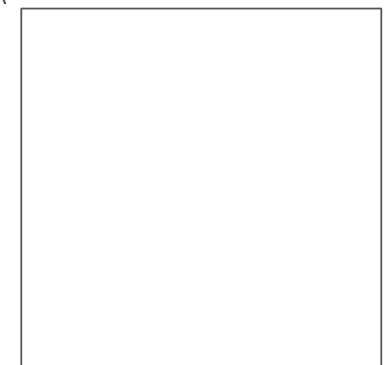
Map date: 1872

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1872
Revised 1872
Edition N/A
Copyright N/A
Levelled N/A

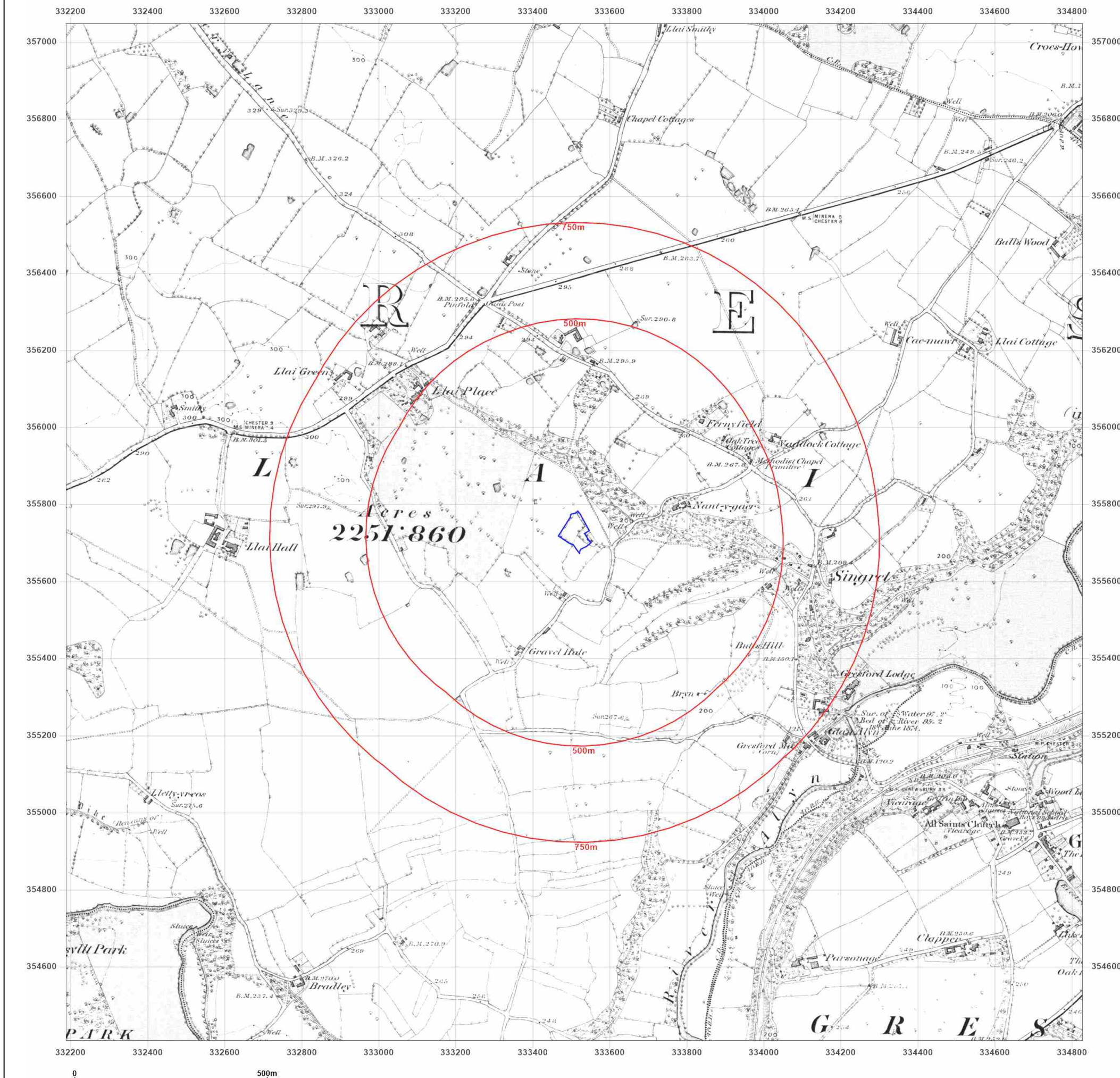


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 14 February 2022

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

CWRT PENTWMPATH, EIGHTH AVENUE, LLAY, WREXHAM, LL12 0TT

Client Ref: 22WWH006_-BG4516
Report Ref: GS-8516774
Grid Ref: 333507, 355727

Map Name: County Series

Map date: 1900

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1871
 Revised 1900
 Edition N/A
 Copyright N/A
 Levelled N/A

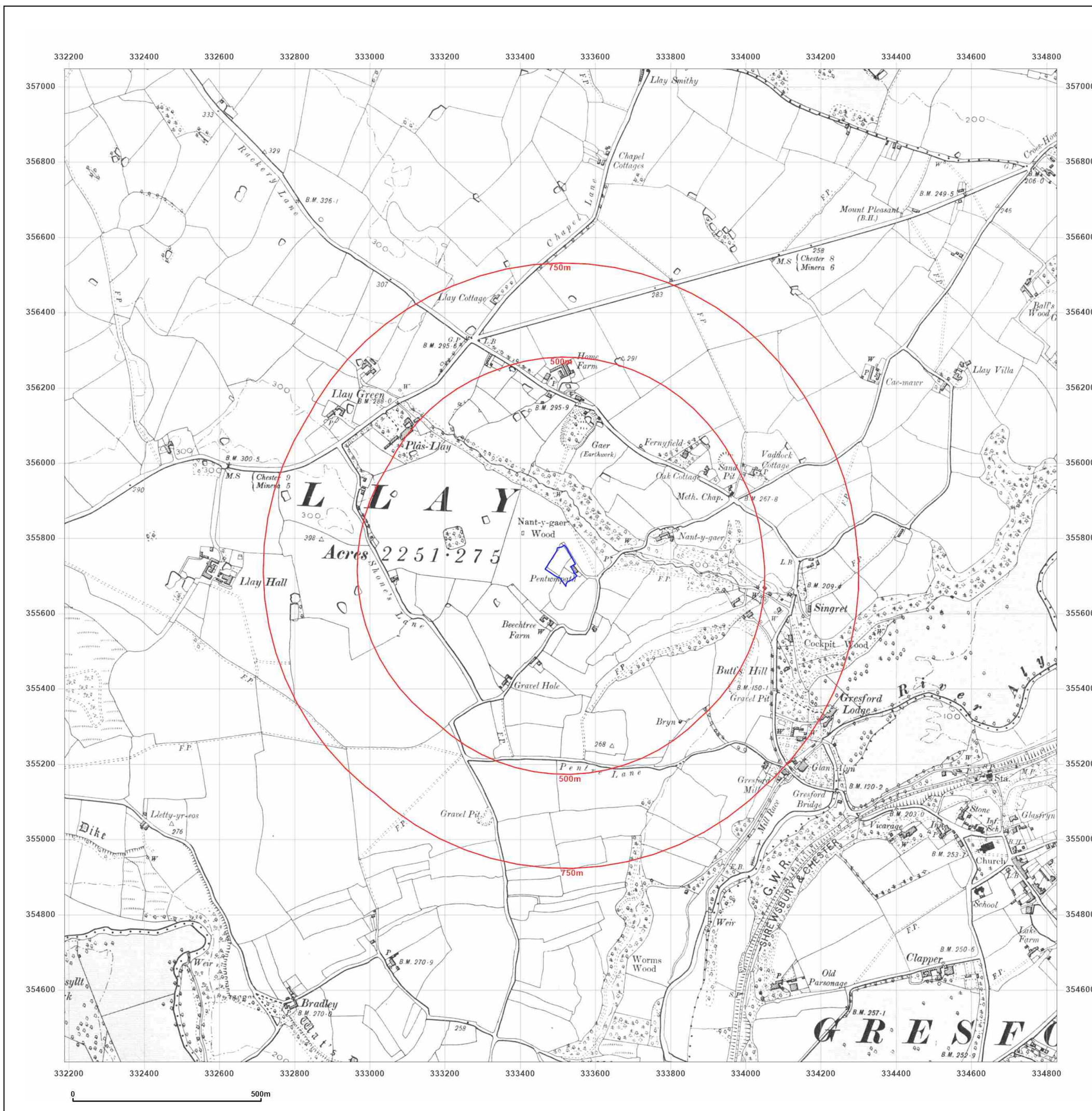


Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 14 February 2022

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

CWRT PENTWMPATH, EIGHTH AVENUE, LLAY, WREXHAM, LL12 0TT

Client Ref: 22WWH006_-BG4516
Report Ref: GS-8516774
Grid Ref: 333507, 355727

Map Name: Provisional

Map date: 1960-1964

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1871
Revised 1960
Edition N/A
Copyright N/A
Levelled N/A

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

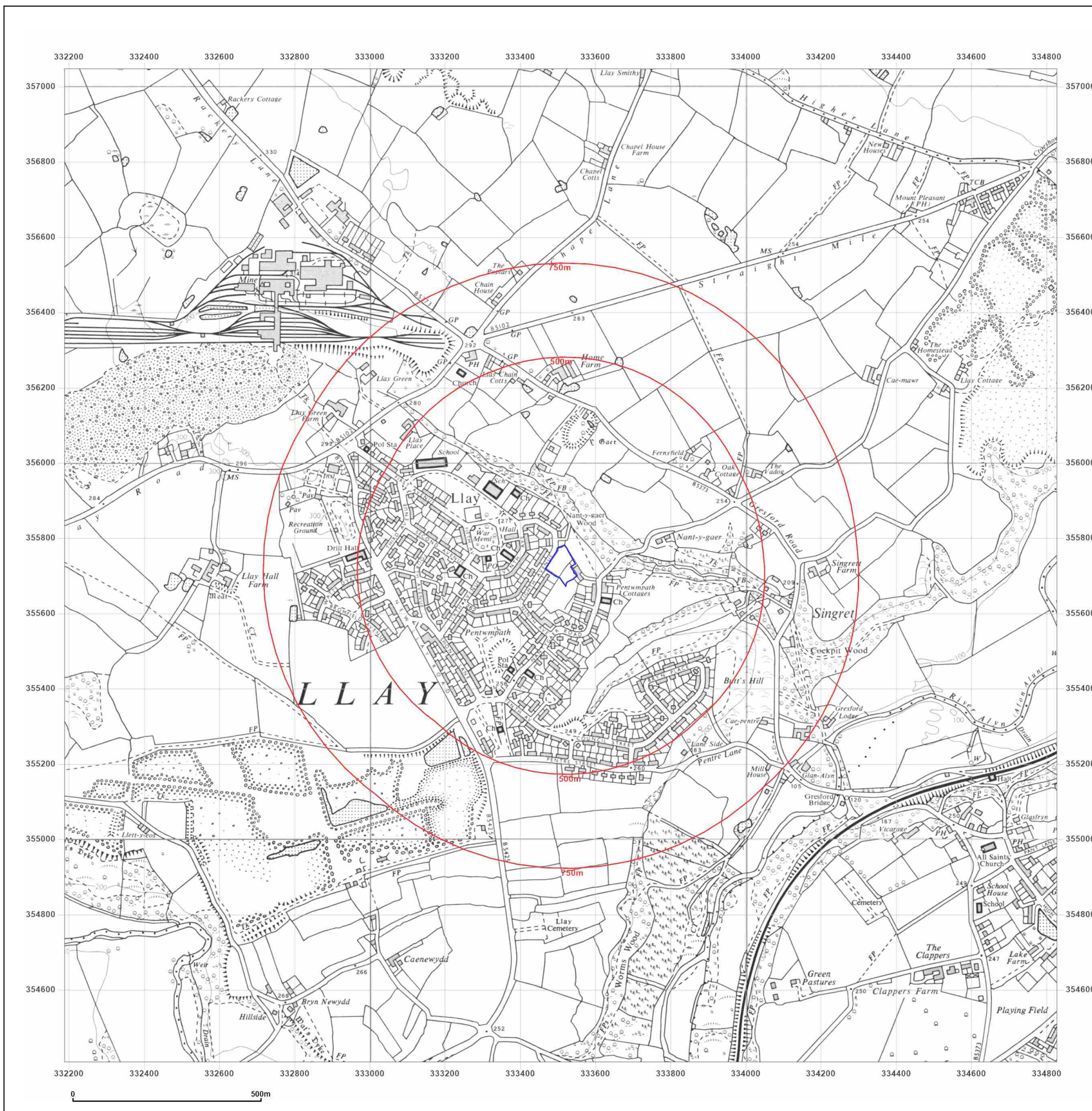


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 14 February 2022

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

CWRT PENTWMPATH, EIGHTH AVENUE, LLAY, WREXHAM, LL12 0TT

Client Ref: 22WWH006_-BG4516
Report Ref: GS-8516774
Grid Ref: 333507, 355727

Map Name: Provisional

Map date: 1968

Scale: 1:10,560

Printed at: 1:10,560



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

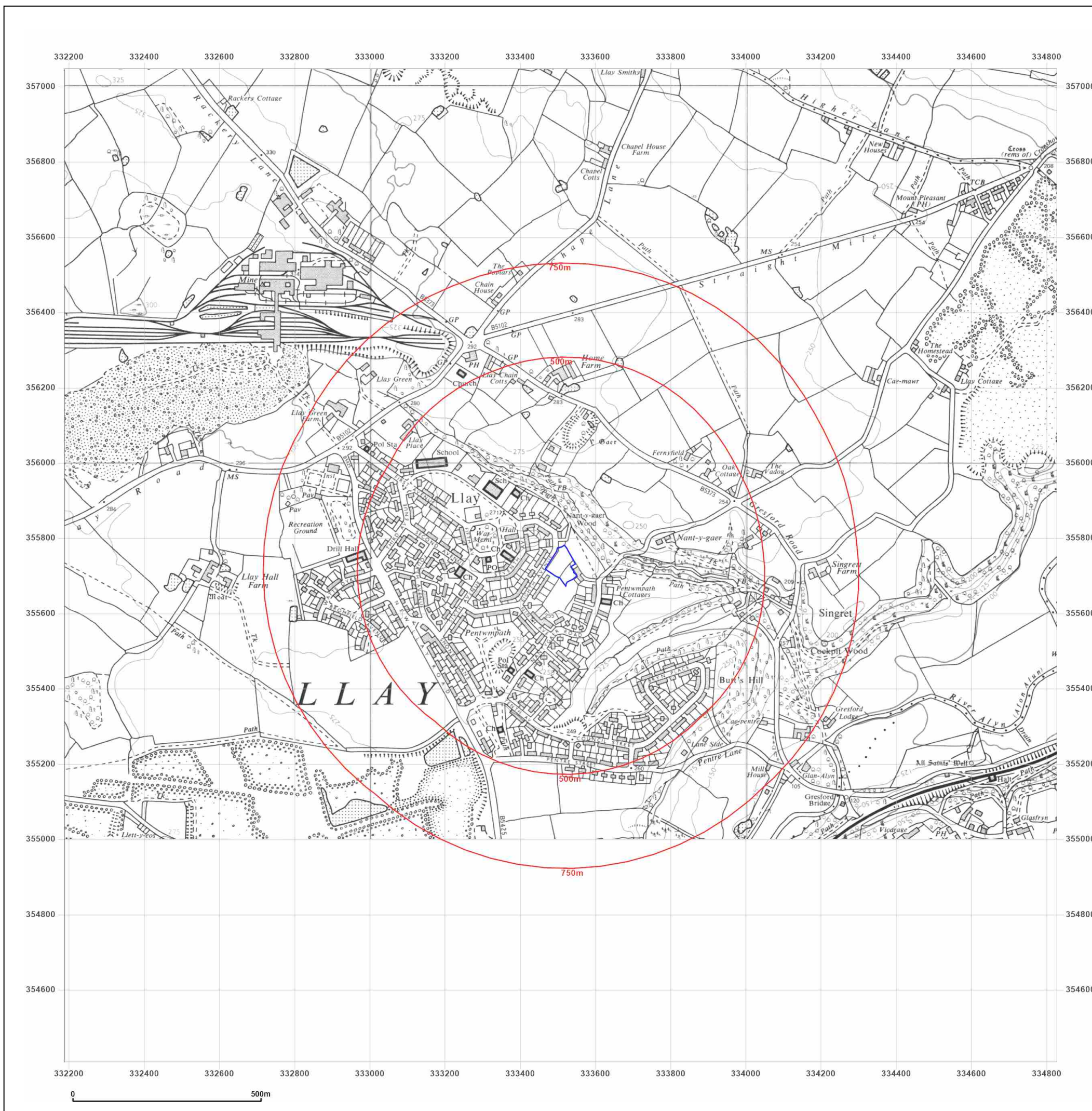


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 14 February 2022

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

CWRT PENTWMPATH, EIGHTH AVENUE, LLAY, WREXHAM, LL12 0TT

Client Ref: 22WWH006_-_BG4516
Report Ref: GS-8516774
Grid Ref: 333507, 355727

Map Name: National Grid

Map date: 1980-1981

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1974
Revised 1981
Edition N/A
Copyright 1981
Levelled 1976

Surveyed 1980
Revised 1980
Edition N/A
Copyright N/A
Levelled N/A



Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 14 February 2022

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

CWRT PENTWMPATH, EIGHTH AVENUE, LLAY, WREXHAM, LL12 0TT

Client Ref: 22WWH006_-_BG4516
Report Ref: GS-8516774
Grid Ref: 333507, 355727

Map Name: National Grid

Map date: 1989-1992

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1990
 Revised 1992
 Edition N/A
 Copyright N/A
 Levelled N/A

Surveyed 1985
 Revised 1989
 Edition N/A
 Copyright N/A
 Levelled N/A

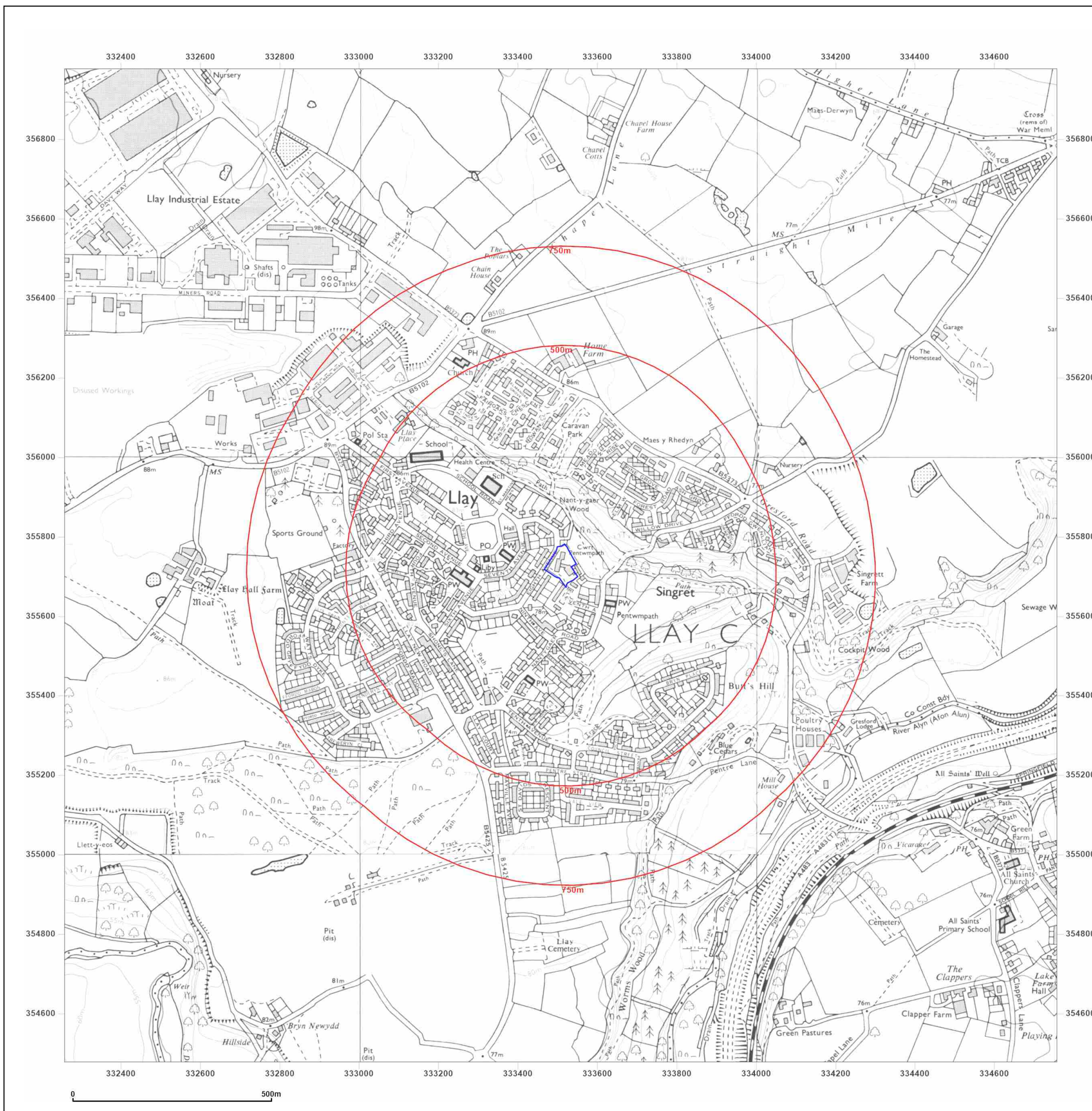


Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 14 February 2022

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

CWRT PENTWMPATH, EIGHTH AVENUE, LLAY, WREXHAM, LL12 0TT

Client Ref: 22WWH006_-_BG4516
Report Ref: GS-8516774
Grid Ref: 333507, 355727

Map Name: National Grid

Map date: 2001

Scale: 1:10,000

Printed at: 1:10,000



2001

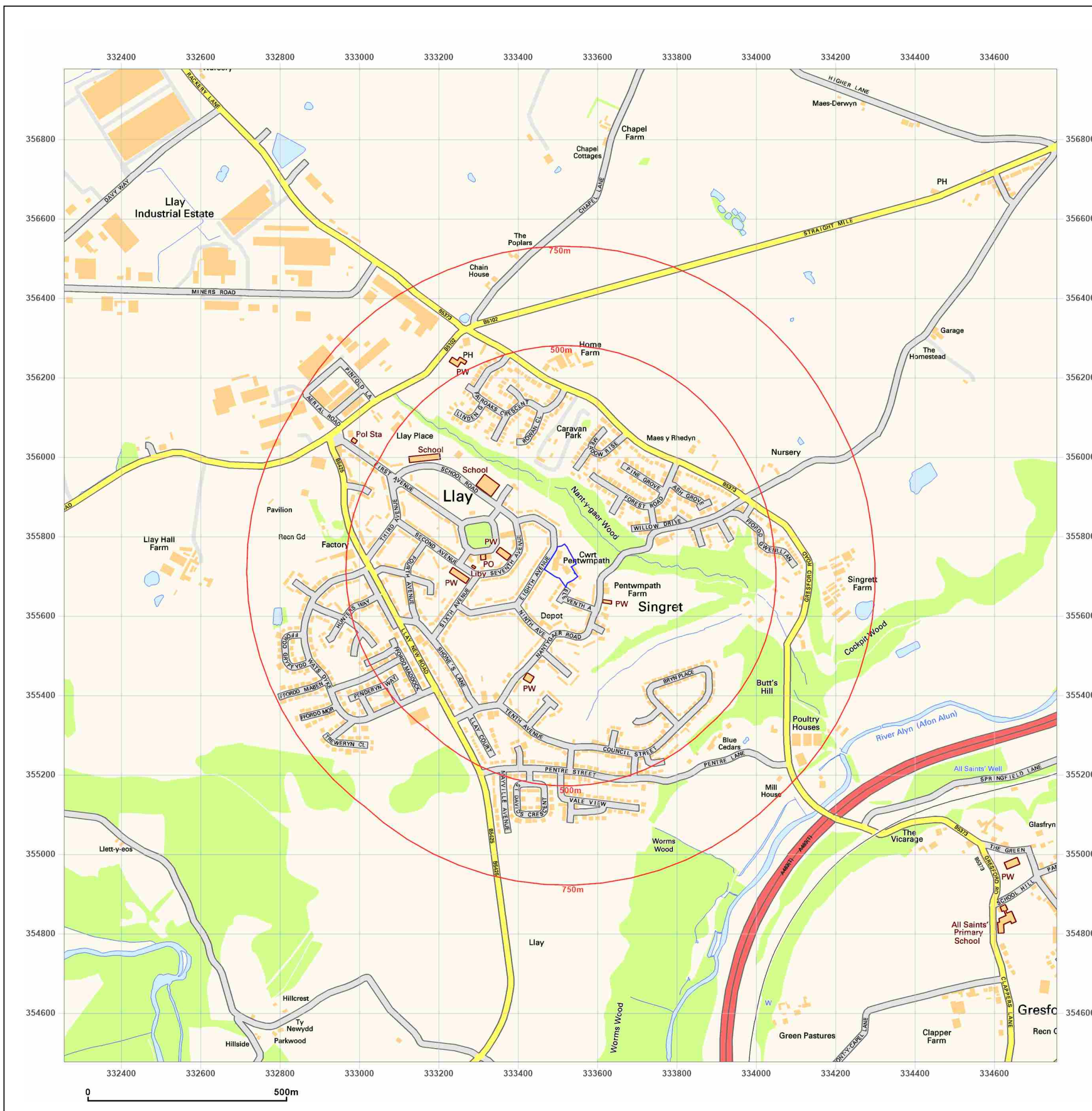


Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 14 February 2022

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

CWRT PENTWMPATH, EIGHTH AVENUE, LLAY, WREXHAM, LL12 0TT

Client Ref: 22WWH006_-_BG4516
Report Ref: GS-8516774
Grid Ref: 333507, 355727

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000



2010

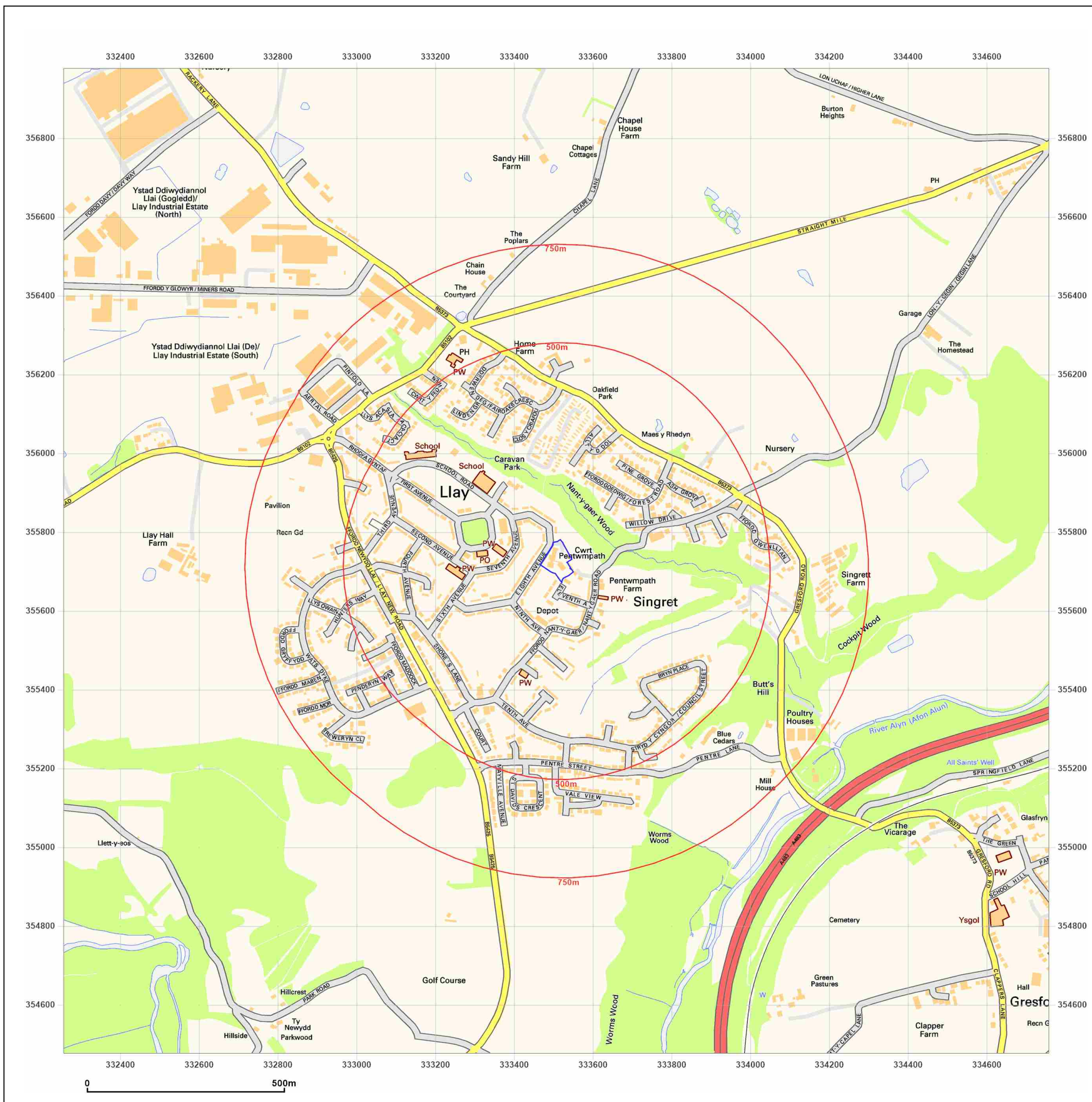


Produced by
Groundsure Insights
T: 08444 159000
E: info@groundsure.com
W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 14 February 2022

