Lead Road