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

CWRT PENTWMPATH, EIGHTH AVENUE, LLAY, WREXHAM, LL12 0TT

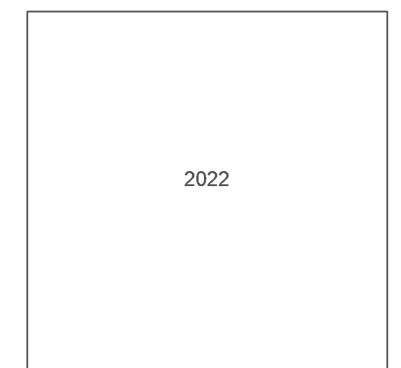
Client Ref: 22WWH006_-_BG4516
Report Ref: GS-8516774
Grid Ref: 333507, 355727

Map Name: National Grid

Map date: 2022

Scale: 1:10,000

Printed at: 1:10,000

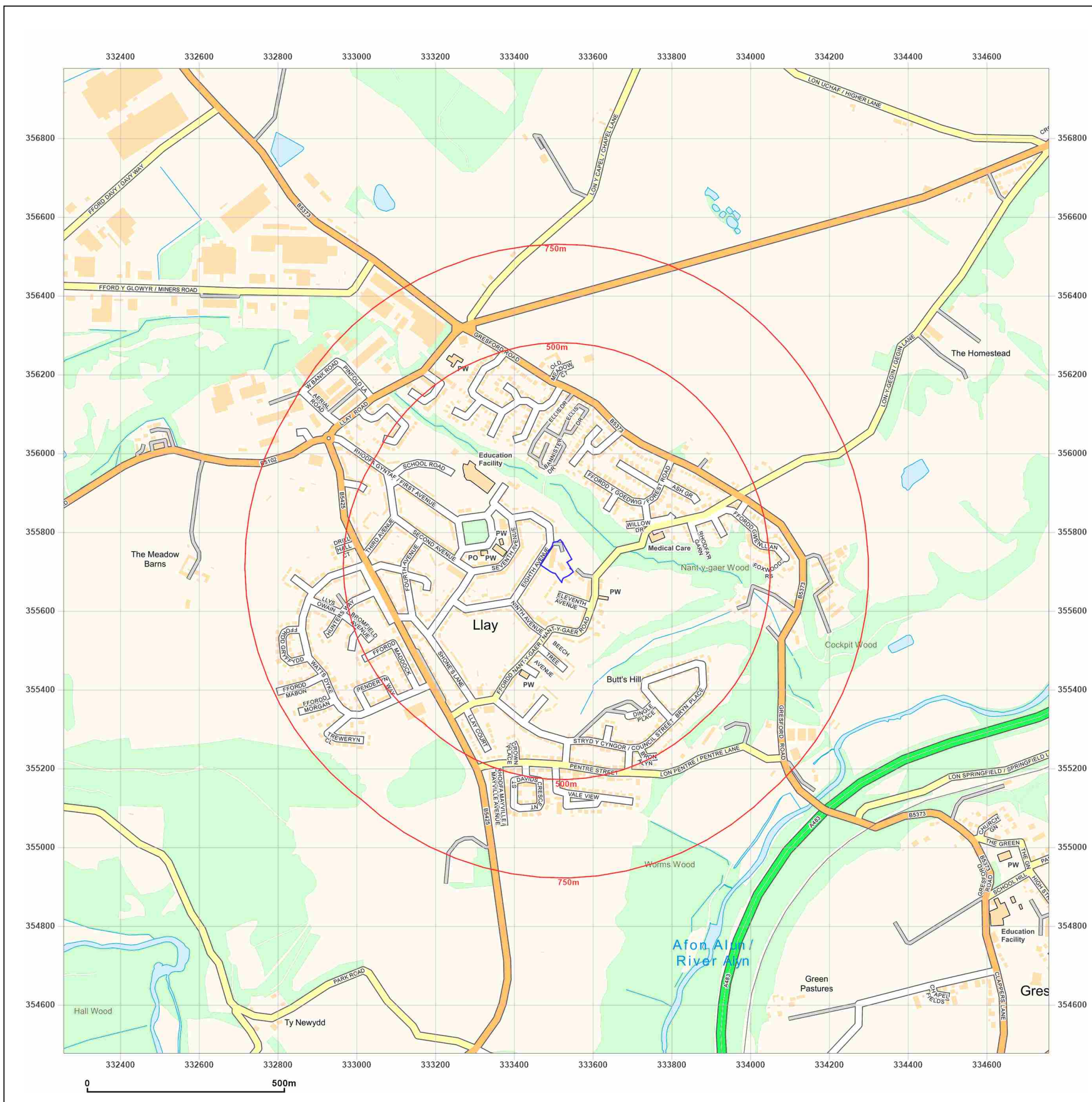


Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 14 February 2022

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

CWRT PENTWMPATH, EIGHTH AVENUE, LLAY, WREXHAM, LL12 0TT

Client Ref: 22WWH006_-_BG4516
Report Ref: GS-8516774
Grid Ref: 333507, 355727

Map Name: County Series

Map date: 1874-1875

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1875
 Revised 1875
 Edition N/A
 Copyright N/A
 Levelled N/A

Surveyed 1874
 Revised 1874
 Edition N/A
 Copyright N/A
 Levelled N/A

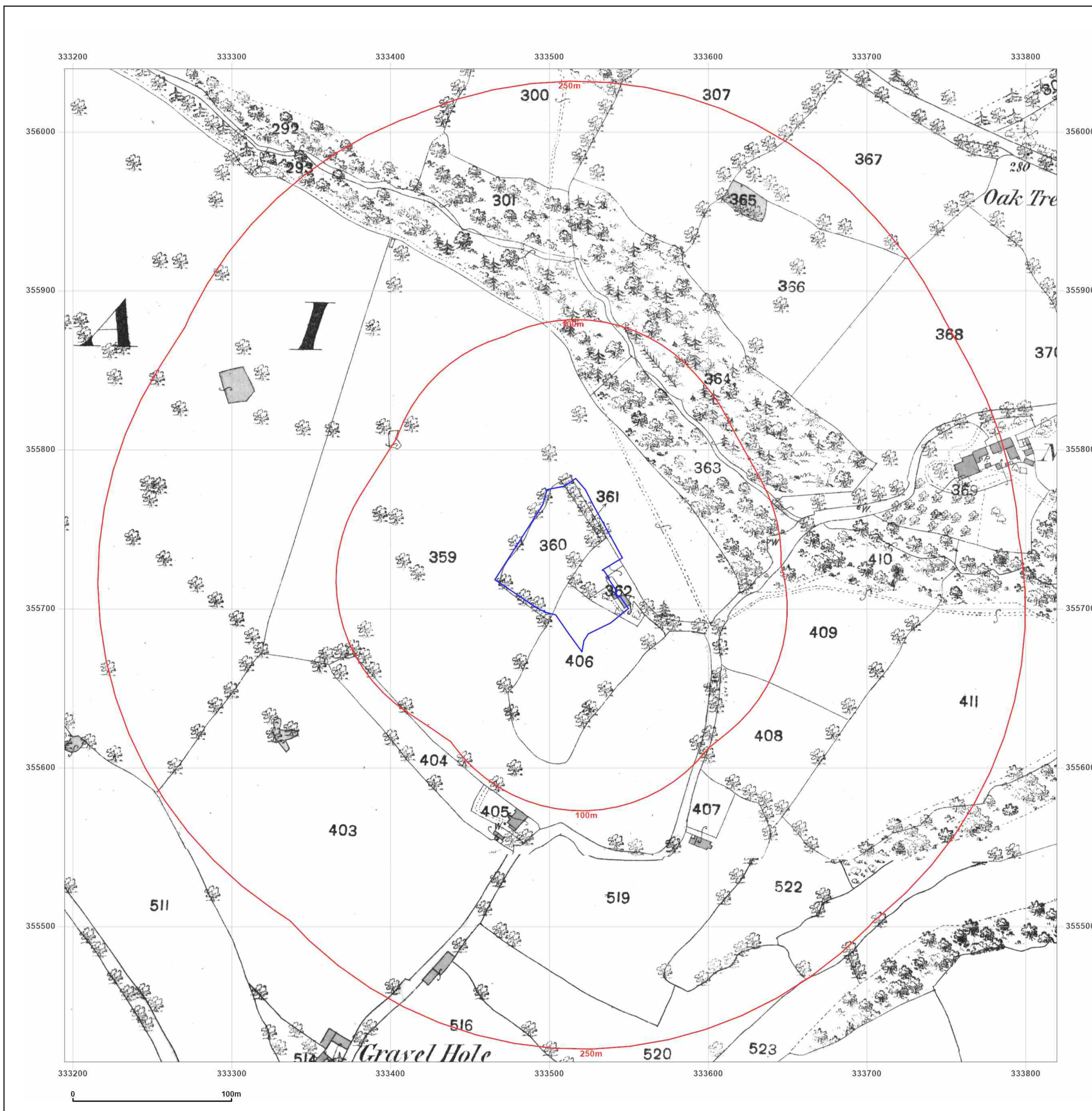


Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 14 February 2022

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

CWRT PENTWMPATH, EIGHTH AVENUE, LLAY, WREXHAM, LL12 0TT

Client Ref: 22WWH006_-_BG4516
Report Ref: GS-8516774
Grid Ref: 333507, 355727

Map Name: County Series

Map date: 1912

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1912
 Revised 1912
 Edition N/A
 Copyright N/A
 Levelled N/A

Surveyed 1912
 Revised 1912
 Edition N/A
 Copyright N/A
 Levelled N/A

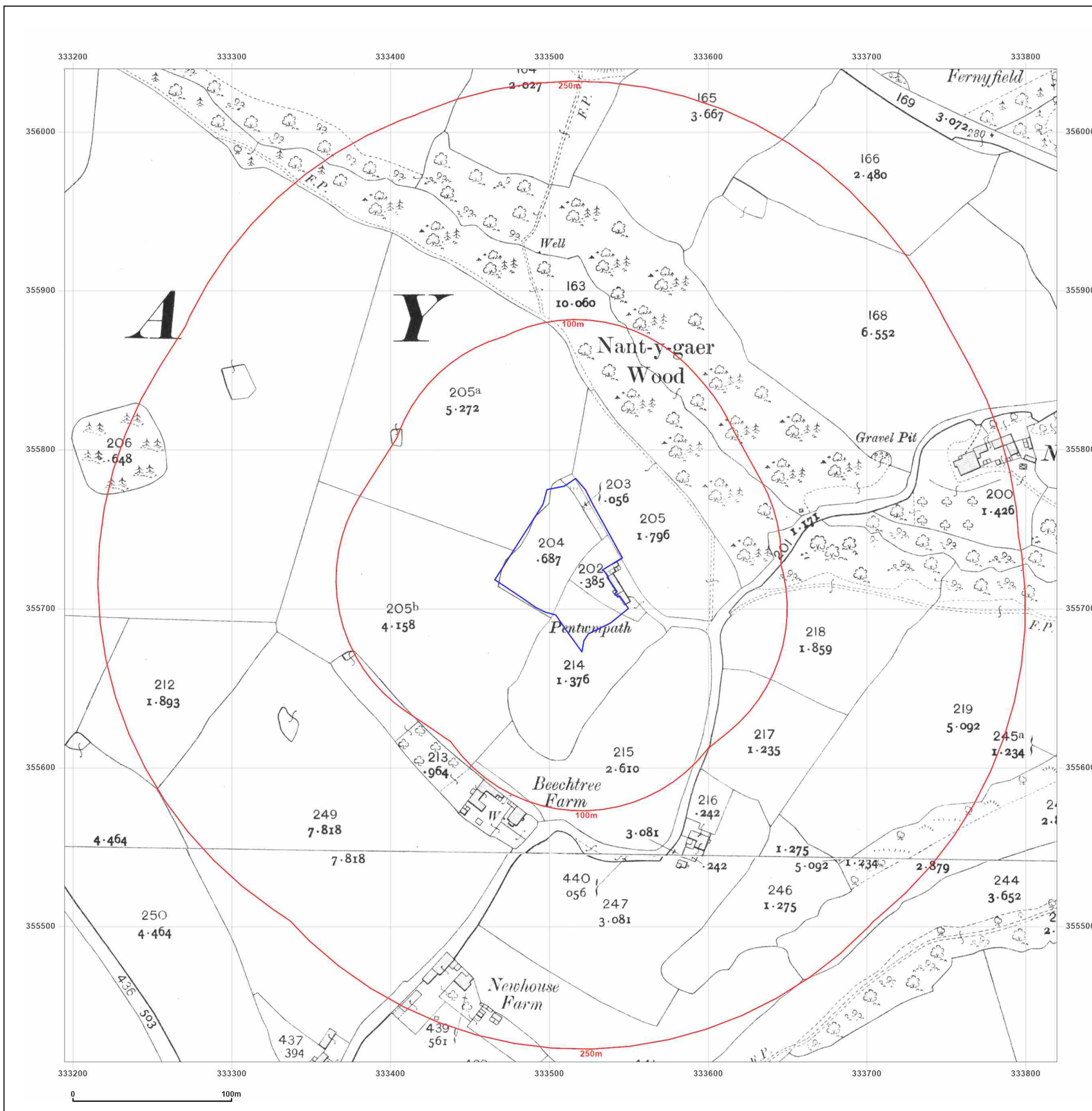


Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 14 February 2022

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

CWRT PENTWMPATH, EIGHTH AVENUE, LLAY, WREXHAM, LL12 0TT

Client Ref: 22WWH006_-BG4516
Report Ref: GS-8516774
Grid Ref: 333507, 355727

Map Name: National Grid

Map date: 1959-1962

Scale: 1:2,500

Printed at: 1:2,500



Surveyed N/A
 Revised N/A
 Edition N/A
 Copyright N/A
 Levelled 1959

Surveyed 1961
 Revised 1961
 Edition N/A
 Copyright 1962
 Levelled 1959

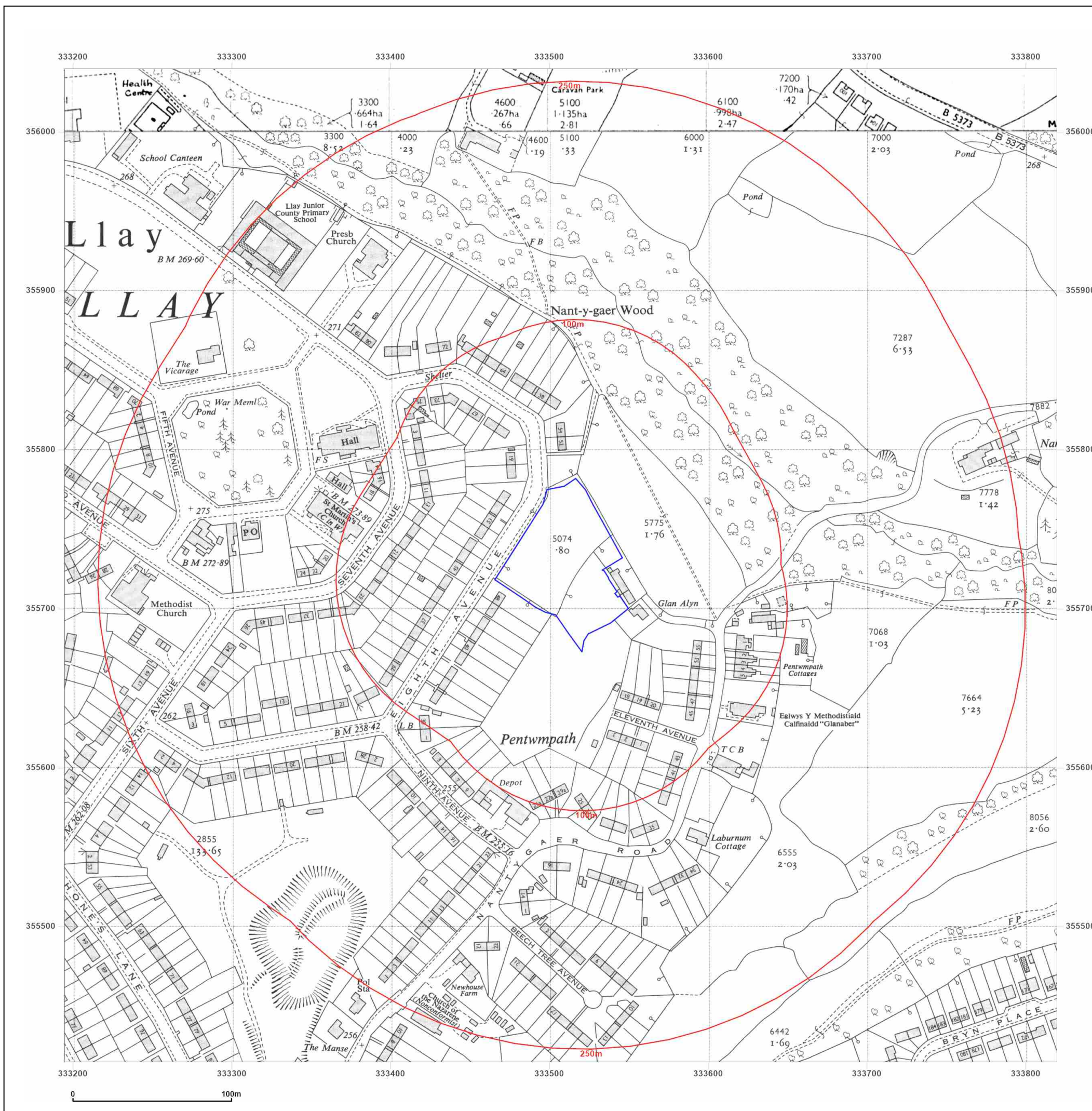


Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 14 February 2022

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

CWRT PENTWMPATH, EIGHTH AVENUE, LLAY, WREXHAM, LL12 0TT

Client Ref: 22WWH006_-BG4516
Report Ref: GS-8516774
Grid Ref: 333507, 355727

Map Name: National Grid

Map date: 1970-1973

Scale: 1:2,500

Printed at: 1:2,500



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

Surveyed 1969
 Revised 1969
 Edition N/A
 Copyright 1970
 Levelled 1959

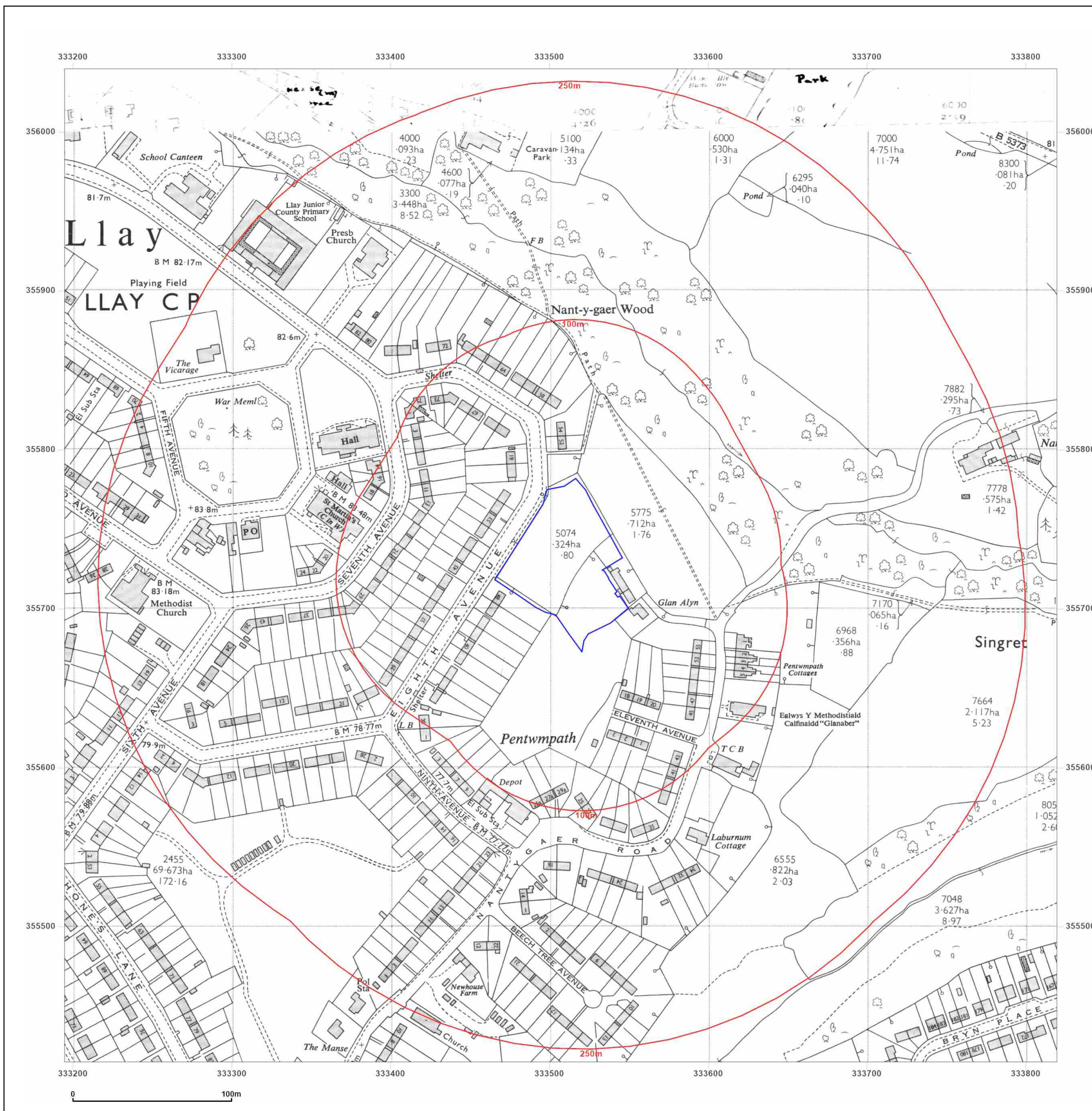


Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 14 February 2022

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

CWRT PENTWMPATH, EIGHTH AVENUE, LLAY, WREXHAM, LL12 0TT

Client Ref: 22WWH006_-_BG4516
Report Ref: GS-8516774
Grid Ref: 333507, 355727

Map Name: National Grid

Map date: 1970-1975

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1974
 Revised 1974
 Edition N/A
 Copyright 1975
 Levelled 1959

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

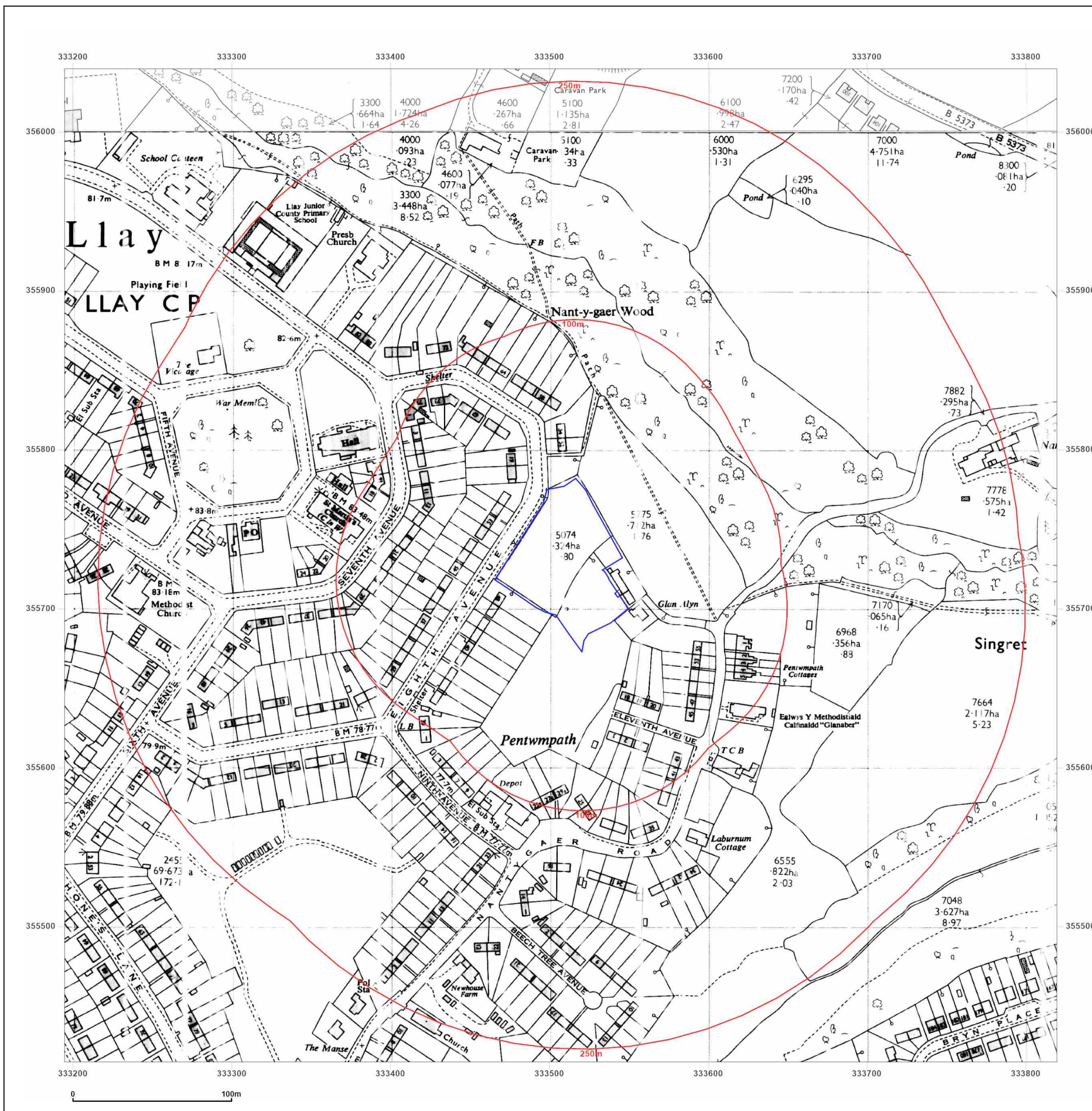


Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 14 February 2022

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

CWRT PENTWMPATH, EIGHTH AVENUE, LLAY, WREXHAM, LL12 0TT

Client Ref: 22WWH006_-_BG4516
Report Ref: GS-8516774
Grid Ref: 333507, 355727

Map Name: National Grid

Map date: 1973-1975

Scale: 1:2,500

Printed at: 1:2,500



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

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

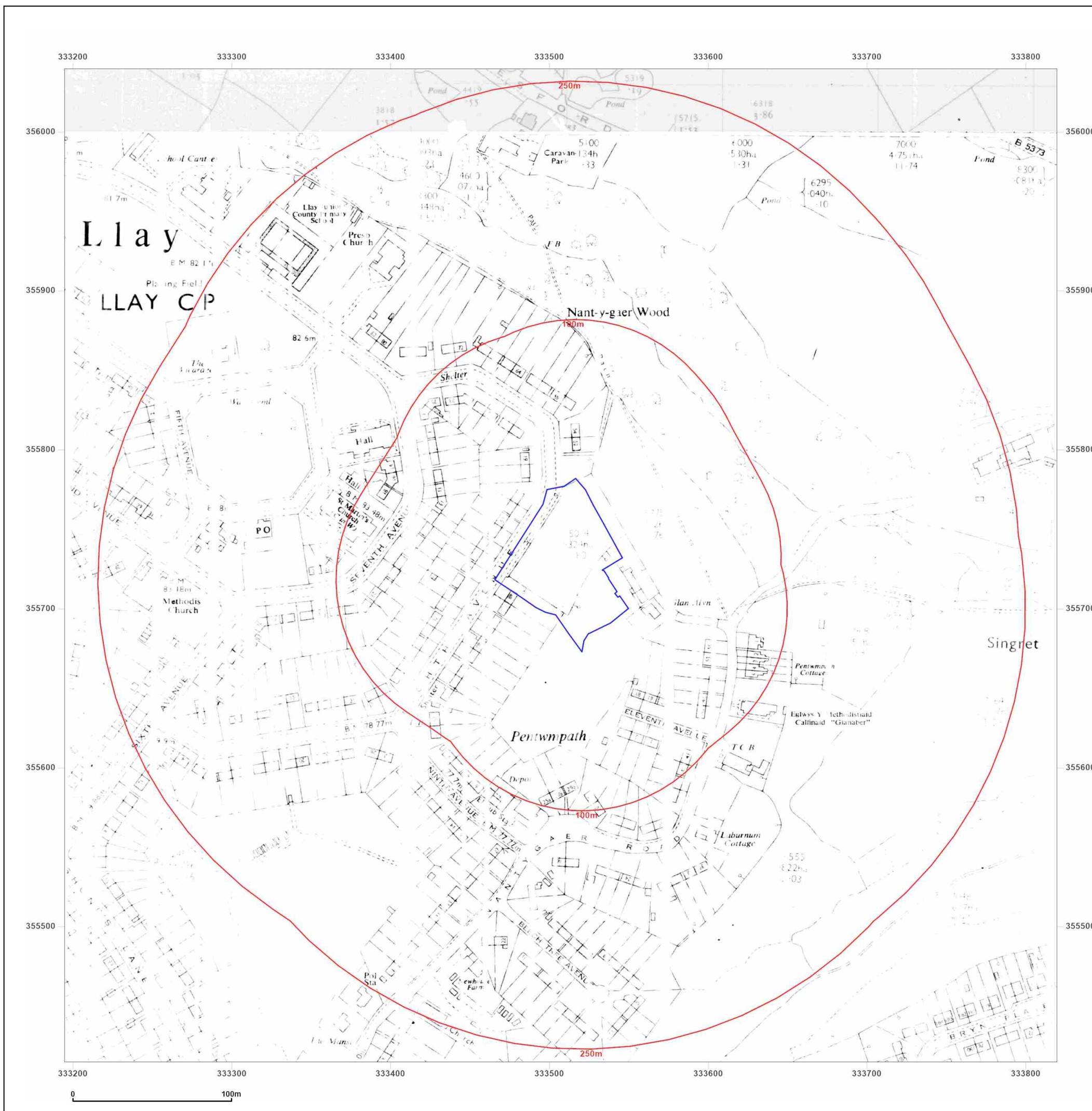


Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 14 February 2022

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

CWRT PENTWMPATH, EIGHTH AVENUE, LLAY, WREXHAM, LL12 0TT

Client Ref: 22WWH006_-_BG4516
Report Ref: GS-8516774
Grid Ref: 333507, 355727

Map Name: National Grid

Map date: 1980

Scale: 1:2,500

Printed at: 1:2,500



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

Surveyed N/A
 Revised N/A
 Edition 1980
 Copyright N/A
 Levelled 1959



Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 14 February 2022

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

CWRT PENTWMPATH, EIGHTH AVENUE, LLAY, WREXHAM, LL12 0TT

Client Ref: 22WWH006_-_BG4516
Report Ref: GS-8516774
Grid Ref: 333507, 355727

Map Name: National Grid

Map date: 1984

Scale: 1:2,500

Printed at: 1:2,500



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

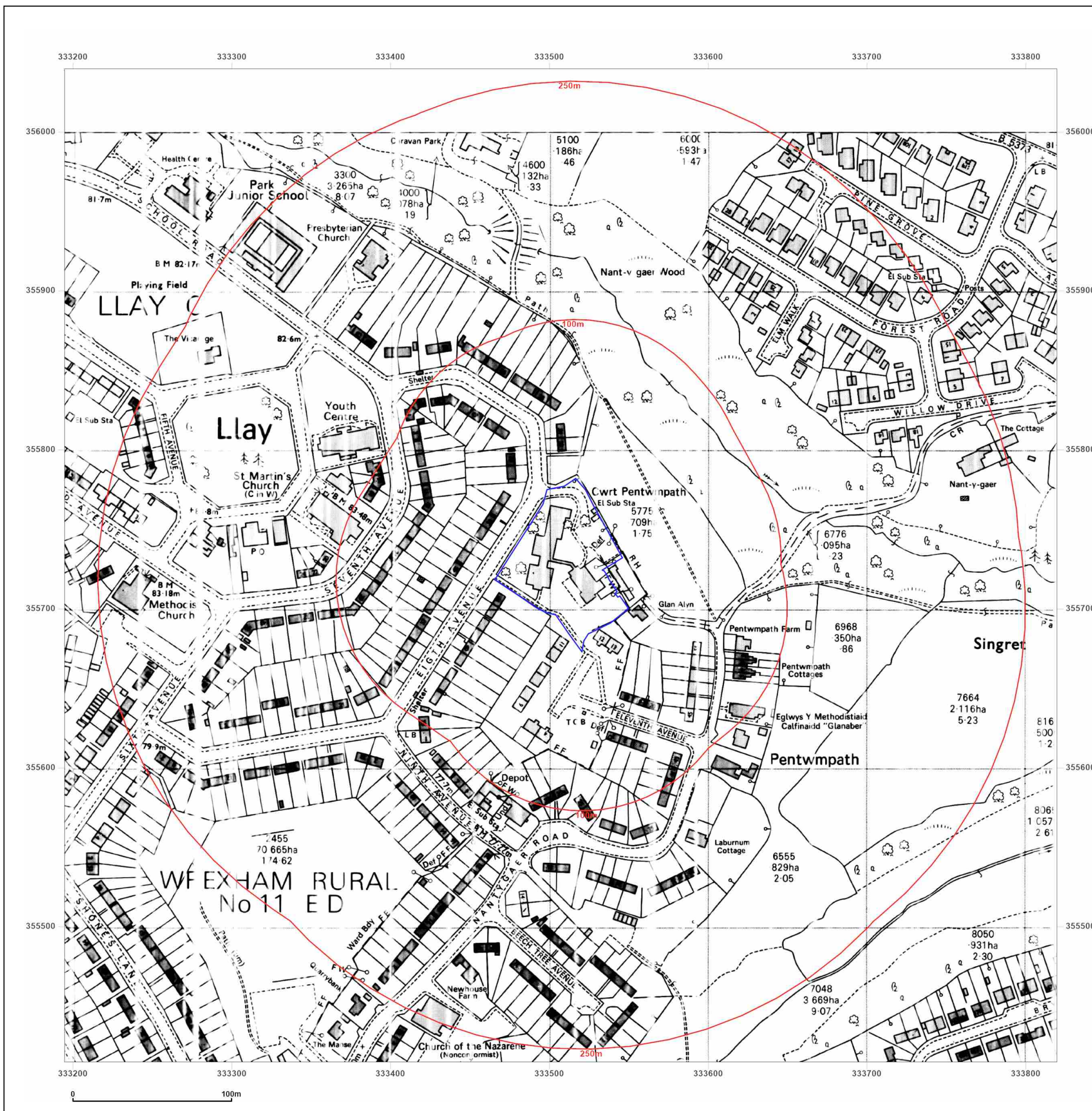


Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 14 February 2022

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

CWRT PENTWMPATH, EIGHTH AVENUE, LLAY, WREXHAM, LL12 0TT

Client Ref: 22WWH006_-_BG4516
Report Ref: GS-8516774
Grid Ref: 333507, 355727

Map Name: National Grid

Map date: 1984

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1959
 Revised 1984
 Edition N/A
 Copyright 1984
 Levelled 1959

Surveyed 1983
 Revised 1983
 Edition N/A
 Copyright 1984
 Levelled 1959

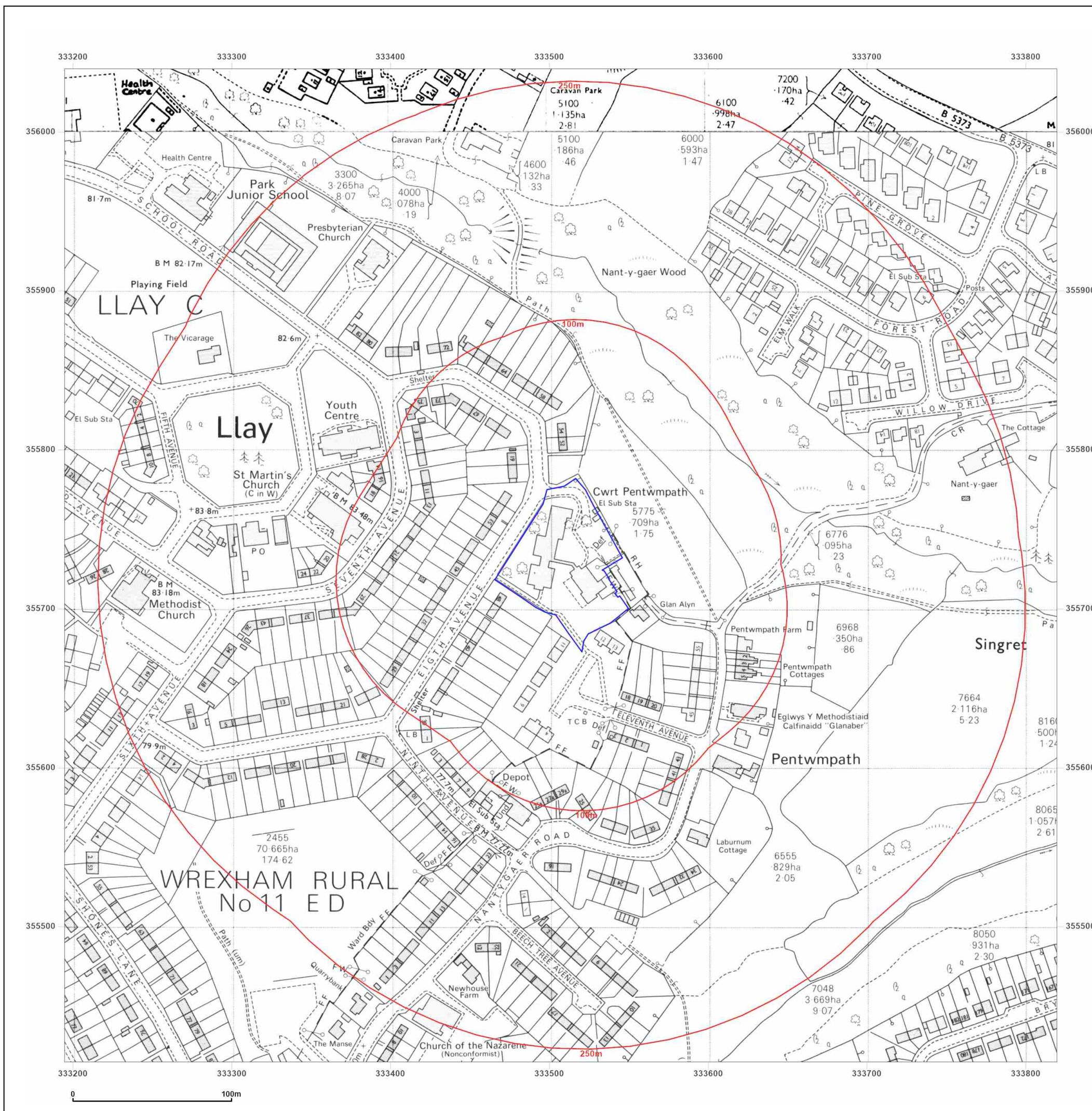


Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 14 February 2022

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

CWRT PENTWMPATH, EIGHTH AVENUE, LLAY, WREXHAM, LL12 0TT

Client Ref: 22WWH006_-_BG4516
Report Ref: GS-8516774
Grid Ref: 333507, 355727

Map Name: National Grid

Map date: 1990

Scale: 1:2,500

Printed at: 1:2,500



Surveyed N/A
 Revised N/A
 Edition N/A
 Copyright 1990
 Levelled N/A

Surveyed N/A
 Revised N/A
 Edition N/A
 Copyright 1990
 Levelled N/A

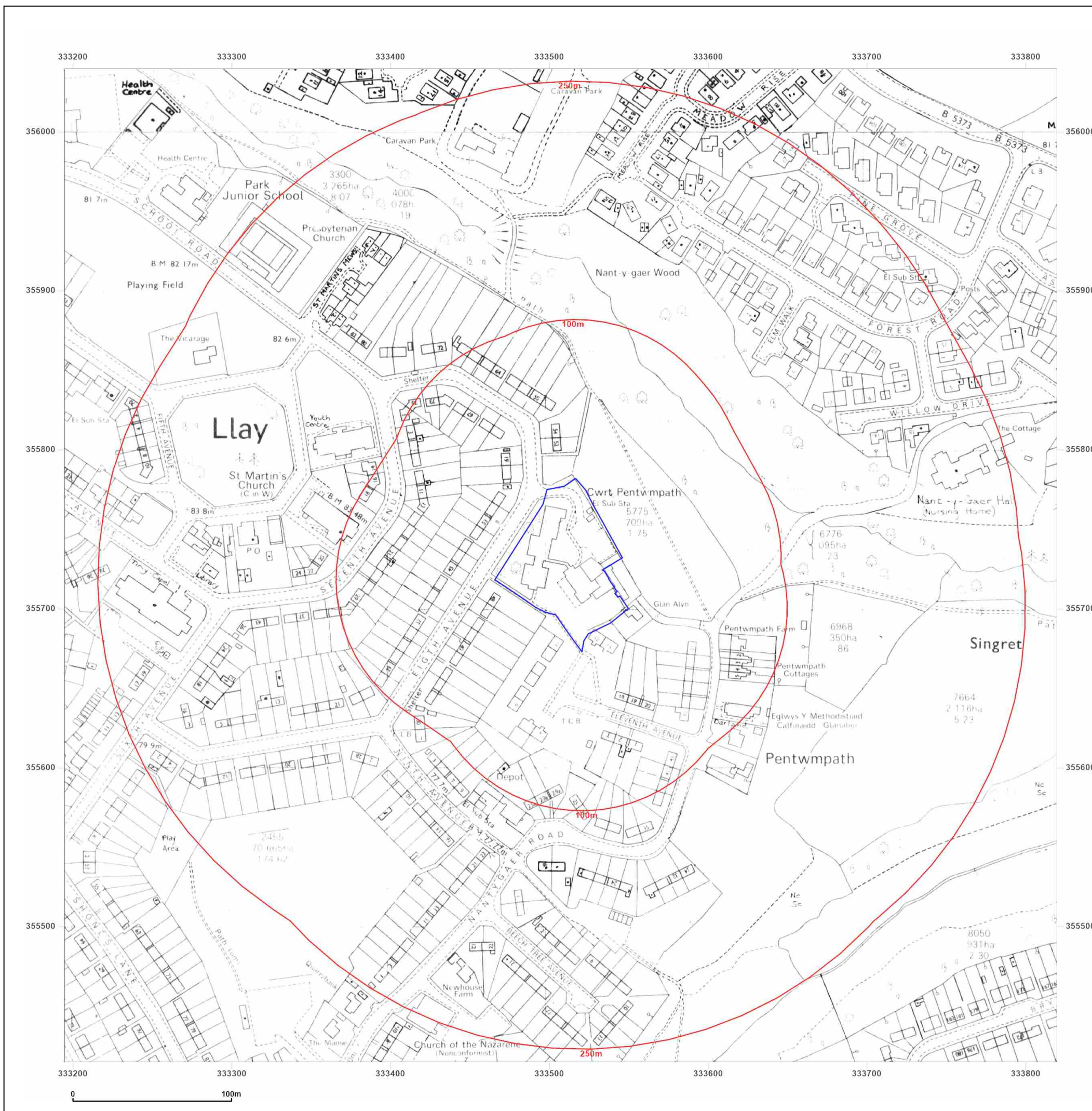


Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 14 February 2022

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

CWRT PENTWMPATH, EIGHTH AVENUE, LLAY, WREXHAM, LL12 0TT

Client Ref: 22WWH006_-_BG4516
Report Ref: GS-8516774
Grid Ref: 333507, 355727

Map Name: National Grid

Map date: 1991

Scale: 1:2,500

Printed at: 1:2,500



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

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

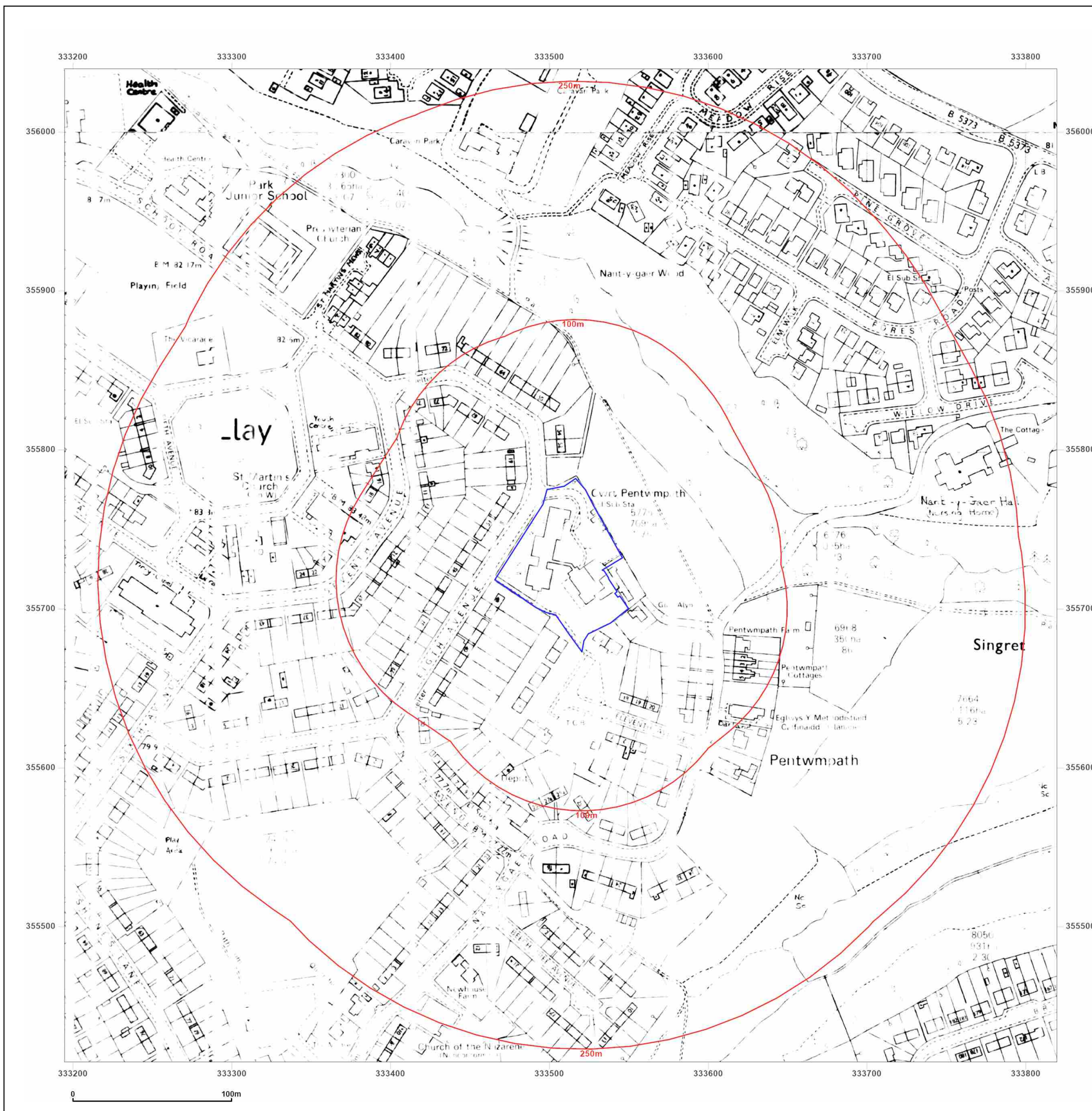


Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 14 February 2022

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

CWRT PENTWMPATH, EIGHTH AVENUE, LLAY, WREXHAM, LL12 0TT

Client Ref: 22WWH006_-_BG4516
Report Ref: GS-8516774
Grid Ref: 333507, 355727

Map Name: National Grid

Map date: 1993

Scale: 1:2,500

Printed at: 1:2,500



Surveyed N/A
 Revised N/A
 Edition N/A
 Copyright 1993
 Levelled N/A

Surveyed N/A
 Revised N/A
 Edition N/A
 Copyright 1993
 Levelled N/A

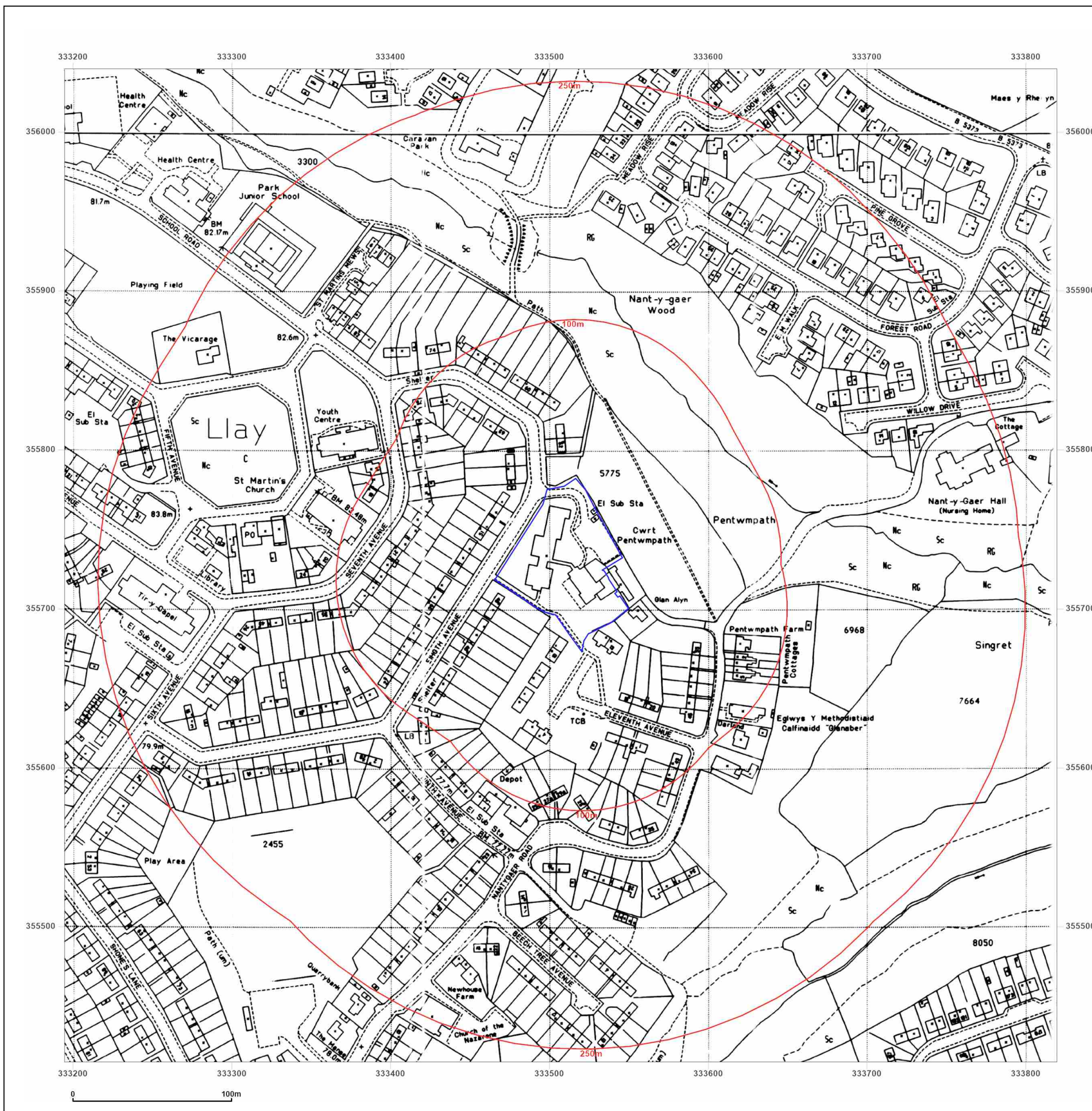


Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 14 February 2022

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



Site Details:

CWRT PENTWMPATH, EIGHTH AVENUE, LLAY, WREXHAM, LL12 0TT

Client Ref: 22WWH006_-_BG4516
Report Ref: GS-8516774
Grid Ref: 333507, 355727

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250



2003

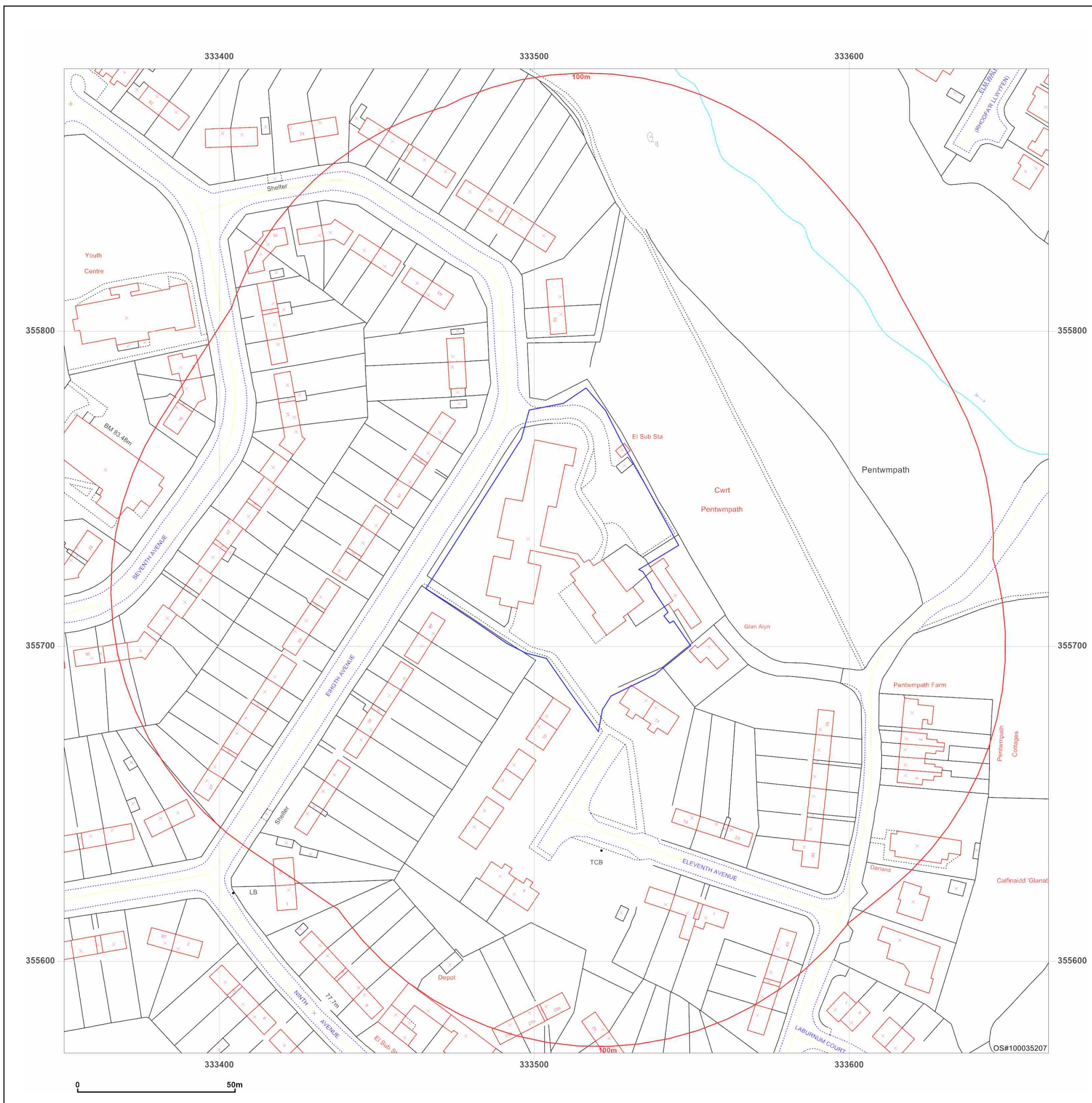


Produced by
 Groundsure Insights
 T: 08444 159000
 E: info@groundsure.com
 W: www.groundsure.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 14 February 2022

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



APPENDIX B

- (i) Groundsure Report
- (ii) Coal Authority Report

CWRT PENTWMPATH, EIGHTH AVENUE, LLAY, WREXHAM, LL12 0TT

Order Details

Date: 14/02/2022
Your ref: 22WWH006_-_BG4516
Our Ref: GS-8516776
Client: Betts Geo Ltd

Site Details

Location: 333511 355725
Area: 0.47 ha
Authority: [Wrexham - Wrexham County Borough Council](#)



Summary of findings

p. 2 **Aerial image**

p. 8

OS MasterMap site plan

p.13 groundsure.com/insightuserguide

Contact us with any questions at:

info@groundsure.com

08444 159 000

Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
14	1.1	<u>Historical industrial land uses</u>	0	0	6	14	-
15	1.2	Historical tanks	0	0	0	0	-
16	1.3	<u>Historical energy features</u>	2	0	2	9	-
16	1.4	Historical petrol stations	0	0	0	0	-
17	1.5	<u>Historical garages</u>	0	0	0	7	-
17	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped	On site	0-50m	50-250m	250-500m	500-2000m
18	2.1	<u>Historical industrial land uses</u>	0	0	9	16	-
19	2.2	Historical tanks	0	0	0	0	-
20	2.3	<u>Historical energy features</u>	3	0	5	16	-
21	2.4	Historical petrol stations	0	0	0	0	-
21	2.5	<u>Historical garages</u>	0	0	0	10	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
22	3.1	Active or recent landfill	0	0	0	0	-
22	3.2	Historical landfill (BGS records)	0	0	0	0	-
23	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
23	3.4	<u>Historical landfill (EA/NRW records)</u>	0	0	0	1	-
23	3.5	Historical waste sites	0	0	0	0	-
23	3.6	Licensed waste sites	0	0	0	0	-
24	3.7	<u>Waste exemptions</u>	0	0	0	5	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
25	4.1	<u>Recent industrial land uses</u>	0	1	5	-	-
26	4.2	<u>Current or recent petrol stations</u>	0	0	0	2	-
26	4.3	Electricity cables	0	0	0	0	-
26	4.4	Gas pipelines	0	0	0	0	-
27	4.5	Sites determined as Contaminated Land	0	0	0	0	-



27	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
27	4.7	Regulated explosive sites	0	0	0	0	-
27	4.8	Hazardous substance storage/usage	0	0	0	0	-
27	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
28	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
28	4.11	<u>Licensed pollutant release (Part A(2)/B)</u>	0	0	0	1	-
28	4.12	Radioactive Substance Authorisations	0	0	0	0	-
28	4.13	<u>Licensed Discharges to controlled waters</u>	0	0	1	5	-
29	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
30	4.15	Pollutant release to public sewer	0	0	0	0	-
30	4.16	List 1 Dangerous Substances	0	0	0	0	-
30	4.17	List 2 Dangerous Substances	0	0	0	0	-
30	4.18	<u>Pollution Incidents (EA/NRW)</u>	0	0	3	16	-
32	4.19	Pollution inventory substances	0	0	0	0	-
33	4.20	Pollution inventory waste transfers	0	0	0	0	-
33	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
34	5.1	<u>Superficial aquifer</u>	Identified (within 500m)				
36	5.2	<u>Bedrock aquifer</u>	Identified (within 500m)				
37	5.3	<u>Groundwater vulnerability</u>	Identified (within 50m)				
38	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
38	5.5	Groundwater vulnerability- local information	None (within 0m)				
39	5.6	<u>Groundwater abstractions</u>	0	0	0	0	1
40	5.7	<u>Surface water abstractions</u>	0	0	0	0	6
41	5.8	Potable abstractions	0	0	0	0	0
42	5.9	Source Protection Zones	0	0	0	0	-
42	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
43	6.1	<u>Water Network (OS MasterMap)</u>	0	0	1	-	-



44	6.2	<u>Surface water features</u>	0	0	3	-	-
44	6.3	<u>WFD Surface water body catchments</u>	1	-	-	-	-
44	6.4	<u>WFD Surface water bodies</u>	0	0	0	-	-
45	6.5	<u>WFD Groundwater bodies</u>	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
46	7.1	Risk of flooding from rivers and the sea	None (within 50m)				
46	7.2	Historical Flood Events	0	0	0	-	-
46	7.3	Flood Defences	0	0	0	-	-
47	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
47	7.5	Flood Storage Areas	0	0	0	-	-
48	7.6	Flood Zone 2	None (within 50m)				
48	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding					
49	8.1	<u>Surface water flooding</u>	1 in 30 year, 0.3m - 1.0m (within 50m)				
Page	Section	Groundwater flooding					
51	9.1	<u>Groundwater flooding</u>	Moderate (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
52	10.1	<u>Sites of Special Scientific Interest (SSSI)</u>	0	0	0	0	3
53	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
53	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
53	10.4	Special Protection Areas (SPA)	0	0	0	0	0
53	10.5	National Nature Reserves (NNR)	0	0	0	0	0
54	10.6	<u>Local Nature Reserves (LNR)</u>	0	0	0	0	1
54	10.7	<u>Designated Ancient Woodland</u>	0	1	1	1	47
56	10.8	Biosphere Reserves	0	0	0	0	0
56	10.9	Forest Parks	0	0	0	0	0
57	10.10	Marine Conservation Zones	0	0	0	0	0
57	10.11	Green Belt	0	0	0	0	0
57	10.12	Proposed Ramsar sites	0	0	0	0	0



57	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
57	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
58	10.15	Nitrate Sensitive Areas	0	0	0	0	0
58	10.16	<u>Nitrate Vulnerable Zones</u>	0	0	0	2	2
59	10.17	<u>SSSI Impact Risk Zones</u>	1	-	-	-	-
60	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
61	11.1	World Heritage Sites	0	0	0	-	-
61	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
61	11.3	National Parks	0	0	0	-	-
61	11.4	Listed Buildings	0	0	0	-	-
62	11.5	Conservation Areas	0	0	0	-	-
62	11.6	Scheduled Ancient Monuments	0	0	0	-	-
62	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
63	12.1	Agricultural Land Classification	None (within 250m)				
63	12.2	Open Access Land	0	0	0	-	-
63	12.3	Tree Felling Licences	0	0	0	-	-
63	12.4	Environmental Stewardship Schemes	0	0	0	-	-
64	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
65	13.1	Priority Habitat Inventory	0	0	0	-	-
65	13.2	Habitat Networks	0	0	0	-	-
65	13.3	Open Mosaic Habitat	0	0	0	-	-
65	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
66	14.1	<u>10k Availability</u>	Identified (within 500m)				
67	14.2	Artificial and made ground (10k)	0	0	0	0	-
68	14.3	<u>Superficial geology (10k)</u>	2	0	2	1	-

69	14.4	Landslip (10k)	0	0	0	0	-
70	14.5	<u>Bedrock geology (10k)</u>	1	0	0	1	-
71	14.6	<u>Bedrock faults and other linear features (10k)</u>	0	0	0	1	-
Page	Section	Geology 1:50,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
72	15.1	<u>50k Availability</u>	Identified (within 500m)				
73	15.2	Artificial and made ground (50k)	0	0	0	0	-
73	15.3	Artificial ground permeability (50k)	0	0	-	-	-
74	15.4	<u>Superficial geology (50k)</u>	3	1	3	0	-
75	15.5	<u>Superficial permeability (50k)</u>	Identified (within 50m)				
75	15.6	Landslip (50k)	0	0	0	0	-
75	15.7	Landslip permeability (50k)	None (within 50m)				
76	15.8	<u>Bedrock geology (50k)</u>	2	0	0	1	-
77	15.9	<u>Bedrock permeability (50k)</u>	Identified (within 50m)				
77	15.10	<u>Bedrock faults and other linear features (50k)</u>	0	0	0	1	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
78	16.1	BGS Boreholes	0	0	0	-	-
Page	Section	Natural ground subsidence					
79	17.1	<u>Shrink swell clays</u>	Very low (within 50m)				
80	17.2	<u>Running sands</u>	Very low (within 50m)				
81	17.3	<u>Compressible deposits</u>	Negligible (within 50m)				
82	17.4	<u>Collapsible deposits</u>	Very low (within 50m)				
83	17.5	<u>Landslides</u>	Very low (within 50m)				
84	17.6	<u>Ground dissolution of soluble rocks</u>	Negligible (within 50m)				
Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
85	18.1	Natural cavities	0	0	0	0	-
86	18.2	BritPits	0	0	0	0	-
86	18.3	<u>Surface ground workings</u>	0	0	6	-	-
86	18.4	<u>Underground workings</u>	0	0	0	0	5
87	18.5	Historical Mineral Planning Areas	0	0	0	0	-



87	18.6	Non-coal mining	0	0	0	0	0
87	18.7	Mining cavities	0	0	0	0	0
87	18.8	JPB mining areas	None (within 0m)				
88	18.9	<u>Coal mining</u>	Identified (within 0m)				
88	18.10	Brine areas	None (within 0m)				
88	18.11	Gypsum areas	None (within 0m)				
88	18.12	Tin mining	None (within 0m)				
88	18.13	Clay mining	None (within 0m)				
Page	Section	Radon					
89	19.1	<u>Radon</u>	Between 5% and 10% (within 0m)				
Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
90	20.1	<u>BGS Estimated Background Soil Chemistry</u>	5	2	-	-	-
90	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
91	20.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
92	21.1	Underground railways (London)	0	0	0	-	-
92	21.2	Underground railways (Non-London)	0	0	0	-	-
92	21.3	Railway tunnels	0	0	0	-	-
92	21.4	Historical railway and tunnel features	0	0	0	-	-
92	21.5	Royal Mail tunnels	0	0	0	-	-
93	21.6	Historical railways	0	0	0	-	-
93	21.7	Railways	0	0	0	-	-
93	21.8	Crossrail 1	0	0	0	0	-
93	21.9	Crossrail 2	0	0	0	0	-
93	21.10	HS2	0	0	0	0	-



Recent aerial photograph



Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2022. All Rights Reserved

Capture Date: 10/04/2020

Site Area: 0.47ha



Recent site history - 2017 aerial photograph



Capture Date: 07/05/2017

Site Area: 0.47ha



Recent site history - 2009 aerial photograph



Capture Date: 01/06/2009

Site Area: 0.47ha



Recent site history - 2003 aerial photograph



Capture Date: 04/08/2003

Site Area: 0.47ha



Recent site history - 2000 aerial photograph



Aerial photography supplied by Getmapping PLC, © Copyright Getmapping PLC 2022. All Rights Reserved.

Capture Date: 04/09/2000

Site Area: 0.47ha



OS MasterMap site plan



Site Area: 0.47ha



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

Records within 500m	20
---------------------	----

Features are displayed on the Past land use map on **page 14**

ID	Location	Land use	Dates present	Group ID
B	168m E	Gravel Pit	1909	857414

ID	Location	Land use	Dates present	Group ID
B	169m E	Gravel Pit	1938	860592
B	169m E	Gravel Pit	1949	933438
2	207m SW	Unspecified Pit	1960 - 1968	875877
4	211m S	Gravel Hole	1872 - 1900	873988
C	247m SW	Police Station	1960 - 1979	978332
5	252m N	Earthwork	1909	811549
C	300m SW	Gravel Hole	1909	827130
F	345m S	Unspecified Heap	1960 - 1968	888054
9	437m N	Wind Pump	1909	837787
H	442m NE	Unspecified Pit	1872	838766
10	458m W	Unspecified Factory	1992	821311
H	459m NE	Sand Pit	1909	905836
H	462m NE	Sand Pit	1900	954004
H	464m NE	Sand Pit	1949	901058
11	465m E	Nursery	1992	831643
H	465m NE	Sand Pit	1938	852286
I	494m SE	Gravel Pit	1938	926234
I	496m SE	Gravel Pit	1900 - 1909	882576
I	497m SE	Gravel Pit	1949	897891

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

0

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

This data is sourced from Ordnance Survey / Groundsure.



1.3 Historical energy features

Records within 500m

13

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

Features are displayed on the Past land use map on **page 14**

ID	Location	Land use	Dates present	Group ID
A	On site	Electricity Substation	1980 - 1990	67010
A	On site	Electricity Substation	1983	80480
1	111m SW	Electricity Substation	1969 - 1990	69434
3	210m W	Electricity Substation	1990	60076
D	250m NE	Electricity Substation	1980 - 1990	71859
D	252m NE	Electricity Substation	1983	83137
6	284m W	Electricity Substation	1969 - 1990	76659
E	342m SW	Electricity Substation	1983	60077
7	374m N	Electricity Substation	1990	60073
8	377m SE	Electricity Substation	1969 - 1990	65312
F	384m S	Electricity Substation	1983	60075
F	386m S	Electricity Substation	1980	82336
F	387m S	Electricity Substation	1969	83204

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m

0

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

This data is sourced from Ordnance Survey / Groundsure.



1.5 Historical garages

Records within 500m

7

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

Features are displayed on the Past land use map on **page 14**

ID	Location	Land use	Dates present	Group ID
E	321m SW	Garage	1983	23252
E	322m SW	Garage	1990	23787
E	334m SW	Garage	1980	23738
E	334m SW	Garage	1969	22867
E	334m SW	Garage	1961	21220
G	437m N	Garage	1959 - 1990	25942
G	437m N	Garage	1961 - 1974	24599

This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

Records within 500m

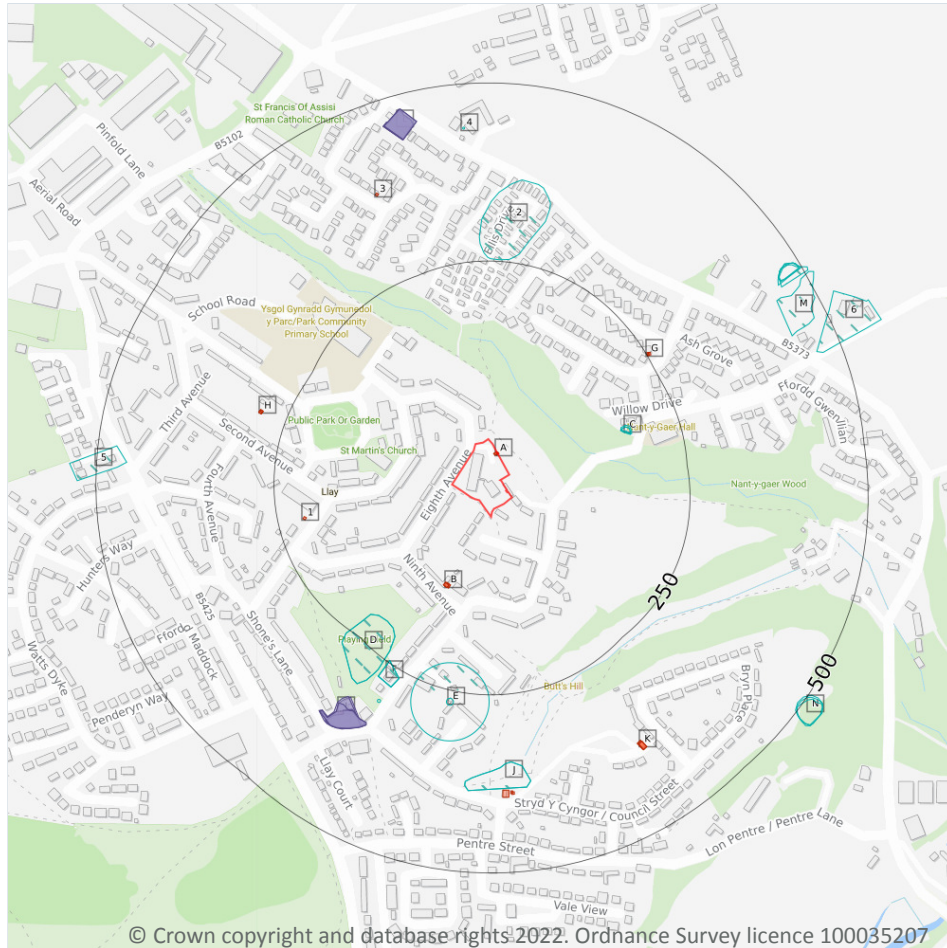
0

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

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



2 Past land use - un-grouped



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

2.1 Historical industrial land uses

Records within 500m

25

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

Features are displayed on the Past land use - un-grouped map on **page 18**

ID	Location	Land Use	Date	Group ID
C	168m E	Gravel Pit	1909	857414
C	169m E	Gravel Pit	1938	860592
C	169m E	Gravel Pit	1949	933438



ID	Location	Land Use	Date	Group ID
D	207m SW	Unspecified Pit	1968	875877
D	207m SW	Unspecified Pit	1960	875877
E	211m S	Gravel Hole	1872	873988
F	247m SW	Police Station	1968	978332
F	247m SW	Police Station	1979	978332
F	247m SW	Police Station	1960	978332
2	252m N	Earthwork	1909	811549
E	261m S	Gravel Hole	1900	873988
F	300m SW	Gravel Hole	1909	827130
J	345m S	Unspecified Heap	1968	888054
J	345m S	Unspecified Heap	1960	888054
4	437m N	Wind Pump	1909	837787
M	442m NE	Unspecified Pit	1872	838766
5	458m W	Unspecified Factory	1992	821311
M	459m NE	Sand Pit	1909	905836
M	462m NE	Sand Pit	1900	954004
M	464m NE	Sand Pit	1949	901058
6	465m E	Nursery	1992	831643
M	465m NE	Sand Pit	1938	852286
N	494m SE	Gravel Pit	1938	926234
N	496m SE	Gravel Pit	1909	882576
N	497m SE	Gravel Pit	1949	897891

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m

0

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



This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m

24

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

Features are displayed on the Past land use - un-grouped map on **page 18**

ID	Location	Land Use	Date	Group ID
A	On site	Electricity Substation	1983	80480
A	On site	Electricity Substation	1980	67010
A	On site	Electricity Substation	1990	67010
B	111m SW	Electricity Substation	1983	69434
B	111m SW	Electricity Substation	1969	69434
B	112m SW	Electricity Substation	1980	69434
B	112m SW	Electricity Substation	1990	69434
1	210m W	Electricity Substation	1990	60076
G	250m NE	Electricity Substation	1980	71859
G	250m NE	Electricity Substation	1990	71859
G	252m NE	Electricity Substation	1983	83137
H	284m W	Electricity Substation	1983	76659
H	284m W	Electricity Substation	1969	76659
H	285m W	Electricity Substation	1980	76659
H	285m W	Electricity Substation	1990	76659
I	342m SW	Electricity Substation	1983	60077
3	374m N	Electricity Substation	1990	60073
K	377m SE	Electricity Substation	1980	65312
K	377m SE	Electricity Substation	1990	65312
K	380m SE	Electricity Substation	1983	65312
K	380m SE	Electricity Substation	1969	65312



ID	Location	Land Use	Date	Group ID
J	384m S	Electricity Substation	1983	60075
J	386m S	Electricity Substation	1980	82336
J	387m S	Electricity Substation	1969	83204

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m

0

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

This data is sourced from Ordnance Survey / Groundsure.

2.5 Historical garages

Records within 500m

10

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

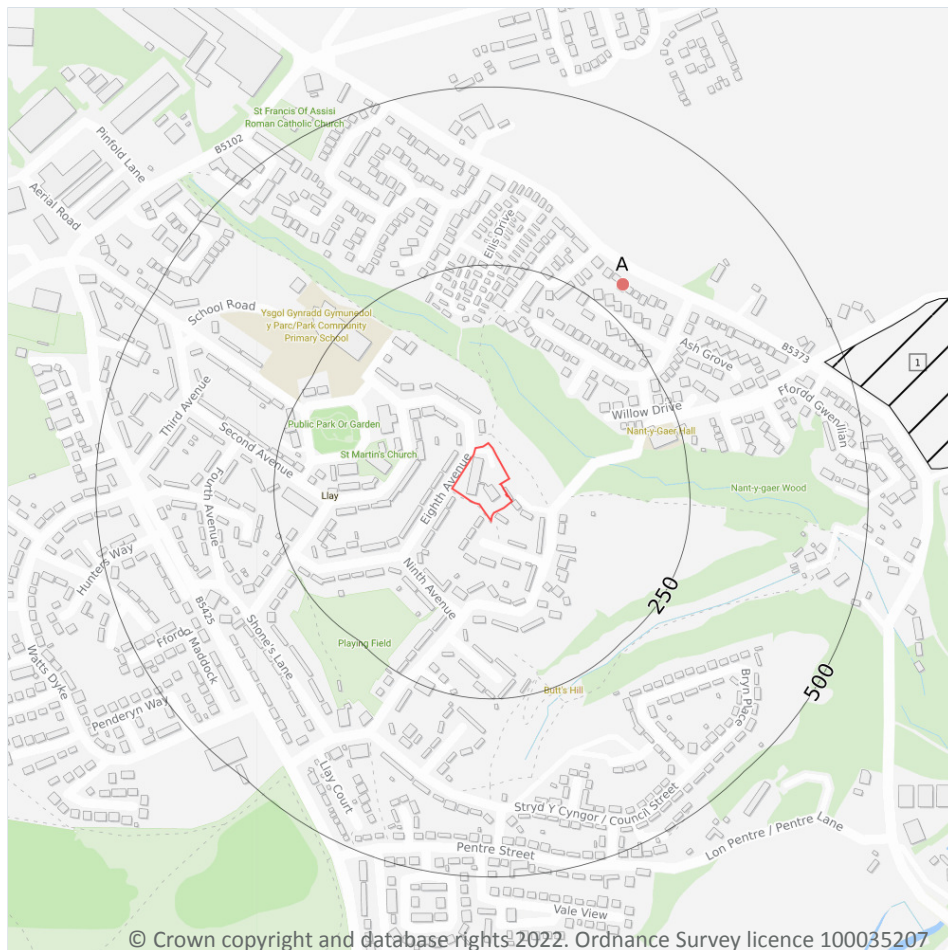
Features are displayed on the Past land use - un-grouped map on **page 18**

ID	Location	Land Use	Date	Group ID
I	321m SW	Garage	1983	23252
I	322m SW	Garage	1990	23787
I	334m SW	Garage	1980	23738
I	334m SW	Garage	1969	22867
I	334m SW	Garage	1961	21220
L	437m N	Garage	1990	25942
L	437m N	Garage	1959	25942
L	437m N	Garage	1984	25942
L	437m N	Garage	1961	24599
L	437m N	Garage	1974	24599

This data is sourced from Ordnance Survey / Groundsure.



3 Waste and landfill



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

3.1 Active or recent landfill

Records within 500m

0

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

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

3.2 Historical landfill (BGS records)

Records within 500m

0

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

This data is sourced from the British Geological Survey.



3.3 Historical landfill (LA/mapping records)

Records within 500m

0

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

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

3.4 Historical landfill (EA/NRW records)

Records within 500m

1

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

Features are displayed on the Waste and landfill map on **page 22**

ID	Location	Details		
1	472m E	Site Address: Singret Quarry Licence Holder Address: -	Waste Licence: Yes Site Reference: WMBC L63, NOW-514-L Waste Type: Inert, Industrial Environmental Permitting Regulations (Waste) Reference: WW1/L/BOD001 Licence Issue: 31/12/1983 Licence Surrender: 18/12/2003	Operator: Bodfari (quarries) Licence Holder: Tarmac First Recorded 31/12/1976 Last Recorded: 30/06/1998

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

3.5 Historical waste sites

Records within 500m

0

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

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

3.6 Licensed waste sites

Records within 500m

0

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

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

3.7 Waste exemptions

Records within 500m

5

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

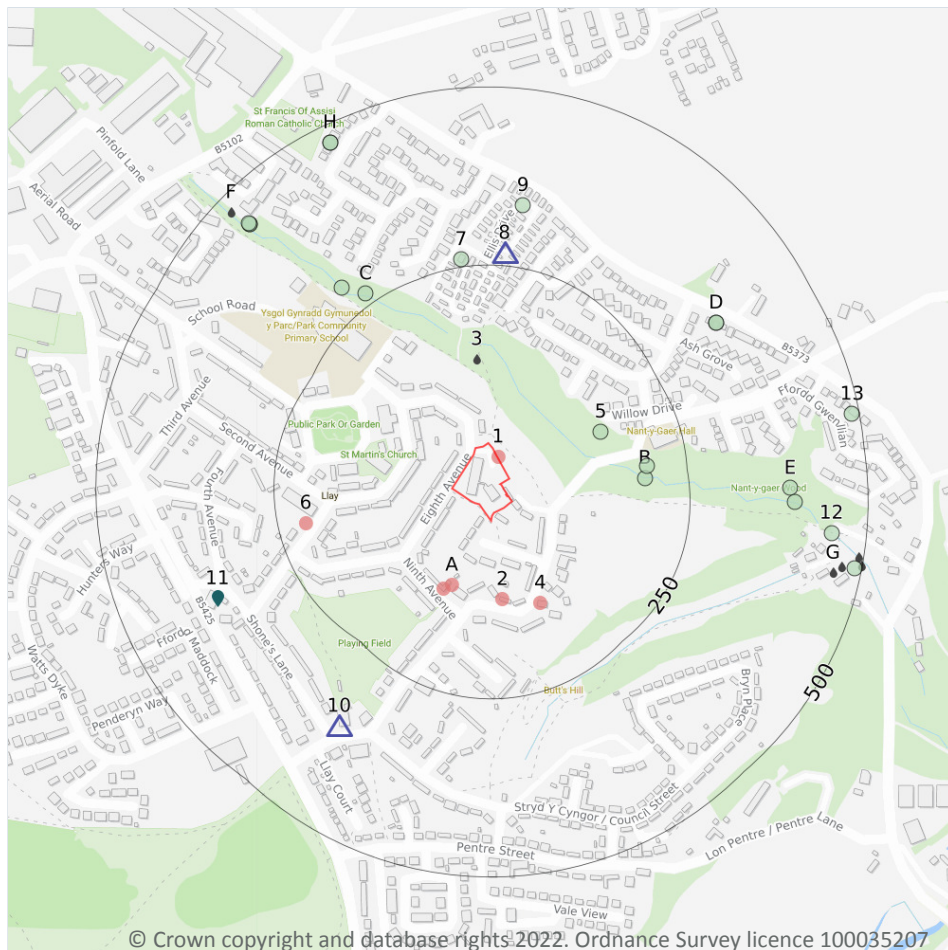
Features are displayed on the Waste and landfill map on **page 22**

ID	Location	Site	Reference	Category	Sub-Category	Description
A	291m NE	Home Farm, Gresford Road, Wrexham, Wreccsam, LL12 ONW	NRW-WME000079	Using waste exemption	Waste Exemption - Agricultural and Non-Agricultural	Use of waste in construction
A	291m NE	Home Farm, Gresford Road, Wrexham, Wreccsam, LL12 ONW	NRW-WME000079	Using waste exemption	Waste Exemption - Agricultural and Non-Agricultural	Burning of waste as a fuel in a small appliance
A	291m NE	Home Farm, Gresford Road, Wrexham, Wreccsam, LL12 ONW	NRW-WME000079	Treating waste exemption	Waste Exemption - Agricultural	Aerobic composting and associated prior treatment
A	291m NE	Home Farm, Gresford Road, Wrexham, Wreccsam, LL12 ONW	NRW-WME000079	Disposing of waste exemption	Waste Exemption - Agricultural and Non-Agricultural	Burning waste in the open
A	291m NE	Home Farm, Gresford Road, Wrexham, Wreccsam, LL12 ONW	NRW-WME000079	Storing waste exemption	Waste Exemption - Agricultural	Storage of waste in a secure place

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



4 Current industrial land use



- Site Outline
- Search buffers in metres (m)
- Recent industrial land uses
- ▲ Current or recent petrol stations
- Licensed pollutant release (Part A(2)/B)
- Licensed Discharges to controlled waters
- Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m

6

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 25**

ID	Location	Company	Address	Activity	Category
1	1m NE	Electricity Sub Station	Clwyd, LL12	Electrical Features	Infrastructure and Facilities
A	106m SW	S Hinchliffe Services Ltd	Housing Maintenance Department, Ninth Avenue, Llay, Wrexham, Clwyd, LL12 OSF	Vehicle Repair, Testing and Servicing	Repair and Servicing
2	111m S	Clearol Pest Control	29, Nant y Gaer Road, Llay, Wrexham, Clwyd, LL12 OSH	Pest and Vermin Control	Contract Services



ID	Location	Company	Address	Activity	Category
A	116m SW	Electricity Sub Station	Clwyd, LL12	Electrical Features	Infrastructure and Facilities
4	134m SE	Optima	2, Laburnum Court, Llay, Wrexham, Clwyd, LL12 0SQ	Vehicle Hire and Rental	Hire Services
6	211m W	Electricity Sub Station	Clwyd, LL12	Electrical Features	Infrastructure and Facilities

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

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

Open, closed, under development and obsolete petrol stations.

Features are displayed on the Current industrial land use map on **page 25**

ID	Location	Company	Address	LPG	Status
8	268m N	OBSOLETE	B5373, Llay, Wrexham, Wrexham, LL12 0NW	Not Applicable	Obsolete
10	358m SW	TEXACO	Shones Lane, Tenth Avenue, Llay, Wrexham, Wrexham, LL12 0PL	Not Applicable	Obsolete

This data is sourced from Experian.

4.3 Electricity cables

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

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

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

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m

0

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

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m

0

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

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m

0

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

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m

0

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

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m

0

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

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



4.10 Licensed industrial activities (Part A(1))

Records within 500m

0

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

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

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

Records within 500m

1

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

Features are displayed on the Current industrial land use map on **page 25**

ID	Location	Address	Details	
11	363m SW	Waste Oil Burners, Llay Garage, Shones Lane, Llay, Wrexham, LL12 OPL	Process: Waste Oil Burner 0.4 MW Status: New Legislation Applies Permit Type: Part B	Enforcement: No Enforcement Notified. Date of enforcement: No Enforcement Notified. Comment: No Enforcement Notified.

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m

0

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

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

4.13 Licensed Discharges to controlled waters

Records within 500m

6

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

Features are displayed on the Current industrial land use map on **page 25**



ID	Location	Address	Details	
3	119m N	LLAY GRESFORD ROAD, GRESFORD ROAD	Effluent Type: UNSPECIFIED Permit Number: CM0065001 Permit Version: 1 Receiving Water: SINGRET BROOK	Status: CONSENT EXPIRED - TIME LIMIT Issue date: 24/05/1971 Effective Date: 24/05/1971 Revocation Date: 23/02/1995
G	461m E	LLAY SINGRET BOREEN CAM- SSO	Effluent Type: UNSPECIFIED Permit Number: CM0197701 Permit Version: 1 Receiving Water: SINGRET BROOK	Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 20/10/1989 Effective Date: 20/10/1989 Revocation Date: 30/03/2005
G	471m E	LLAY SINGRET (BOREEN CAM) CSO, Back garden of Ivy Cottage, Singrett Hill Llay, Wrexham, LL12 ONS	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: CM0197701 Permit Version: 3 Receiving Water: SINGRET BROOK	Status: Effective Issue date: 11/10/2019 Effective Date: 11/10/2019 Revocation Date: -
F	476m NW	PUMPING STATION ON DEVELOPMENT LAND, OFF LLAY ROAD, WREXHAM, WALES, UNITED KINGDOM, LL12 OTX	Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - NOT WATER COMPANY Permit Number: CG0413901 Permit Version: 1 Receiving Water: SINGRET BROOK	Status: Effective Issue date: 22/01/2004 Effective Date: 22/01/2004 Revocation Date: -
G	492m E	LLAY SINGRET (BOREEN CAM) CSO, SINGRET HILL, LLAY, Wrexham, LL12 ONS	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: CM0197701 Permit Version: 2 Receiving Water: SINGRET BROOK	Status: Effective Issue date: 25/11/2004 Effective Date: 31/03/2005 Revocation Date: -
G	498m E	LLAY SINGRET SEWERAGE SYSTEM (S'CED, LLAY SINGRET SEWERAGE SYSTEM (S', SINGRET SEWERAGE SYSTEM (S'CED	Effluent Type: UNSPECIFIED Permit Number: CM0058601 Permit Version: 1 Receiving Water: SINGRET BROOK	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY Issue date: 16/09/1969 Effective Date: 16/09/1969 Revocation Date: 17/02/1986

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

4.14 Pollutant release to surface waters (Red List)

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

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

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



4.15 Pollutant release to public sewer

Records within 500m

0

Discharges of Special Category Effluents to the public sewer.

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

4.16 List 1 Dangerous Substances

Records within 500m

0

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

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

4.17 List 2 Dangerous Substances

Records within 500m

0

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

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

4.18 Pollution Incidents (EA/NRW)

Records within 500m

19

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

Features are displayed on the Current industrial land use map on **page 25**

ID	Location	Details	
5	144m NE	Incident Date: 05/10/2013 Incident Identification: 1165151 Pollutant: Sewage Materials Pollutant Description: Crude Sewage	Water Impact: - Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
B	189m E	Incident Date: 02/09/2014 Incident Identification: 1275741 Pollutant: Sewage Materials Pollutant Description: Other Sewage Material	Water Impact: - Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)

ID	Location	Details	
B	194m E	Incident Date: 05/08/2009 Incident Identification: 704123 Pollutant: Sewage Materials Pollutant Description: Crude Sewage	Water Impact: Category 2 (Significant) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
7	260m N	Incident Date: 21/08/2015 Incident Identification: 1367023 Pollutant: Contaminated Water Pollutant Description: Other Contaminated Water	Water Impact: - Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
C	266m NW	Incident Date: 06/02/2005 Incident Identification: 291717 Pollutant: Oils and Fuel Pollutant Description: Cutting Oils	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
C	293m NW	Incident Date: 20/05/2002 Incident Identification: 80015 Pollutant: Sewage Materials Pollutant Description: Crude Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
9	337m N	Incident Date: 20/11/2013 Incident Identification: 1177422 Pollutant: Inert Materials and Wastes Pollutant Description: Construction and Demolition Materials and Wastes	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
D	359m NE	Incident Date: 19/05/2001 Incident Identification: 5973 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Atmospheric Pollutant or Effect	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
D	359m NE	Incident Date: 19/05/2001 Incident Identification: 5973 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Atmospheric Pollutant or Effect	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
E	390m E	Incident Date: 27/10/2009 Incident Identification: 727899 Pollutant: Sewage Materials Pollutant Description: Crude Sewage	Water Impact: Category 2 (Significant) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
E	396m E	Incident Date: 01/12/2015 Incident Identification: 1391224 Pollutant: Sewage Materials Pollutant Description: Crude Sewage	Water Impact: - Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
F	445m NW	Incident Date: 27/12/2001 Incident Identification: 49674 Pollutant: Sewage Materials Pollutant Description: Crude Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)



ID	Location	Details	
F	445m NW	Incident Date: 27/12/2001 Incident Identification: 49674 Pollutant: Sewage Materials Pollutant Description: Crude Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
F	448m NW	Incident Date: 30/04/2001 Incident Identification: 3861 Pollutant: Sewage Materials Pollutant Description: Storm Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
12	450m E	Incident Date: 05/01/2015 Incident Identification: 1304273 Pollutant: Sewage Materials Pollutant Description: Crude Sewage	Water Impact: - Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
H	475m NW	Incident Date: 11/05/2001 Incident Identification: 5234 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Sulphide Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
H	475m NW	Incident Date: 11/05/2001 Incident Identification: 5234 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Sulphide Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
G	489m E	Incident Date: 14/08/2003 Incident Identification: 182014 Pollutant: Sewage Materials Pollutant Description: Crude Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
13	489m E	Incident Date: 15/12/2001 Incident Identification: 48343 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Landfill Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)

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

4.19 Pollution inventory substances

Records within 500m

0

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

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



4.20 Pollution inventory waste transfers

Records within 500m

0

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

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

4.21 Pollution inventory radioactive waste

Records within 500m

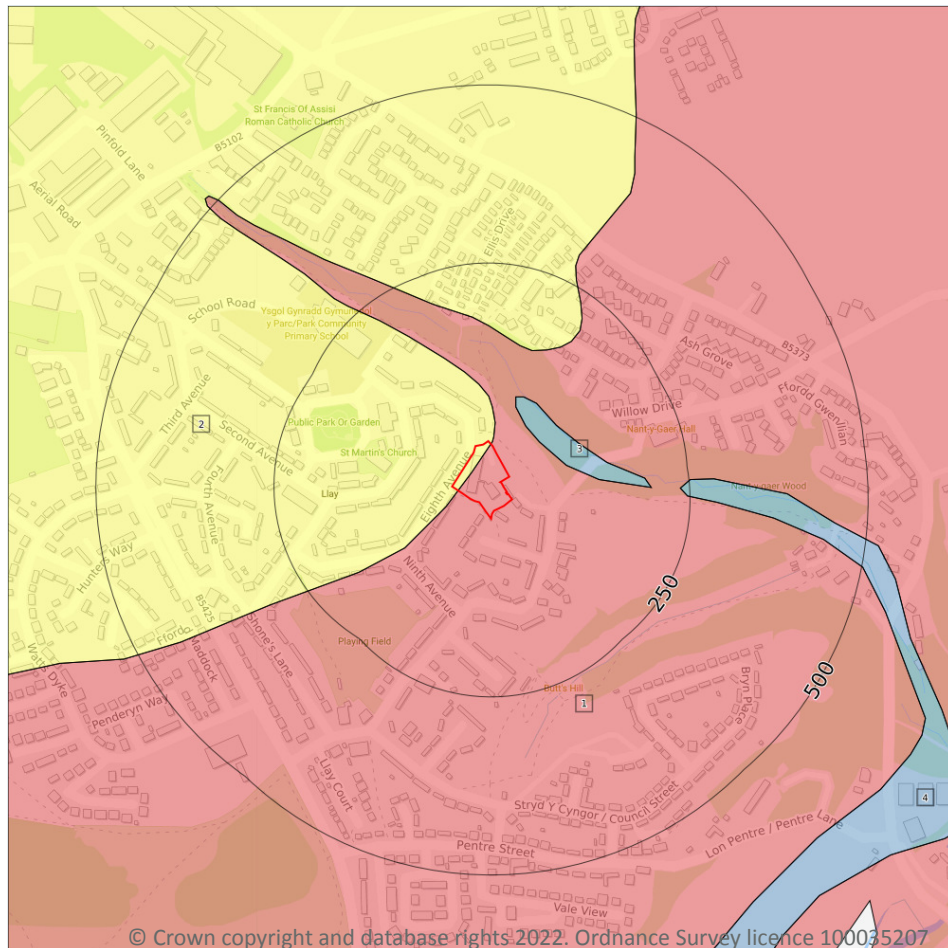
0

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

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



5 Hydrogeology - Superficial aquifer



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

5.1 Superficial aquifer

Records within 500m

4

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on **page 34**

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

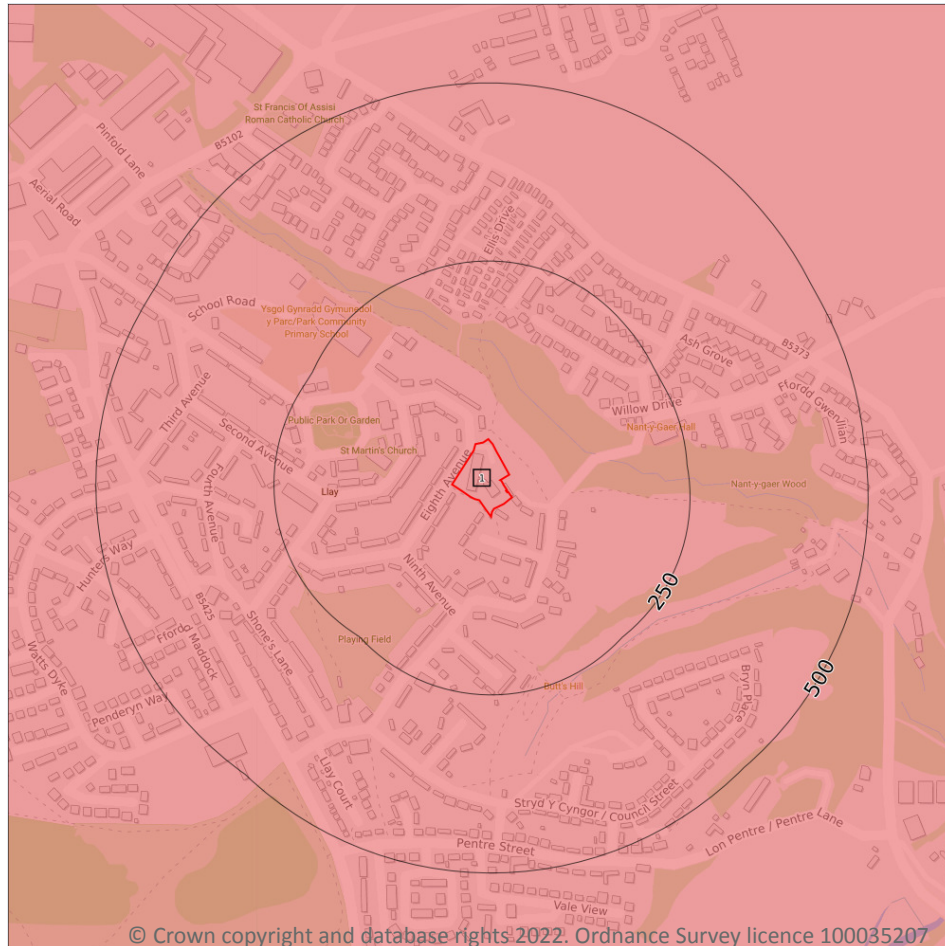


ID	Location	Designation	Description
3	54m NE	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
4	237m E	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow

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



Bedrock aquifer



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

5.2 Bedrock aquifer

Records within 500m

1

Aquifer status of groundwater held within bedrock geology.

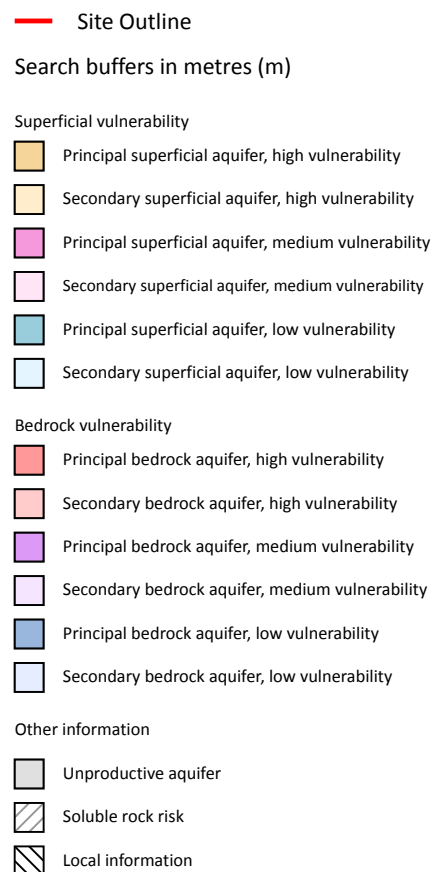
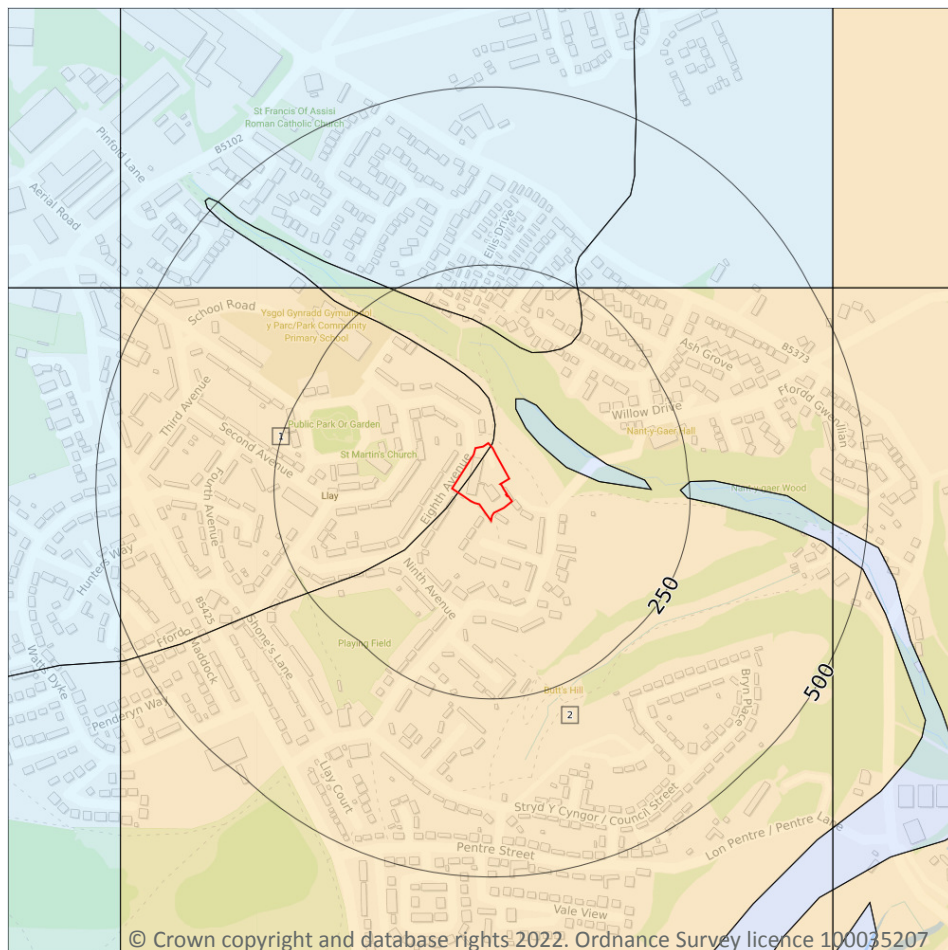
Features are displayed on the Bedrock aquifer map on **page 36**

ID	Location	Designation	Description
1	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

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



Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m

2

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

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

Features are displayed on the Groundwater vulnerability map on **page 37**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: 300- 550mm/year	Vulnerability: High Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures
2	On site	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: 300- 550mm/year	Vulnerability: High Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: High	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures

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

5.4 Groundwater vulnerability- soluble rock risk

Records on site

0

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

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

5.5 Groundwater vulnerability- local information

Records on site

0

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

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



This map shows the area around Park/Park Community Primary School. The school is located on School Road, near the intersection with Third Avenue. Other landmarks include St Francis Of Assisi Roman Catholic Church, St Martin's Church, and Public Park Or Garden. The map also shows several streets, including Pinfold Lane, Aerial Road, School Road, Third Avenue, Second Avenue, Fourth Avenue, Fifth Avenue, Sixth Avenue, Seventh Avenue, Eighth Avenue, Ninth Avenue, Tenth Avenue, Eleventh Avenue, Twelfth Avenue, Thirteenth Avenue, Fourteenth Avenue, Fifteenth Avenue, Sixteenth Avenue, Seventeenth Avenue, Eighteenth Avenue, Nineteenth Avenue, Twentieth Avenue, Twenty-first Avenue, Twenty-second Avenue, Twenty-third Avenue, Twenty-fourth Avenue, Twenty-fifth Avenue, Twenty-sixth Avenue, Twenty-seventh Avenue, Twenty-eighth Avenue, Twenty-ninth Avenue, Thirtieth Avenue, Thirty-first Avenue, Thirty-second Avenue, Thirty-third Avenue, Thirty-fourth Avenue, Thirty-fifth Avenue, Thirty-sixth Avenue, Thirty-seventh Avenue, Thirty-eighth Avenue, Thirty-ninth Avenue, and Fortieth Avenue. A red-outlined site is located on Eighth Avenue, between Fifth Avenue and Sixth Avenue. Two concentric circles are drawn on the map, with radii of 250m and 500m from the school. The map is credited to Crown copyright and database rights 2022, Ordnance Survey licence 100035207.

- 39

ID	Location	Details	
-	1876m NE	Status: Historical Licence No: 24/67/9/0146 Details: General Farming & Domestic Direct Source: EAW Groundwater Point: BOREHOLE Data Type: Point Name: Lister Easting: 334500 Northing: 357380	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 07/10/1974 Expiry Date: - Issue No: 100 Version Start Date: 07/10/1974 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m	6
-----------------------------	----------

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

Features are displayed on the Abstractions and Source Protection Zones map on **page 39**

ID	Location	Details	
-	977m E	Status: Historical Licence No: 24/67/8/0052 Details: Mineral Washing Direct Source: EAW Surface Water Point: RIVER ALYN Data Type: Point Name: Tarmac Limited Easting: 334480 Northing: 355400	Annual Volume (m ³): 166929 Max Daily Volume (m ³): 545.52 Original Application No: - Original Start Date: 14/06/1968 Expiry Date: - Issue No: 102 Version Start Date: 01/01/2008 Version End Date: -
-	1556m NE	Status: Historical Licence No: WA/067/0008/007 Details: Mineral Washing Direct Source: EAW Surface Water Point: LAGOON AT BALLSWOOD QUARRY Data Type: Point Name: DP Williams Holdings Ltd Easting: 334961 Northing: 356380	Annual Volume (m ³): 3800 Max Daily Volume (m ³): 138 Original Application No: - Original Start Date: 26/06/2015 Expiry Date: 31/03/2017 Issue No: 1 Version Start Date: 26/06/2015 Version End Date: -

ID	Location	Details	
-	1556m NE	Status: Historical Licence No: WA/067/0008/007 Details: Mineral Washing - Low Direct Source: - Point: - Data Type: Point Name: - Easting: 334961 Northing: 356380	Annual Volume (m ³): 3800 Max Daily Volume (m ³): - Original Application No: - Original Start Date: Jun 26 2015 12:00AM Expiry Date: Mar 31 2017 12:00AM Issue No: - Version Start Date: - Version End Date: -
-	1600m NE	Status: Historical Licence No: 24/67/8/0108 Details: Mineral Washing Direct Source: EAW Surface Water Point: LAGOON AT BALLSWOOD QUARRY WREXHAM Data Type: Point Name: DP Williams Holdings Ltd Easting: 335000 Northing: 356400	Annual Volume (m ³): 3800 Max Daily Volume (m ³): 138 Original Application No: - Original Start Date: 30/06/2006 Expiry Date: 31/03/2015 Issue No: 2 Version Start Date: 03/10/2012 Version End Date: -
-	1866m E	Status: Historical Licence No: 24/67/8/0086 Details: Spray Irrigation - Direct Direct Source: EAW Surface Water Point: RIVER ALYN Data Type: Line Name: H E Jones And Son Easting: 335530 Northing: 356760	Annual Volume (m ³): 6164.38 Max Daily Volume (m ³): 272.76 Original Application No: - Original Start Date: 16/06/1980 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2007 Version End Date: -
-	1866m E	Status: Active Licence No: 24/67/8/0086 Details: Spray Irrigation - Direct - High Direct Source: - Point: - Data Type: Line Name: - Easting: 335530 Northing: 356760	Annual Volume (m ³): 6,164.38 Max Daily Volume (m ³): 654.48 Original Application No: - Original Start Date: Apr 1 2007 12:00AM Expiry Date: - Issue No: - Version Start Date: - Version End Date: -

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

5.8 Potable abstractions

Records within 2000m

0

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

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



5.9 Source Protection Zones

Records within 500m

0

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

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

5.10 Source Protection Zones (confined aquifer)

Records within 500m

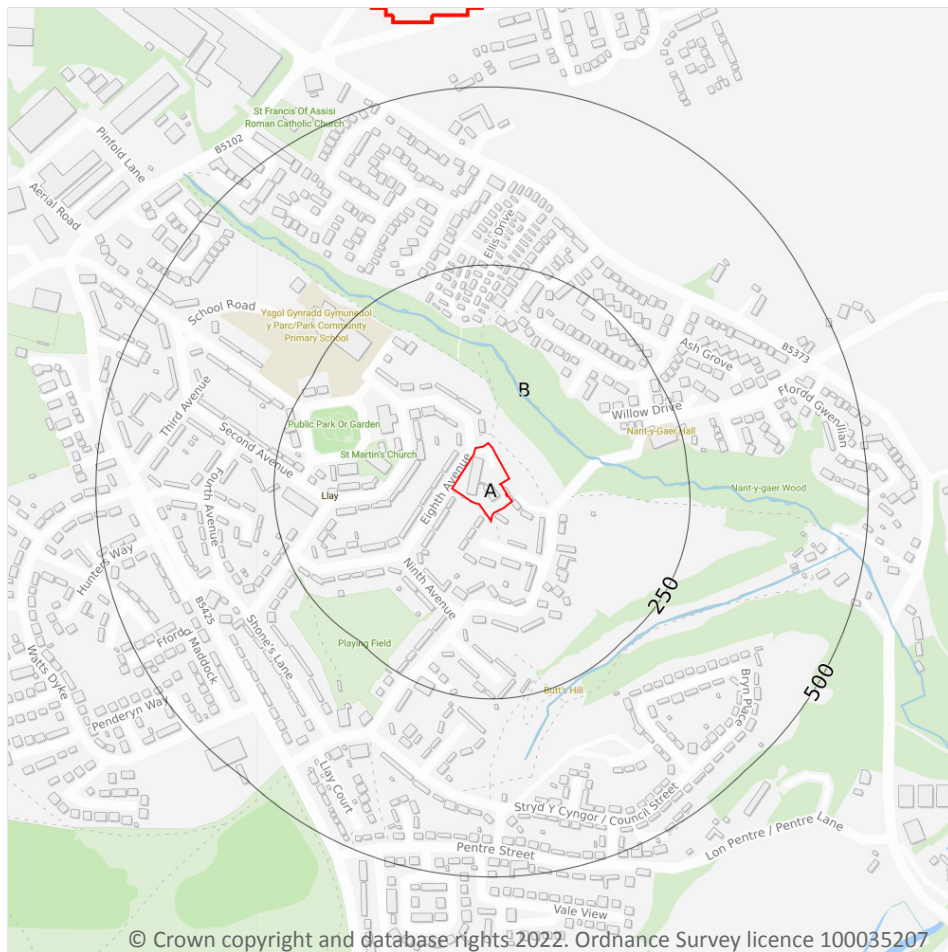
0

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

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



6 Hydrology



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

6.1 Water Network (OS MasterMap)

Records within 250m

1

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

Features are displayed on the Hydrology map on **page 43**

ID	Location	Type of water feature	Ground level	Permanence	Name
B	82m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.



6.2 Surface water features

Records within 250m

3

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

Features are displayed on the Hydrology map on **page 43**

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site

1

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

Features are displayed on the Hydrology map on **page 43**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
A	On site	River WB catchment	Alyn - Hope to Dee	GB111067052173	Alyn	Dee

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

6.4 WFD Surface water bodies

Records identified

1

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

Features are displayed on the Hydrology map on **page 43**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	804m SE	River	Alyn - Hope to Dee	GB111067052173	Moderate	Good	Moderate	2016

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



6.5 WFD Groundwater bodies

Records on site

1

Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place.

Features are displayed on the Hydrology map on **page 43**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
A	On site	Dee Carboniferous Coal Measures	GB41102G204800	Poor	Poor	Good	2017

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



7 River and coastal flooding

7.1 Risk of flooding from rivers and the sea

Records within 50m

0

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

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

7.2 Historical Flood Events

Records within 250m

0

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

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

7.3 Flood Defences

Records within 250m

0

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

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



7.4 Areas Benefiting from Flood Defences

Records within 250m

0

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

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

7.5 Flood Storage Areas

Records within 250m

0

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

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

River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m

0

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

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

7.7 Flood Zone 3

Records within 50m

0

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

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



8 Surface water flooding



— Site Outline

Search buffers in metres (m)

1 in 1000 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 250 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 100 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 30 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

8.1 Surface water flooding

Highest risk on site

1 in 100 year, 0.1m - 0.3m

Highest risk within 50m

1 in 30 year, 0.3m - 1.0m

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

Features are displayed on the Surface water flooding map on **page 49**

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

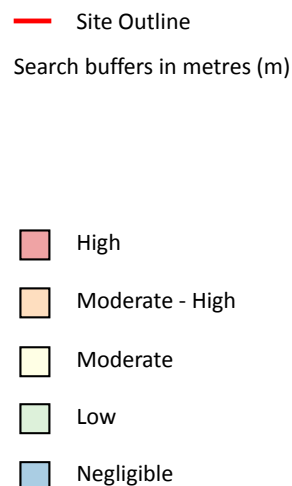
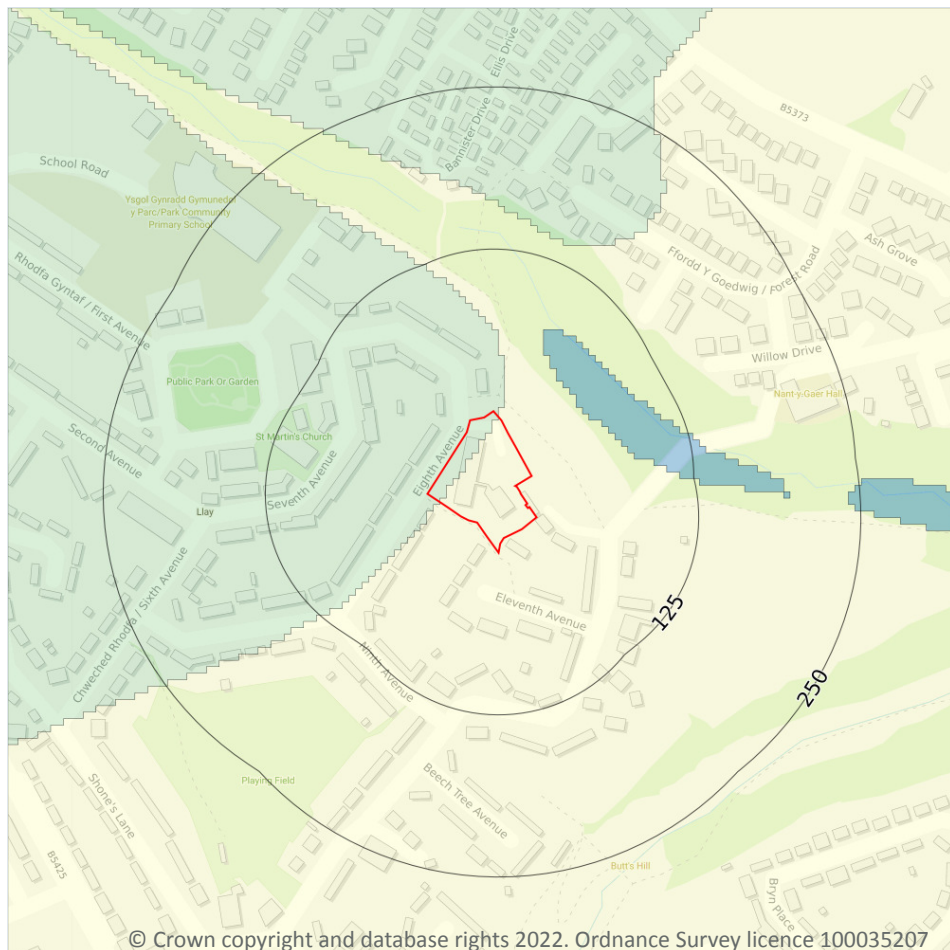
The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Between 0.3m and 1.0m
1 in 250 year	Between 0.1m and 0.3m
1 in 100 year	Between 0.1m and 0.3m
1 in 30 year	Negligible

This data is sourced from Ambiantal Risk Analytics.



9 Groundwater flooding



9.1 Groundwater flooding

Highest risk on site

Moderate

Highest risk within 50m

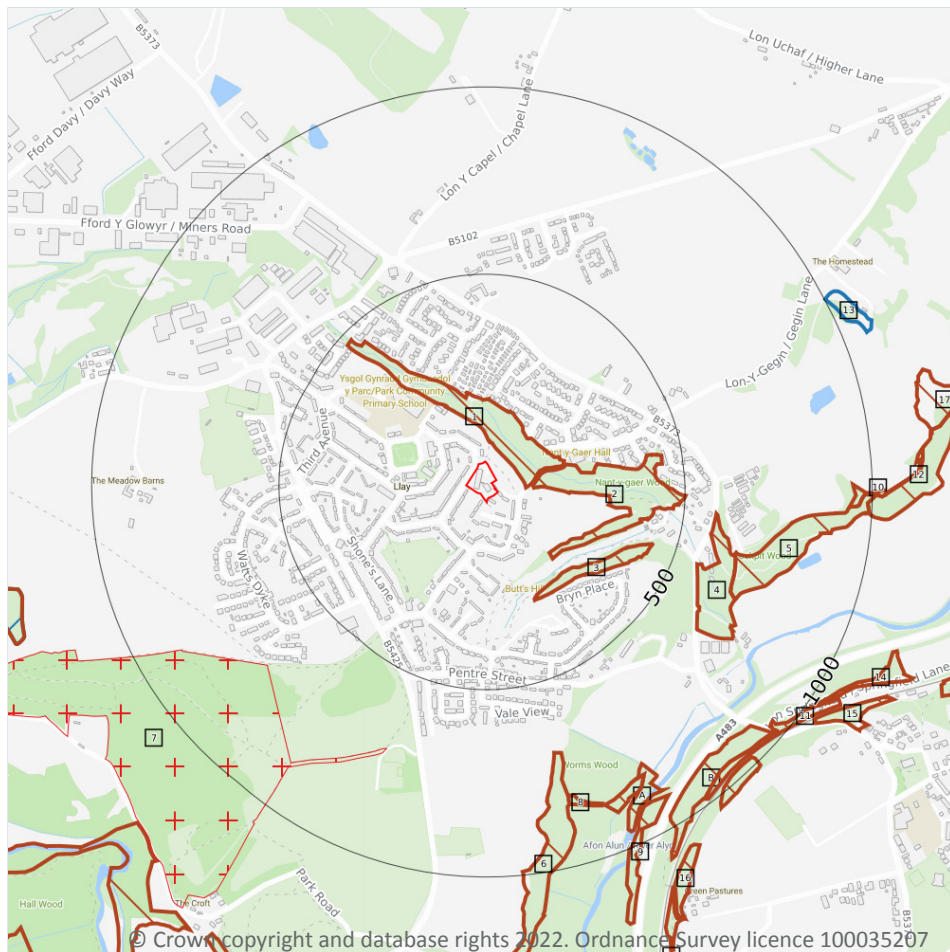
Moderate

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

Features are displayed on the Groundwater flooding map on **page 51**

This data is sourced from Ambiantal Risk Analytics.

10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- Sites of Special Scientific Interest (SSSI)
- + Local Nature Reserves (LNR)
- / Designated Ancient Woodland

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

3

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

Features are displayed on the Environmental designations map on **page 52**

ID	Location	Name	Data source
13	1002m NE	CHWAREL SINGRET	Natural Resources Wales



ID	Location	Name	Data source
C	1222m W	LLAY BOG	Natural Resources Wales
-	1892m E	MARFORD QUARRY	Natural Resources Wales

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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m

0

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

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m

0

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

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

10.4 Special Protection Areas (SPA)

Records within 2000m

0

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

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

10.5 National Nature Reserves (NNR)

Records within 2000m

0

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

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

10.6 Local Nature Reserves (LNR)

Records within 2000m

1

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

Features are displayed on the Environmental designations map on **page 52**

ID	Location	Name	Data source
7	709m S	ALYN WATERS	Natural Resources Wales

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

10.7 Designated Ancient Woodland

Records within 2000m

50

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

Features are displayed on the Environmental designations map on **page 52**

ID	Location	Name	Woodland Type
1	45m NE	Unknown	Ancient Semi Natural Woodland
2	95m E	Unknown	Ancient Semi Natural Woodland
3	275m SE	Unknown	Ancient Semi Natural Woodland
4	566m E	Unknown	Restored Ancient Woodland Site
5	655m E	Unknown	Restored Ancient Woodland Site
6	692m S	Unknown	Restored Ancient Woodland Site
A	811m SE	Unknown	Ancient Semi Natural Woodland
8	813m S	Unknown	Restored Ancient Woodland Site
A	839m SE	Unknown	Restored Ancient Woodland Site
B	898m SE	Unknown	Restored Ancient Woodland Site
9	912m SE	Unknown	Ancient Semi Natural Woodland



ID	Location	Name	Woodland Type
10	939m E	Unknown	Restored Ancient Woodland Site
B	949m SE	Unknown	Ancient Semi Natural Woodland
11	954m SE	Unknown	Restored Ancient Woodland Site
B	978m SE	Unknown	Ancient Semi Natural Woodland
12	988m E	Unknown	Ancient Semi Natural Woodland
14	1022m SE	Unknown	Ancient Semi Natural Woodland
15	1040m SE	Unknown	Restored Ancient Woodland Site
16	1067m SE	Unknown	Ancient Semi Natural Woodland
17	1136m E	Unknown	Restored Ancient Woodland Site
18	1150m SE	Unknown	Restored Ancient Woodland Site
C	1222m W	Unknown	Ancient Semi Natural Woodland
-	1230m S	Unknown	Restored Ancient Woodland Site
20	1258m SW	Unknown	Ancient Semi Natural Woodland
-	1264m E	Unknown	Ancient Semi Natural Woodland
-	1290m E	Unknown	Ancient Semi Natural Woodland
21	1291m SE	Unknown	Ancient Semi Natural Woodland
-	1346m N	Unknown	Ancient Semi Natural Woodland
-	1358m E	Unknown	Ancient Semi Natural Woodland
24	1365m SW	Unknown	Ancient Semi Natural Woodland
-	1372m NE	Unknown	Ancient Semi Natural Woodland
-	1459m E	Unknown	Ancient Semi Natural Woodland
-	1473m SW	Unknown	Ancient Semi Natural Woodland
-	1479m S	Unknown	Ancient Semi Natural Woodland
-	1480m E	Unknown	Ancient Semi Natural Woodland
-	1549m S	Unknown	Restored Ancient Woodland Site
-	1573m S	Unknown	Ancient Semi Natural Woodland
-	1586m E	Unknown	Ancient Semi Natural Woodland
32	1603m NE	Unknown	Ancient Semi Natural Woodland



ID	Location	Name	Woodland Type
-	1639m SW	Unknown	Ancient Semi Natural Woodland
-	1658m E	Unknown	Plantation on Ancient Woodland Site
35	1676m SW	Unknown	Ancient Semi Natural Woodland
-	1688m S	Unknown	Ancient Semi Natural Woodland
-	1689m E	Unknown	Ancient Semi Natural Woodland
-	1808m E	Unknown	Restored Ancient Woodland Site
-	1812m S	Unknown	Ancient Semi Natural Woodland
-	1894m S	Unknown	Ancient Semi Natural Woodland
-	1943m N	Unknown	Restored Ancient Woodland Site
-	1949m N	Unknown	Ancient Semi Natural Woodland
-	1989m S	Unknown	Ancient Semi Natural Woodland

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

10.8 Biosphere Reserves

Records within 2000m

0

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

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

10.9 Forest Parks

Records within 2000m

0

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

This data is sourced from the Forestry Commission.



10.10 Marine Conservation Zones

Records within 2000m

0

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

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

10.11 Green Belt

Records within 2000m

0

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

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

10.12 Proposed Ramsar sites

Records within 2000m

0

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

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m

0

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

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

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m

0

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

This data is sourced from Natural England.



10.15 Nitrate Sensitive Areas

Records within 2000m

0

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

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

Records within 2000m

4

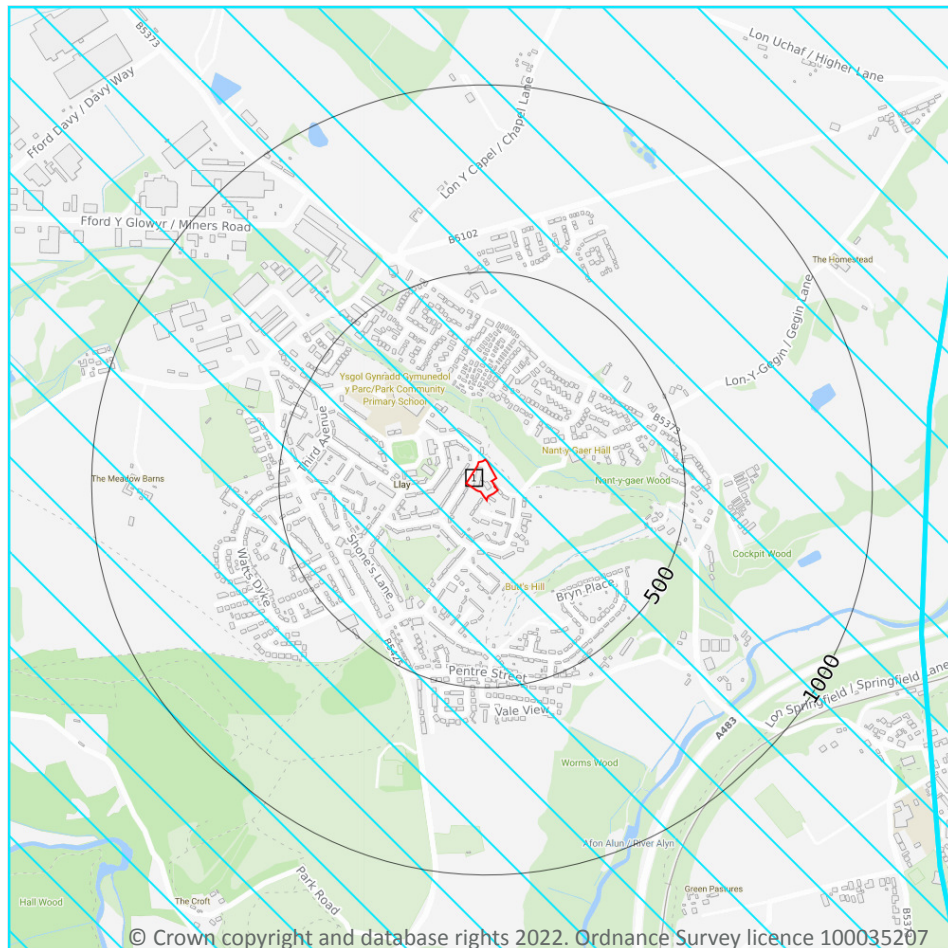
Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

Location	Name	Type	NVZ ID	Status
434m N	-	Surface Water	707	New
436m N	Pulford Brook NVZ	Surface Water	707	Existing
774m NE	Pulford Brook NVZ	Surface Water	707	Existing
808m NE	-	Surface Water	707	New

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



SSSI Impact Zones and Units



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

10.17 SSSI Impact Risk Zones

Records on site

1

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

Features are displayed on the SSSI Impact Zones and Units map on **page 59**

ID	Location	Type of developments requiring consultation
1	On site	Air pollution - Livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 4000m². Combustion - General combustion processes >50mw energy input. incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.



This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m

0

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

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



11 Visual and cultural designations

11.1 World Heritage Sites

Records within 250m

0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m

0

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

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

11.3 National Parks

Records within 250m

0

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

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

11.4 Listed Buildings

Records within 250m

0

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



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

11.5 Conservation Areas

Records within 250m

0

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

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

11.6 Scheduled Ancient Monuments

Records within 250m

0

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

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

11.7 Registered Parks and Gardens

Records within 250m

0

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

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



12 Agricultural designations

12.1 Agricultural Land Classification

Records within 250m

0

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

This data is sourced from Natural Resources Wales.

12.2 Open Access Land

Records within 250m

0

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

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

12.3 Tree Felling Licences

Records within 250m

0

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

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m

0

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

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m

0

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

This data is sourced from Natural England.



13 Habitat designations

13.1 Priority Habitat Inventory

Records within 250m

0

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

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m

0

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

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m

0

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

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m

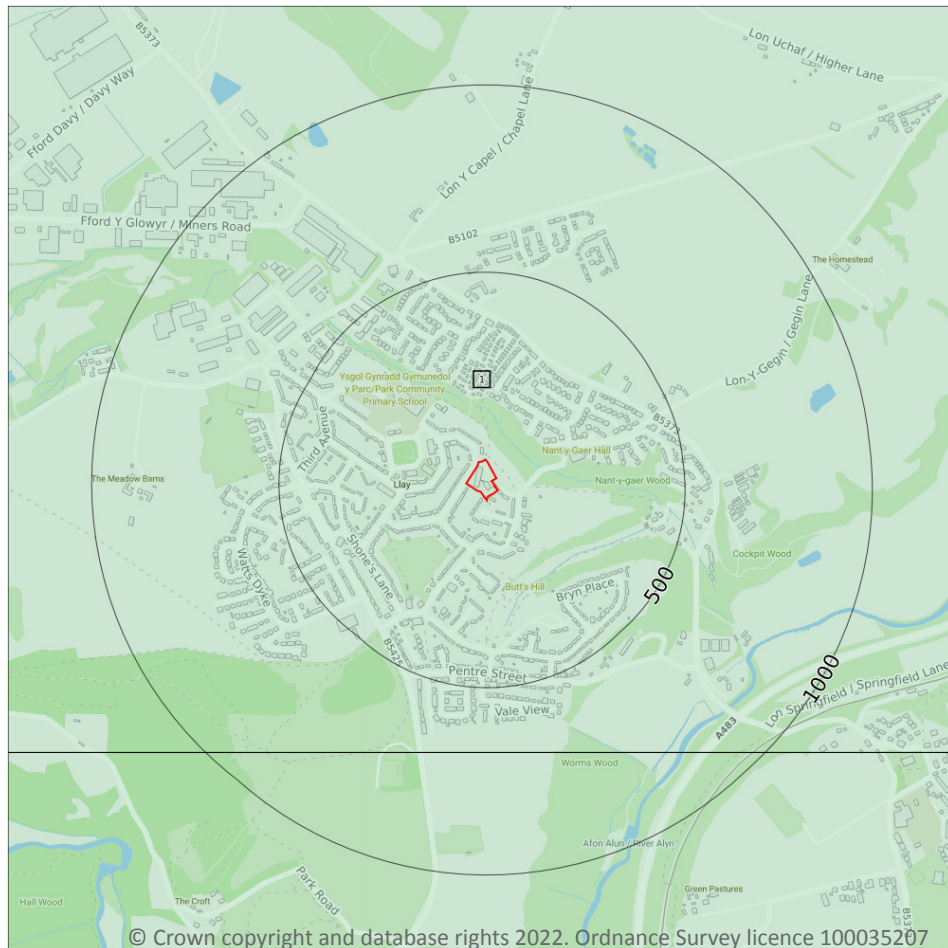
0

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

This data is sourced from Natural England.



14 Geology 1:10,000 scale - Availability



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

14.1 10k Availability

Records within 500m

1

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

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 66**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	SJ35NW

This data is sourced from the British Geological Survey.



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

14.2 Artificial and made ground (10k)

Records within 500m

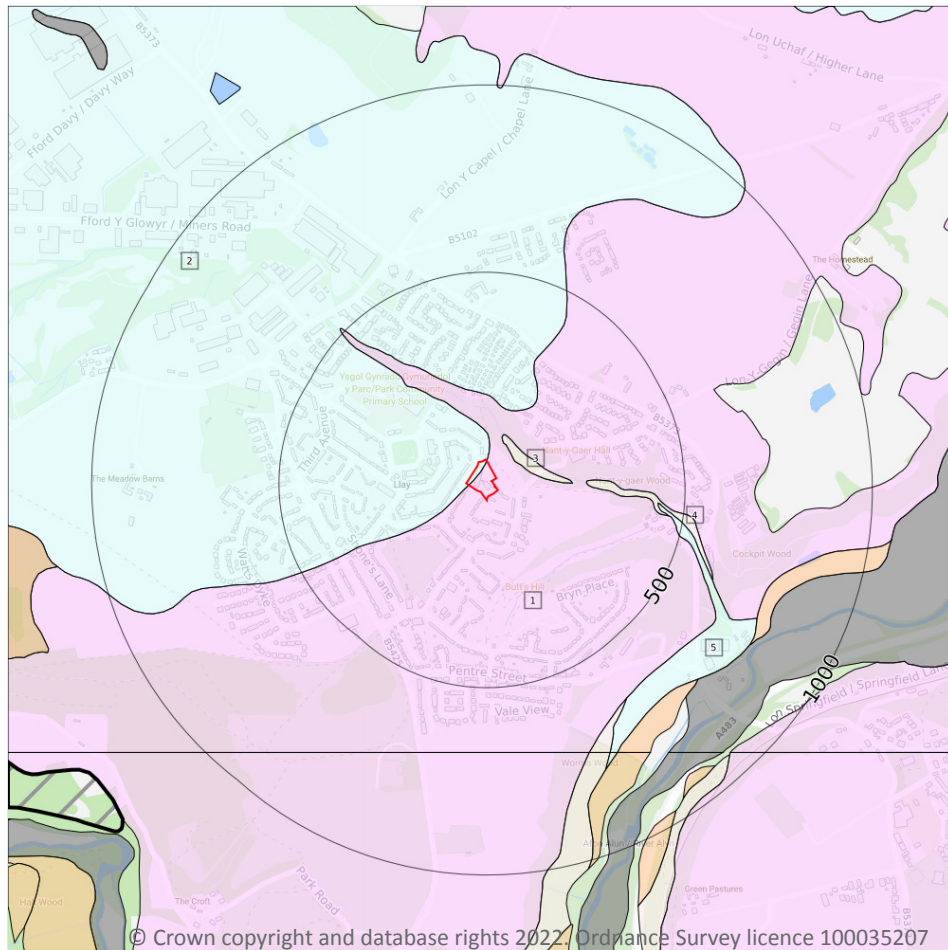
0

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

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (10k)

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

14.3 Superficial geology (10k)

Records within 500m

5

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

Features are displayed on the Geology 1:10,000 scale - Superficial map on **page 68**

ID	Location	LEX Code	Description	Rock description
1	On site	GFDU-XSV	Glaciofluvial Deposits - Sand And Gravel	Sand And Gravel
2	On site	TILL-DMTN	Till - Diamicton	Diamicton
3	65m NE	GLLD-C	Glaciolacustrine Deposits - Clay	Clay
4	237m E	GLLD-C	Glaciolacustrine Deposits - Clay	Clay



ID	Location	LEX Code	Description	Rock description
5	430m E	TILL-DMTN	Till - Diamicton	Diamicton

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m

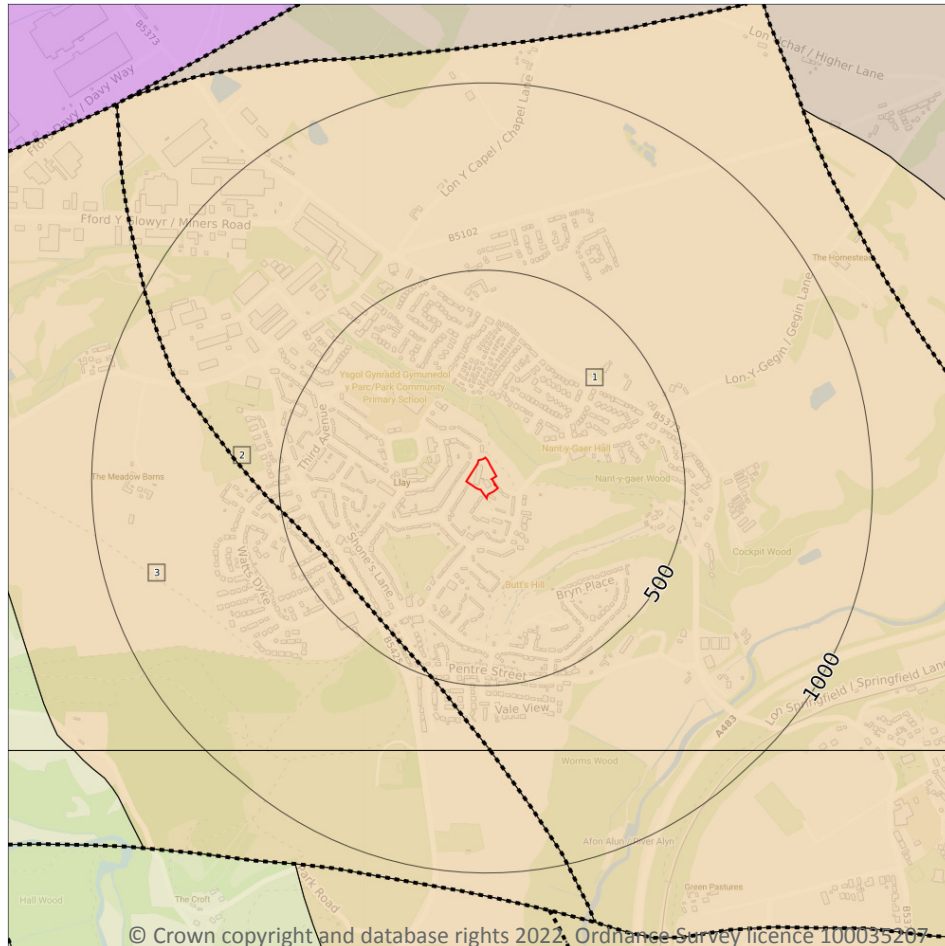
0

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

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

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

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

14.5 Bedrock geology (10k)

Records within 500m

2

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

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 70**

ID	Location	LEX Code	Description	Rock age
1	On site	SAL-MDSC	Salop Formation - Mudstone, Sandstone And Conglomerate	Cisuralian Epoch - Westphalian D Sub-age
3	415m SW	SAL-MDSC	Salop Formation - Mudstone, Sandstone And Conglomerate	Cisuralian Epoch - Westphalian D Sub-age

This data is sourced from the British Geological Survey.



14.6 Bedrock faults and other linear features (10k)

Records within 500m

1

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

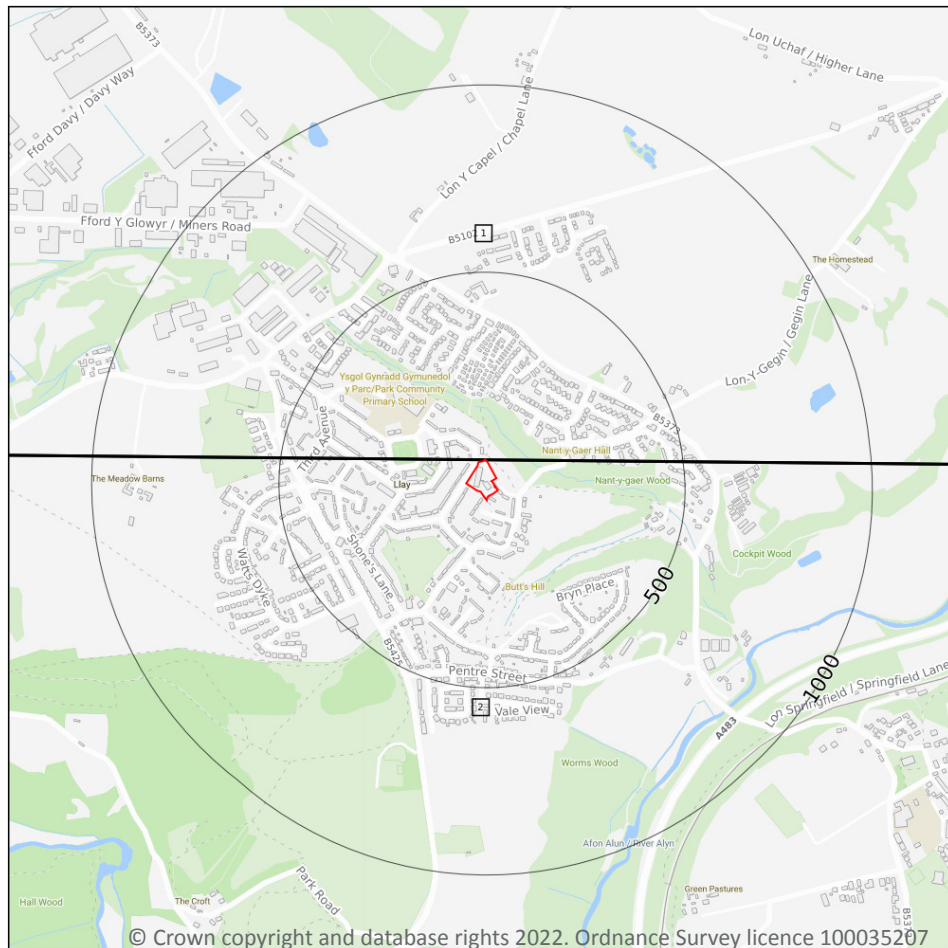
Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 70**

ID	Location	Category	Description
2	415m SW	FAULT	Normal fault, inferred

This data is sourced from the British Geological Survey.



15 Geology 1:50,000 scale - Availability



— Site Outline
Search buffers in metres (m)
☐ Geological map tile

15.1 50k Availability

Records within 500m

2

An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme. Where 50k data is not available, this area has been filled in with 625k scale data.

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 72**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	EW108_flint_v4
2	On site	Full	Full	Full	Full	EW121_wrexham_v4

This data is sourced from the British Geological Survey.



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

15.2 Artificial and made ground (50k)

Records within 500m

0

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

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

Records within 50m

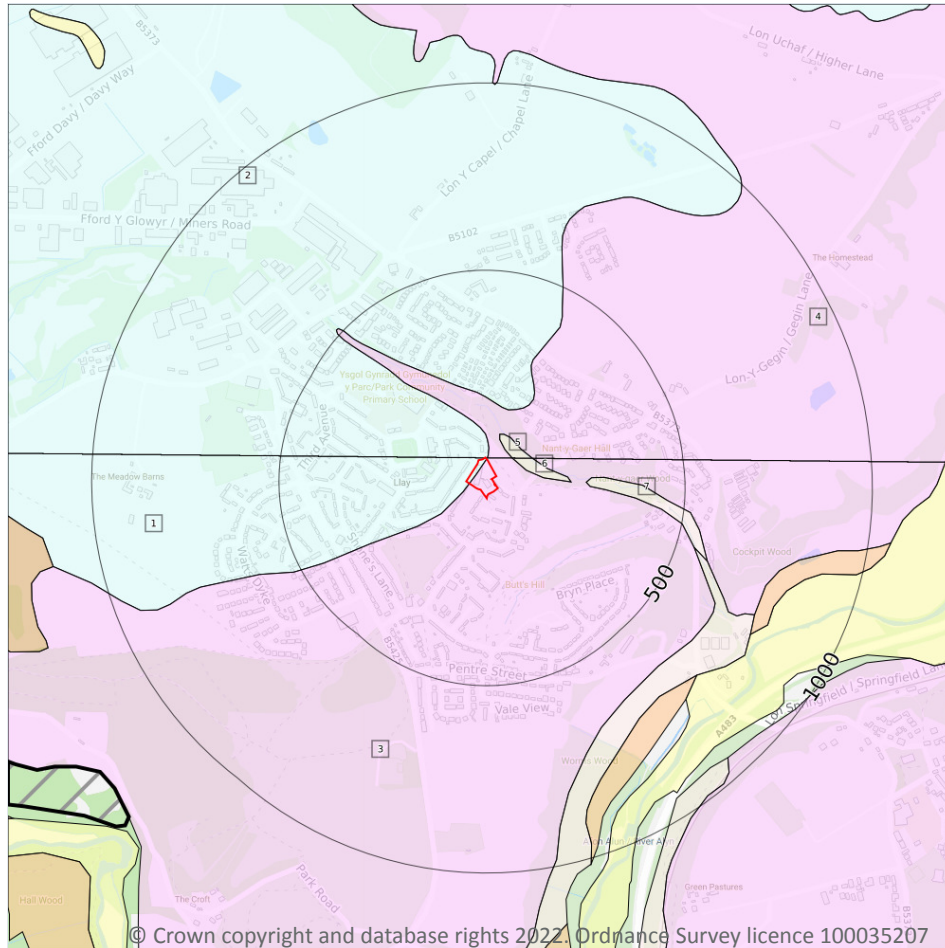
0

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

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (50k)

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

15.4 Superficial geology (50k)

Records within 500m

7

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

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 74**

ID	Location	LEX Code	Description	Rock description
1	On site	TILLD-DMTN	TILL, DEVANSIAN	DIAMICTON
2	On site	TILLD-DMTN	TILL, DEVANSIAN	DIAMICTON
3	On site	GFDUD-XSV	GLACIOFLUVIAL DEPOSITS, DEVANSIAN	SAND AND GRAVEL



ID	Location	LEX Code	Description	Rock description
4	4m NE	GFSDD-XSV	GLACIOFLUVIAL SHEET DEPOSITS, DEVENSIAN	SAND AND GRAVEL
5	54m NE	GLLDD-XCZ	GLACIOLACUSTRINE DEPOSITS, DEVENSIAN	CLAY AND SILT
6	61m NE	GLLDD-XCZ	GLACIOLACUSTRINE DEPOSITS, DEVENSIAN	CLAY AND SILT
7	237m E	GLLDD-XCZ	GLACIOLACUSTRINE DEPOSITS, DEVENSIAN	CLAY AND SILT

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m	3
---------------------------	----------

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	Intergranular	Very High	High
On site	Mixed	High	Low
4m NE	Intergranular	Very High	High

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

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

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

This data is sourced from the British Geological Survey.

15.7 Landslip permeability (50k)

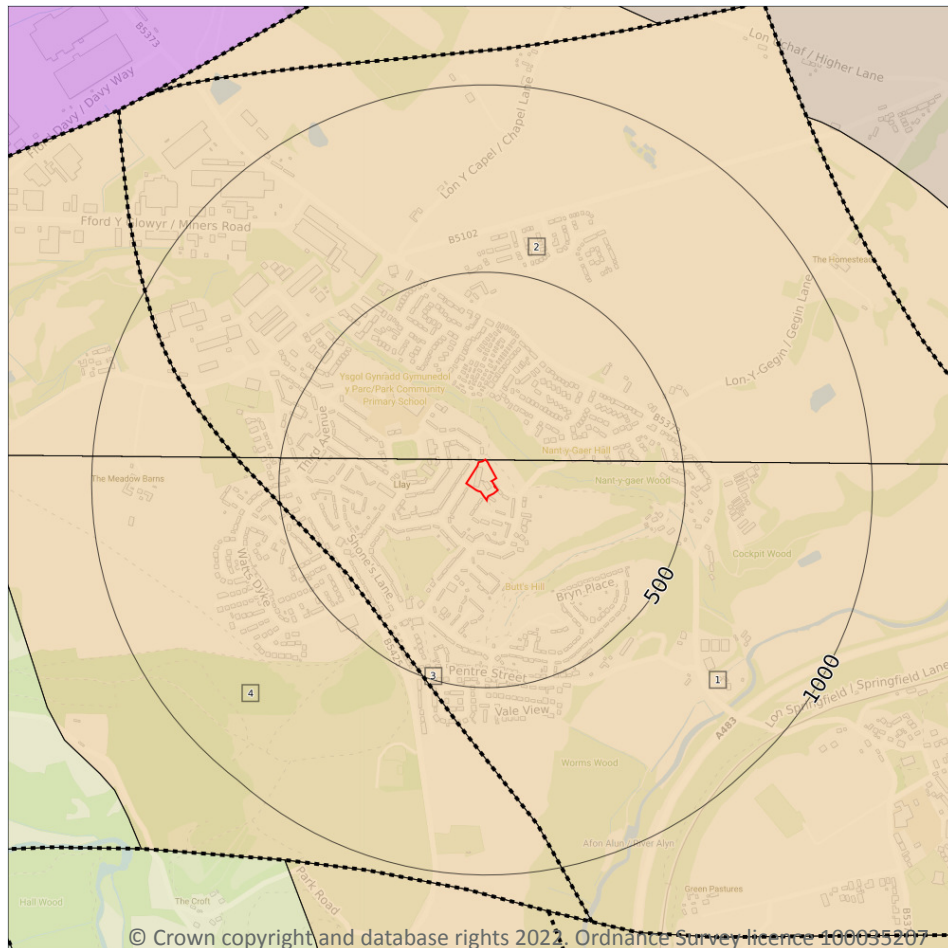
Records within 50m	0
---------------------------	----------

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

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

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

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

15.8 Bedrock geology (50k)

Records within 500m

3

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

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 76**

ID	Location	LEX Code	Description	Rock age
1	On site	SAL-MDSC	SALOP FORMATION - MUDSTONE, SANDSTONE AND CONGLOMERATE	WESTPHALIAN
2	On site	SAL-MDSC	SALOP FORMATION - MUDSTONE, SANDSTONE AND CONGLOMERATE	WESTPHALIAN

ID	Location	LEX Code	Description	Rock age
4	399m SW	SAL-MDSC	SALOP FORMATION - MUDSTONE, SANDSTONE AND CONGLOMERATE	WESTPHALIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	1
---------------------------	----------

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	Fracture	Moderate	Low

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	1
----------------------------	----------

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

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 76**

ID	Location	Category	Description
3	399m SW	FAULT	Fault, inferred, displacement unknown

This data is sourced from the British Geological Survey.

16 Boreholes

16.1 BGS Boreholes

Records within 250m

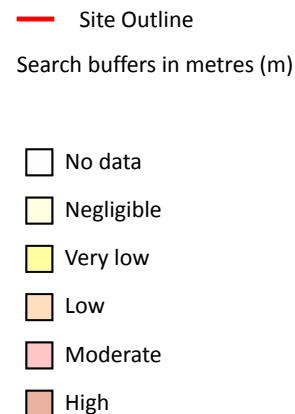
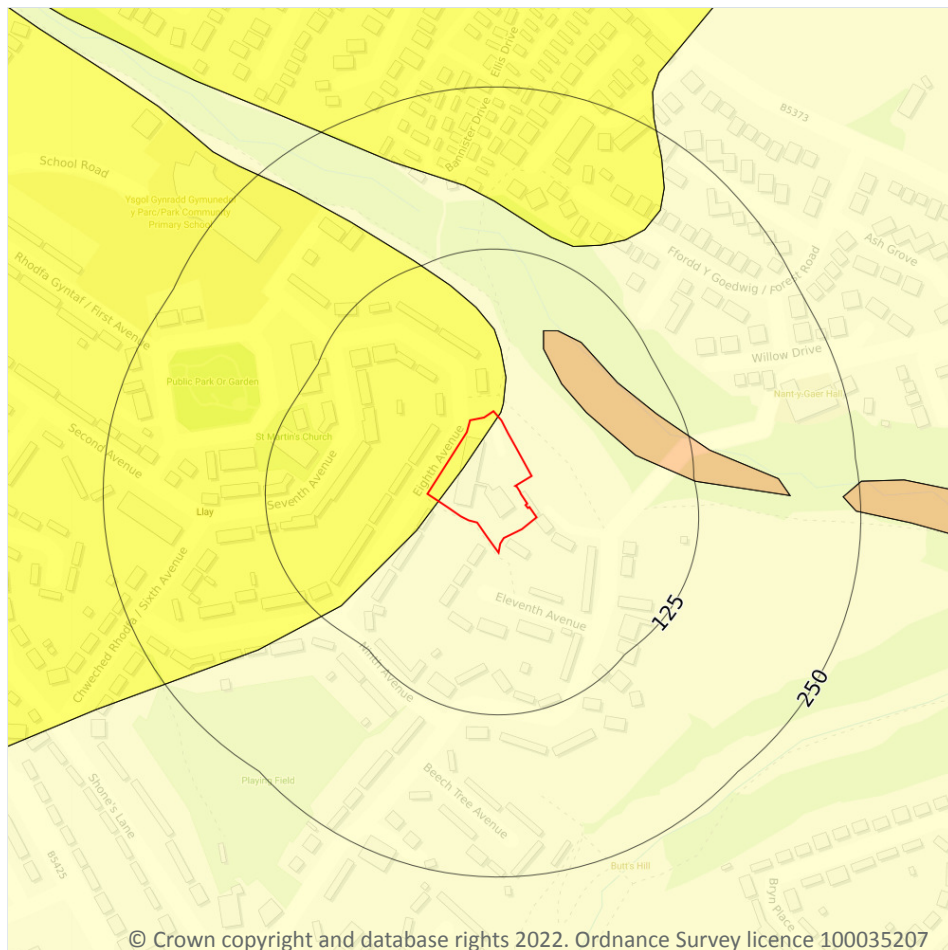
0

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

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



17.1 Shrink swell clays

Records within 50m

2

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

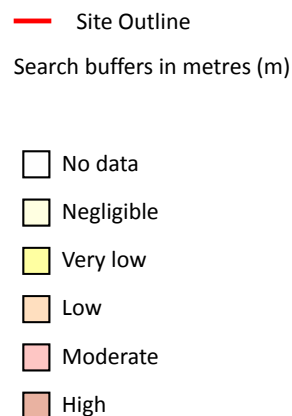
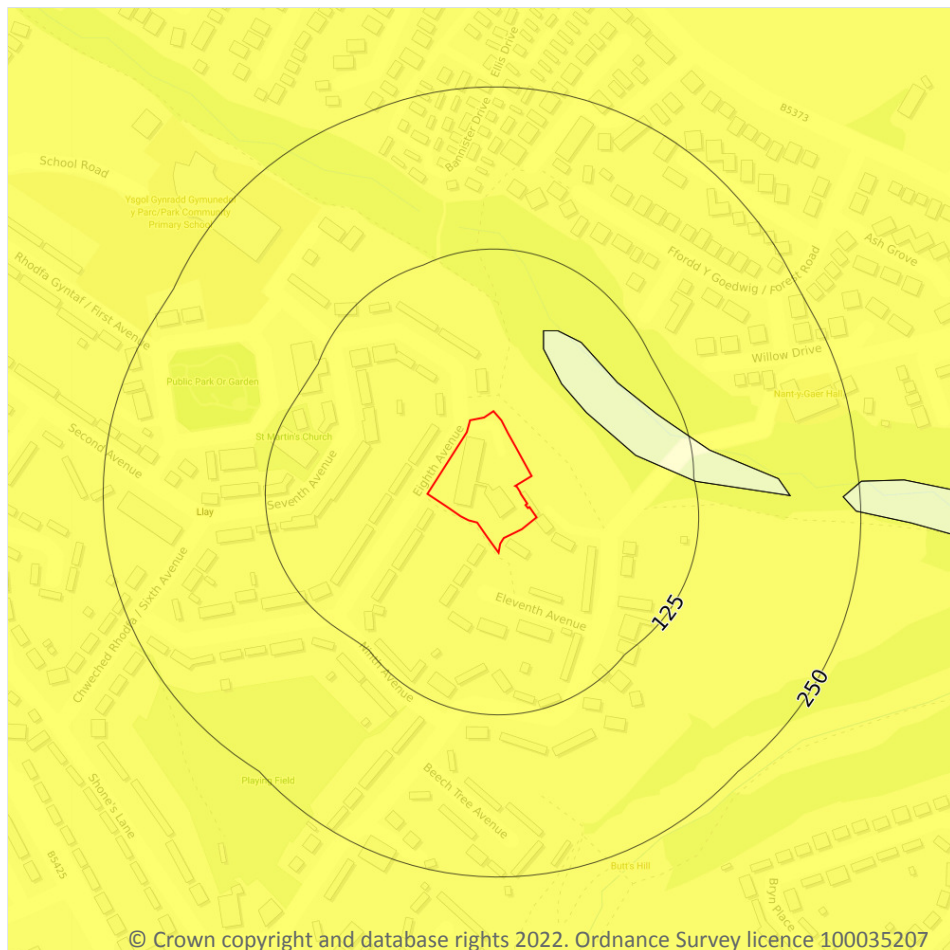
Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 79**

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



17.2 Running sands

Records within 50m

1

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

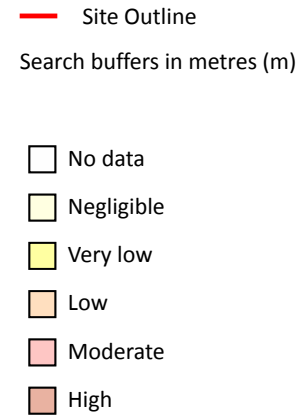
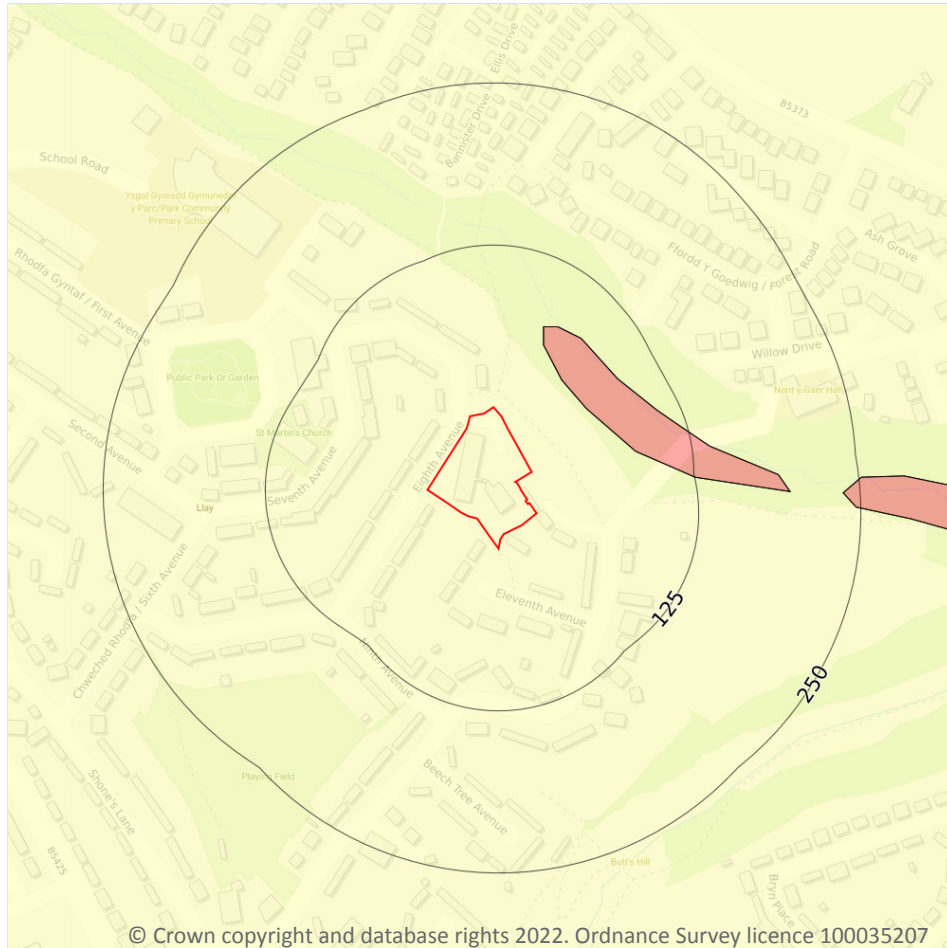
Features are displayed on the Natural ground subsidence - Running sands map on **page 80**

Location	Hazard rating	Details
On site	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



17.3 Compressible deposits

Records within 50m

1

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

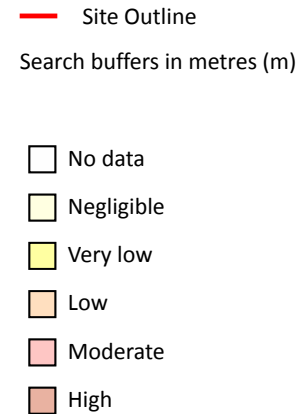
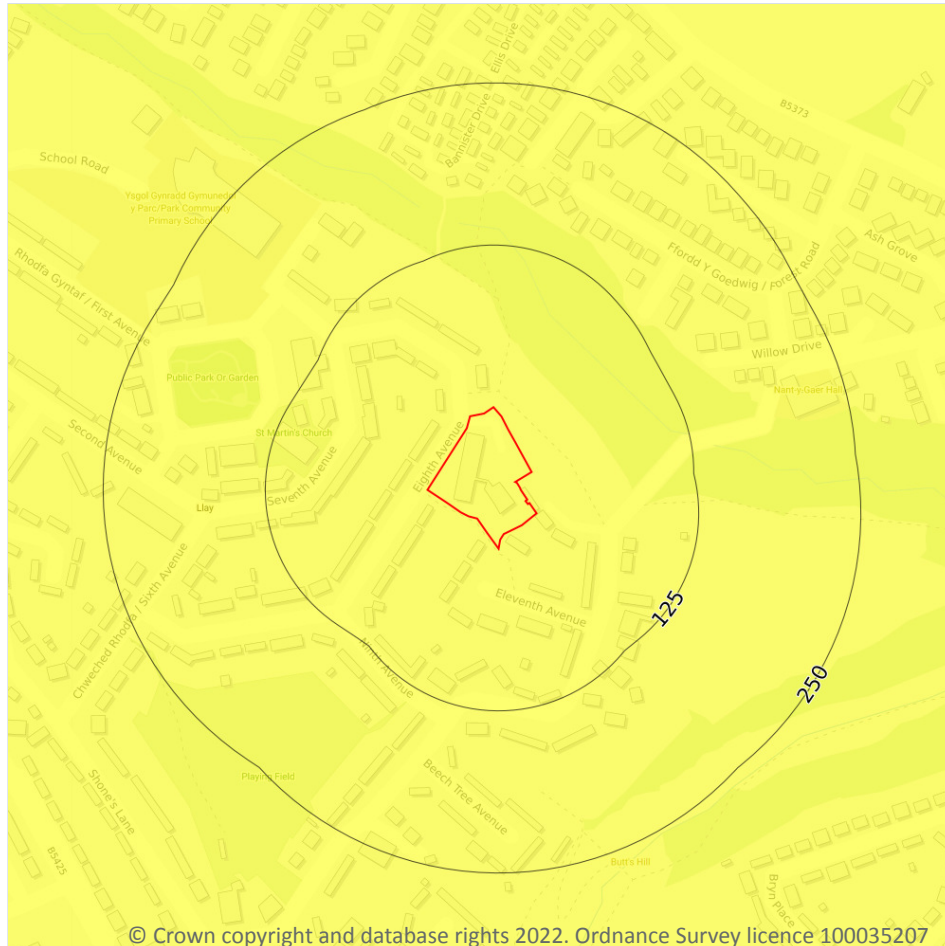
Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 81**

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Collapsible deposits



17.4 Collapsible deposits

Records within 50m

1

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

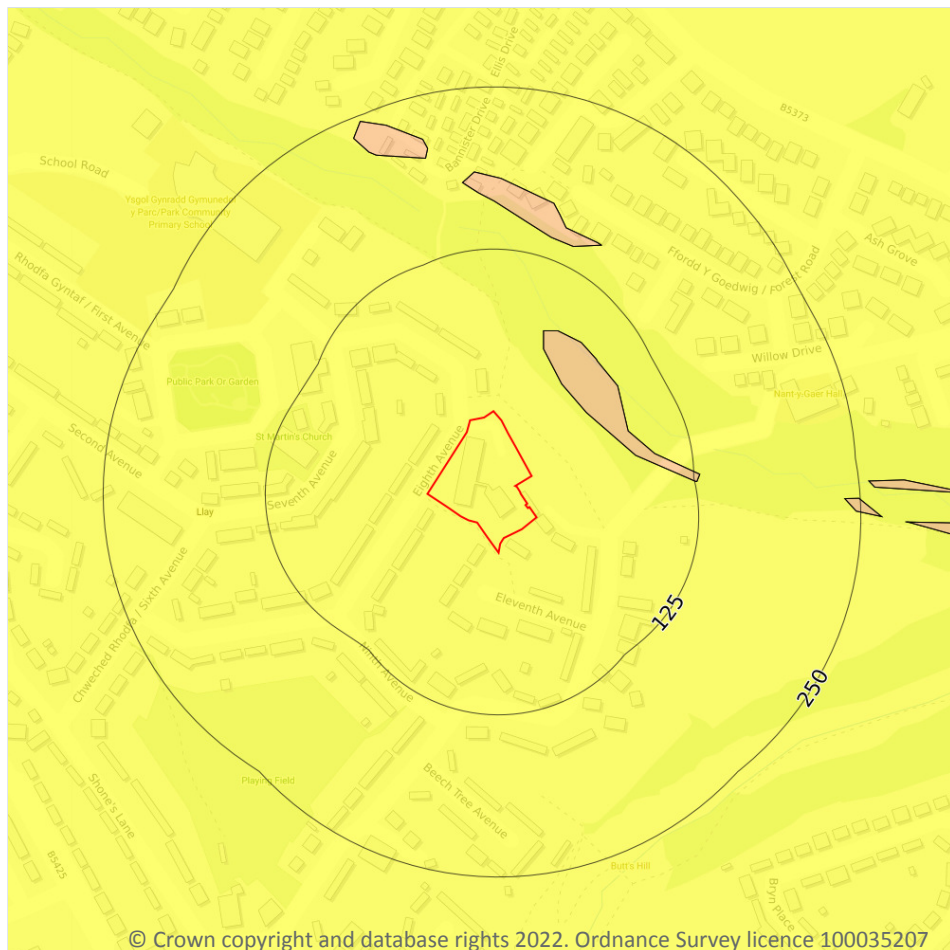
Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 82**

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Landslides



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

17.5 Landslides

Records within 50m

1

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

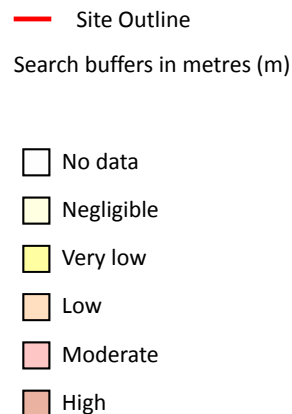
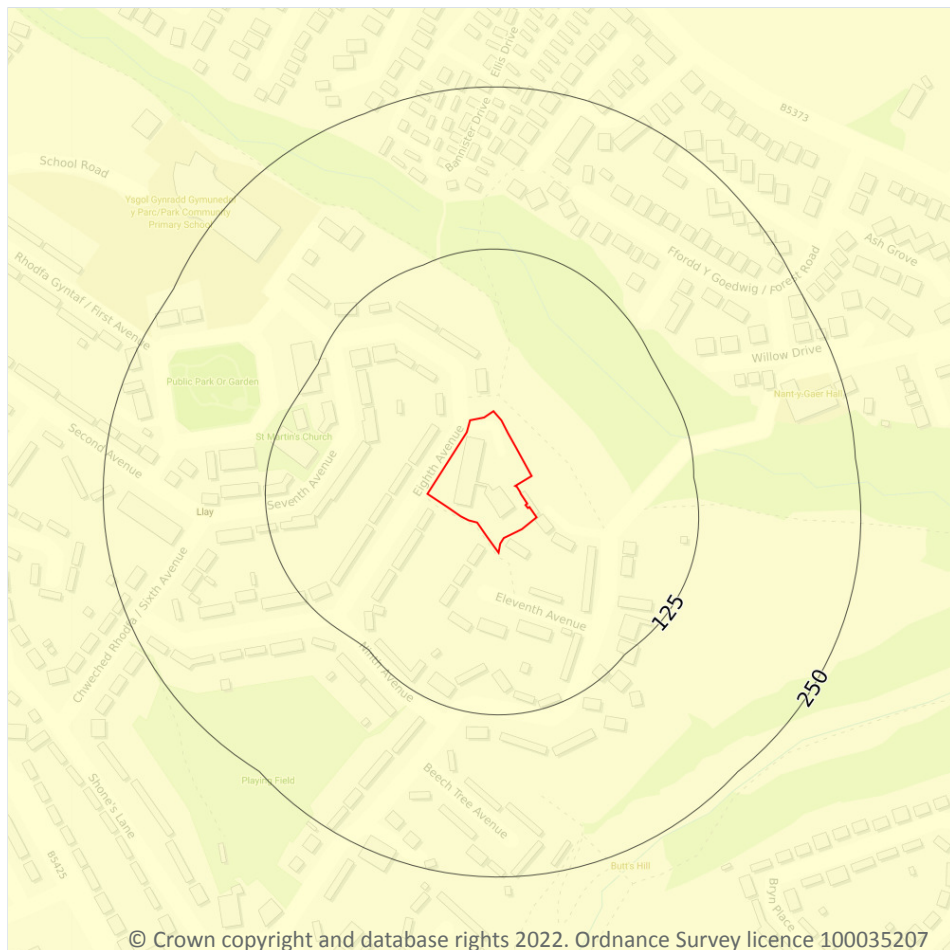
Features are displayed on the Natural ground subsidence - Landslides map on **page 83**

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Ground dissolution of soluble rocks



17.6 Ground dissolution of soluble rocks

Records within 50m

1

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

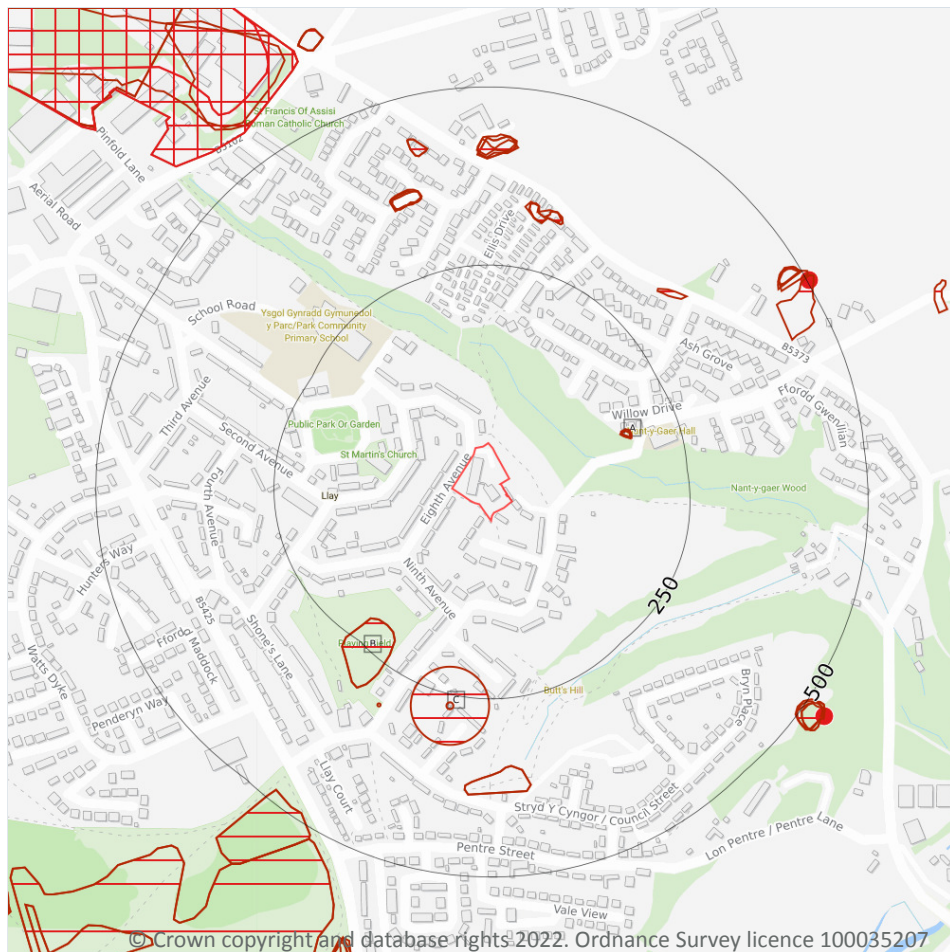
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 84**

Location	Hazard rating	Details
On site	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.

This data is sourced from the British Geological Survey.



18 Mining, ground workings and natural cavities



- Site Outline
- Search buffers in metres (m)
- ▢ Natural cavities (Area)
- Natural cavities (Point)
- BritPits
- ▢ Surface ground workings
- ▢ Underground workings
- ▢ Historical Mineral Planning Areas
- Mining Cavities
- Non Coal Mining
- ▢ Sporadic underground mining of restricted extent possible
- ▢ Localised small scale underground mining possible
- ▢ Small scale mining possible
- ▢ Underground mining known or likely within or in close proximity
- ▢ Underground mining known within or in very close proximity

18.1 Natural cavities

Records within 500m

0

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

This data is sourced from Stantec UK Ltd.

18.2 BritPits

Records within 500m

0

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

This data is sourced from the British Geological Survey.

18.3 Surface ground workings

Records within 250m

6

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 85**

ID	Location	Land Use	Year of mapping	Mapping scale
A	168m E	Gravel Pit	1909	1:10560
A	169m E	Gravel Pit	1938	1:10560
A	169m E	Gravel Pit	1949	1:10560
B	207m SW	Unspecified Pit	1968	1:10560
B	207m SW	Unspecified Pit	1960	1:10560
C	211m S	Gravel Hole	1872	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m

5

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 85**

ID	Location	Land Use	Year of mapping	Mapping scale
3	549m NW	Colliery	1949	1:10560
N	584m NW	Unspecified Mine	1968	1:10560
N	584m NW	Unspecified Mine	1960	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
-	980m NW	Unspecified Disused Shafts	1992	1:10000
-	984m NW	Unspecified Disused Shafts	1979	1:10000

This data is sourced from Ordnance Survey/Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m

0

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

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m

0

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

This data is sourced from the British Geological Survey.

18.7 Mining cavities

Records within 1000m

0

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

This data is sourced from Stantec UK Ltd.

18.8 JPB mining areas

Records on site

0

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

This data is sourced from Johnson Poole and Bloomer.



18.9 Coal mining

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

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

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

This data is sourced from the Coal Authority.

18.10 Brine areas

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

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

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

18.11 Gypsum areas

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

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

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

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

18.13 Clay mining

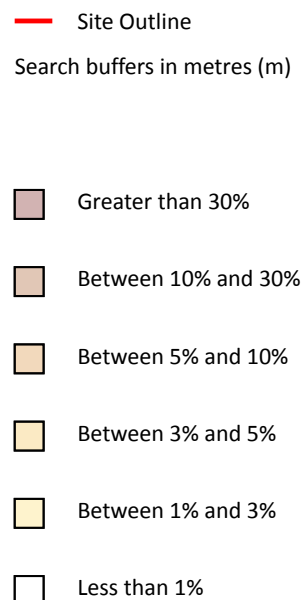
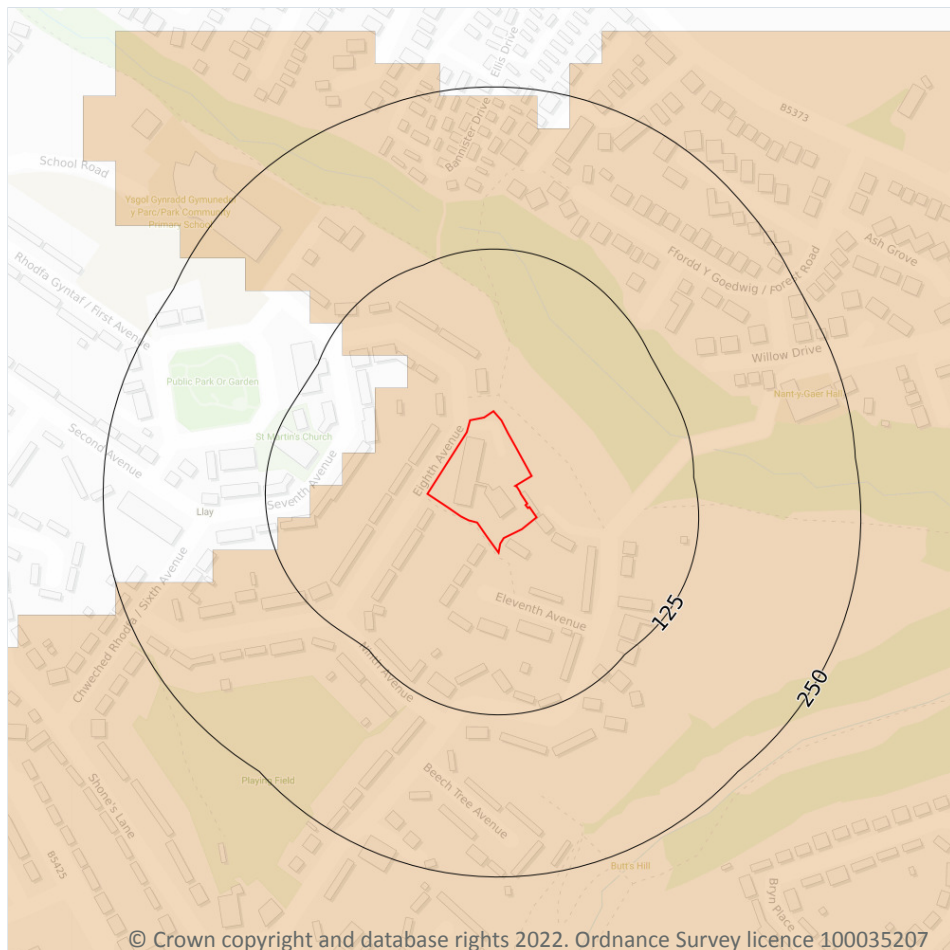
Records on site	0
-----------------	---

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

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



19 Radon



19.1 Radon

Records on site

1

Estimated percentage of dwellings exceeding the Radon Action Level. This data is the highest resolution radon dataset available for the UK and is produced to a 75m level of accuracy to allow for geological data accuracy and a 'residential property' buffer. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain. The data was derived from both geological assessments and long term measurements of radon in more than 479,000 households.

Features are displayed on the Radon map on **page 89**

Location	Estimated properties affected	Radon Protection Measures required
On site	Between 5% and 10%	Basic

This data is sourced from the British Geological Survey and Public Health England.



20 Soil chemistry

20.1 BGS Estimated Background Soil Chemistry

Records within 50m

7

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

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 mg/kg
4m NE	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
6m NW	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 mg/kg

This data is sourced from the British Geological Survey.

20.2 BGS Estimated Urban Soil Chemistry

Records within 50m

0

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

This data is sourced from the British Geological Survey.



20.3 BGS Measured Urban Soil Chemistry

Records within 50m

0

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

This data is sourced from the British Geological Survey.



21 Railway infrastructure and projects

21.1 Underground railways (London)

Records within 250m

0

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

This data is sourced from publicly available information by Groundsure.

21.2 Underground railways (Non-London)

Records within 250m

0

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

This data is sourced from publicly available information by Groundsure.

21.3 Railway tunnels

Records within 250m

0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

21.4 Historical railway and tunnel features

Records within 250m

0

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

This data is sourced from Ordnance Survey/Groundsure.

21.5 Royal Mail tunnels

Records within 250m

0

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



This data is sourced from Groundsure/the Postal Museum.

21.6 Historical railways

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

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

This data is sourced from OpenStreetMap.

21.7 Railways

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

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

This data is sourced from Ordnance Survey and OpenStreetMap.

21.8 Crossrail 1

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

The Crossrail railway project links 41 stations over 100 kilometres from Reading and Heathrow in the west, through underground sections in central London, to Shenfield and Abbey Wood in the east.

This data is sourced from publicly available information by Groundsure.

21.9 Crossrail 2

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

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

This data is sourced from publicly available information by Groundsure.

21.10 HS2

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

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

This data is sourced from HS2 Ltd.



Data providers

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

Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: <https://www.groundsure.com/terms-and-conditions-jan-2020/>.



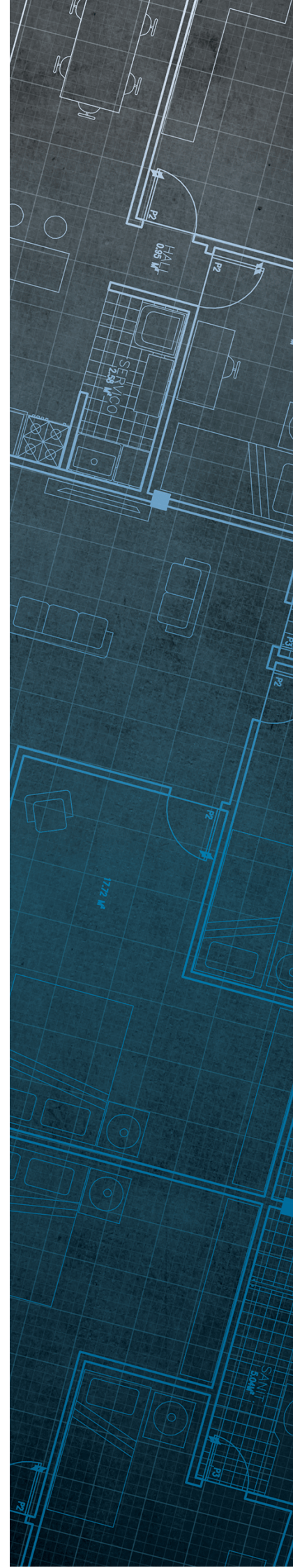


The Coal
Authority

Consultants Coal Mining Report

Cwrt Pentwmpath, Eighth Avenue,
Llay, Wrexham, LL12 0tt
Denbighshire

Date of enquiry:	14 February 2022
Date enquiry received:	14 February 2022
Issue date:	14 February 2022
Our reference:	51002965392001
Your reference:	GS-8516775



Consultants

Coal Mining Report

This report is based on and limited to the records held by the Coal Authority at the time the report was produced.

Client name

GROUNDSURE LIMITED

Enquiry address

Cwrt Pentwmpath, Eighth Avenue, Llay,
Wrexham, LL12 0tt
Denbighshire

How to contact us

0345 762 6848 (UK)
+44 (0)1623 637 000 (International)

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

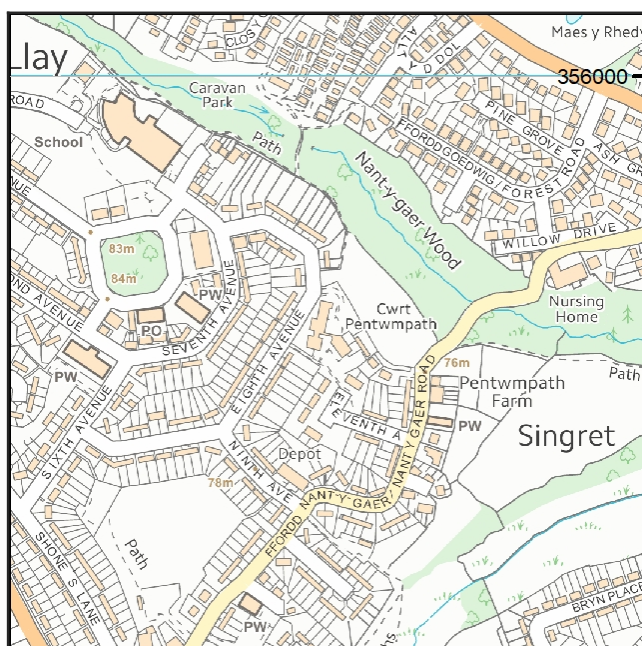
www.groundstability.com

 @coalauthority

 /company/the-coal-authority

 /thecoalauthority

 /thecoalauthority



Approximate position of property



Reproduced by permission of
Ordnance Survey on behalf of
HMSO. © Crown copyright and
database right 2018. All rights
reserved.

Ordnance Survey Licence number: 100020315

Section 1 – Mining activity and geology

Past underground mining

Colliery	Seam	Mineral	Coal Authority reference	Depth (m)	Direction to working	Dipping rate of seam worked (degrees)	Dipped direction of seam worked	Extraction thickness (cm)	Year last mined
unnamed	TWO YARD	Coal	3AD5	682	South-West	12.3	North-East	150	1932
unnamed	TWO YARD	Coal	3A61	687	North-West	10.0	East	150	1931
unnamed	MAIN	Coal	39Y9	687	West	8.0	North-East	200	1960
unnamed	MAIN	Coal	39XZ	696	West	15.0	East	200	1960
unnamed	QUAKER	Coal	3A4G	716	South-West	11.0	North-East	120	1962
unnamed	TWO YARD	Coal	3A62	721	North-West	10.0	East	150	1955
unnamed	MAIN	Coal	39YV	731	South	6.8	East	202	1946
unnamed	MAIN	Coal	39YU	733	South	10.0	North-East	240	1960
unnamed	QUAKER	Coal	3A4F	735	South	11.0	North-East	120	1962
unnamed	QUAKER	Coal	3A4P	748	Beneath Property	6.0	North-East	180	1962
unnamed	QUAKER	Coal	3A4E	761	South-East	11.0	North-East	120	1962
unnamed	MAIN	Coal	39Y6	781	Beneath Property	8.0	North-East	230	1960
unnamed	MAIN	Coal	39Y8	781	Beneath Property	8.0	North-East	230	1960
unnamed	RUABON YARD (SOFT 5 QTRS)	Coal	3A4V	785	West	21.3	North-East	100	1966
unnamed	WALL AND BENCH	Coal	3A28	786	West	20.7	North-East	80	1941
unnamed	MAIN	Coal	39Y0	800	North-West	13.4	South-East	200	1960
unnamed	MAIN	Coal	39Y7	804	North-West	8.0	North-East	230	1960
unnamed	RUABON YARD (SOFT 5 QTRS)	Coal	3A4U	838	South-West	10.0	North-East	100	1966
unnamed	RUABON YARD (SOFT 5 QTRS)	Coal	3A4T	854	South	10.8	North-East	100	1966
unnamed	RUABON YARD (SOFT 5 QTRS)	Coal	3A56	878	Beneath Property	9.6	North-East	100	1966

Colliery	Seam	Mineral	Coal Authority reference	Depth (m)	Direction to working	Dipping rate of seam worked (degrees)	Dipped direction of seam worked	Extraction thickness (cm)	Year last mined
unnamed	RUABON YARD (SOFT 5 QTRS)	Coal	3A58	909	North-West	8.9	East	100	1966

Probable unrecorded shallow workings

None.

Spine roadways at shallow depth

No spine roadway recorded at shallow depth.

Mine entries

None recorded within 100 metres of the enquiry boundary.

Abandoned mine plan catalogue numbers

The following abandoned mine plan catalogue numbers intersect with some, or all, of the enquiry boundary:

11815	12911	NW528
NW550	NW529	

Please contact us on 0345 762 6848 to determine the exact abandoned mine plans you require based on your needs.

Outcrops

No outcrops recorded.

Geological faults, fissures and breaklines

No faults, fissures or breaklines recorded.

Opencast mines

None recorded within 500 metres of the enquiry boundary.

Coal Authority managed tips

None recorded within 500 metres of the enquiry boundary.

Section 2 – Investigative or remedial activity

Please refer to the 'Summary of findings' map (on separate sheet) for details of any activity within the area of the site boundary.

Site investigations

None recorded within 50 metres of the enquiry boundary.

Remediated sites

None recorded within 50 metres of the enquiry boundary.

Coal mining subsidence

The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres of the enquiry boundary, since 31 October 1994.

There is no current Stop Notice delaying the start of remedial works or repairs to the property.

The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.

Mine gas

None recorded within 500 metres of the enquiry boundary.

Mine water treatment schemes

None recorded within 500 metres of the enquiry boundary.

Section 3 – Licensing and future mining activity

Future underground mining

None recorded.

Coal mining licensing

None recorded within 200 metres of the enquiry boundary.

Court orders

None recorded.

Section 46 notices

No notices have been given, under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence.

Withdrawal of support notices

The property is not in an area where a notice to withdraw support has been given.

The property is not in an area where a notice has been given under section 41 of the Coal Industry Act 1994, cancelling the entitlement to withdraw support.

Payments to owners of former copyhold land

The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

Section 4 – Further information

The following potential risks have been identified and as part of your risk assessment should be investigated further.

Development advice

The site is within an area of historical coal mining activity. Should you require advice and/or support on understanding the mining legacy, its risks to your development or what next steps you need to take, please contact us.

For further information on specific site or ground investigations in relation to any issues raised in Section 4, please call us on 0345 762 6848 or email us at groundstability@coal.gov.uk.

Section 5 – Data definitions

The datasets used in this report have limitations and assumptions within their results. For more guidance on the data and the results specific to the enquiry boundary, please **call us on 0345 762 6848** or **email us at groundstability@coal.gov.uk**.

Past underground coal mining

Details of all recorded underground mining relative to the enquiry boundary. Only past underground workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination, will be included.

Probable unrecorded shallow workings

Areas where the Coal Authority believes there to be unrecorded coal workings that exist at or close to the surface (less than 30 metres deep).

Spine roadways at shallow depth

Connecting roadways either, working to working, or, surface to working, both in-seam and cross measures that exist at or close to the surface (less than 30 metres deep), either within or within 10 metres of the enquiry boundary.

Mine entries

Details of any shaft or adit either within, or within 100 metres of the enquiry boundary including approximate location, brief treatment details where known, the mineral worked from the mine entry and conveyance details where the mine entry has previously been sold by the Authority or its predecessors British Coal or the National Coal Board.

Abandoned mine plan catalogue numbers

Plan numbers extracted from the abandoned mines catalogue containing details of coal and other mineral abandonment plans deposited via the Mines Inspectorate in accordance with the Coal Mines Regulation Act and Metalliferous Mines Regulation Act 1872. A maximum of 9 plan extents that intersect with the enquiry boundary will be included. This does not infer that the workings and/or mine entries shown on the abandonment plan will be relevant to the site/property boundary.

Outcrops

Details of seam outcrops will be included where the enquiry boundary intersects with a conjectured or actual seam outcrop location (derived by either the British Geological Survey or the Coal Authority) or intersects with a defined 50 metres buffer on the coal (dip) side of the outcrop. An indication of whether the Coal Authority believes the seam to be of sufficient thickness and/or quality to have been worked will also be included.

Geological faults, fissures and breaklines

Geological disturbances or fractures in the bedrock. Surface fault lines (British Geological Survey derived data) and fissures and breaklines (Coal Authority derived data) intersecting with the enquiry boundary will be included. In some circumstances faults, fissures or breaklines have been known to contribute to surface subsidence damage as a consequence of underground coal mining.

Opencast mines

Opencast coal sites from which coal has been removed in the past by opencast (surface) methods and where the enquiry boundary is within 500 metres of either the licence area, site boundary, excavation area (high wall) or coaling area.

Coal Authority managed tips

Locations of disused colliery tip sites owned and managed by the Coal Authority, located within 500 metres of the enquiry boundary.

Site investigations

Details of site investigations within 50 metres of the enquiry boundary where the Coal Authority has received information relating to coal mining risk investigation and/or remediation by third parties.

Remediated sites

Sites where the Coal Authority has undertaken remedial works either within or within 50 metres of the enquiry boundary following report of a hazard relating to coal mining under the Coal Authority's Emergency Surface Hazard Call Out procedures.

Coal mining subsidence

Details of alleged coal mining subsidence claims made since 31 October 1994 either within or within 50 metres of the enquiry boundary. Where the claim relates to the enquiry boundary confirmation of whether the claim was accepted, rejected or whether liability is still being determined will be given. Where the claim has been discharged, whether this was by repair, payment of compensation or a combination of both, the value of the claim, where known, will also be given.

Details of any current 'Stop Notice' deferring remedial works or repairs affecting the property/site, and if so the date of the notice.

Details of any request made to execute preventative works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991. If yes, whether any person withheld consent or failed to comply with any request to execute preventative works.

Mine gas

Reports of alleged mine gas emissions received by the Coal Authority, either within or within 500 metres of the enquiry boundary that subsequently required investigation and action by the Coal Authority to mitigate the effects of the mine gas emission.

Mine water treatment schemes

Locations where the Coal Authority has constructed or operates assets that remove pollutants from mine water prior to the treated mine water being discharged into the receiving water body.

These schemes are part of the UK's strategy to meet the requirements of the Water Framework Directive. Schemes fall into 2 basic categories: Remedial – mitigating the impact of existing pollution or Preventative – preventing a future pollution incident.

Mine water treatment schemes generally consist of one or more primary settlement lagoons and one or more reed beds for secondary treatment. A small number are more specialised process treatment plants.

Future underground mining

Details of all planned underground mining relative to the enquiry boundary. Only those future workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination will be included.

Coal mining licensing

Details of all licenses issued by the Coal Authority either within or within 200 metres of the enquiry boundary in relation to the under taking of surface coal mining, underground coal mining or underground coal gasification.

Court orders

Orders in respect of the working of coal under the Mines (Working Facilities and Support) Acts of 1923 and 1966 or any statutory modification or amendment thereof.

Section 46 notices

Notice of proposals relating to underground coal mining operations that have been given under section 46 of the Coal Mining Subsidence Act 1991.

Withdrawal of support notices

Published notices of entitlement to withdraw support and the date of the notice. Details of any revocation notice withdrawing the entitlement to withdraw support given under Section 41 of the Coal Industry Act 1994.

Payment to owners of former copyhold land

Relevant notices which may affect the property and any subsequent notice of retained interests in coal and coal mines, acceptance or rejection notices and whether any compensation has been paid to a claimant.

345 762 6848 (UK)
44 (0)1623 637 000 (International)
www.groundstability.com

APPENDIX C

(i) Notes on Limitations

The desk study report includes examination and provision of historical maps and an environmental database search covering geology, hydrogeology, historical, land use, water abstractions, groundwater source protection zones, landfill sites, radon, trade directory entries, petrol filling stations and nature reserves for the site and surrounding area. A Coal Authority Report has been obtained as part of the investigation.

This report does not consider ecological impacts (e.g. bats) or botanical risks (e.g. Japanese knotweed). It is recommended that these are considered as part of the assessment of development constraints for the site.

The assessment and judgements given in this report are directed by both the finite data on which they are based and the proposed works to which they are addressed. The data essentially comprised a study of available documented information from various sources together with discussions with relevant authorities and other interested parties. There may also be circumstances at the site that are not documented. The information reviewed is not exhaustive and has been accepted in good faith as providing representative and true data pertaining to site conditions. If additional information becomes available which might impact our environmental conclusions, we request the opportunity to review the information, reassess the potential concerns and modify our opinion if warranted.

It should be noted that any risks identified in this report are perceived risks based on the available information. Actual risks can only be assessed following a physical investigation of the site.

This report was prepared by Betts Geo Environmental Ltd for the sole and exclusive use of the client specified at the beginning of this report with response to particular instructions. Any other parties using the information contained in this report do so at their own risk and any duty of care to those parties is excluded.

This document has been prepared for the titled project only and should any third party wish to use or rely upon the contents of the report, written approval from Betts Geo Environmental with must be sought.

Betts Geo Environmental Ltd accepts no responsibility or liability for the consequences of this document being used for the purpose other than that for which it was commissioned and for this document to any other party other than the person by whom it was commissioned.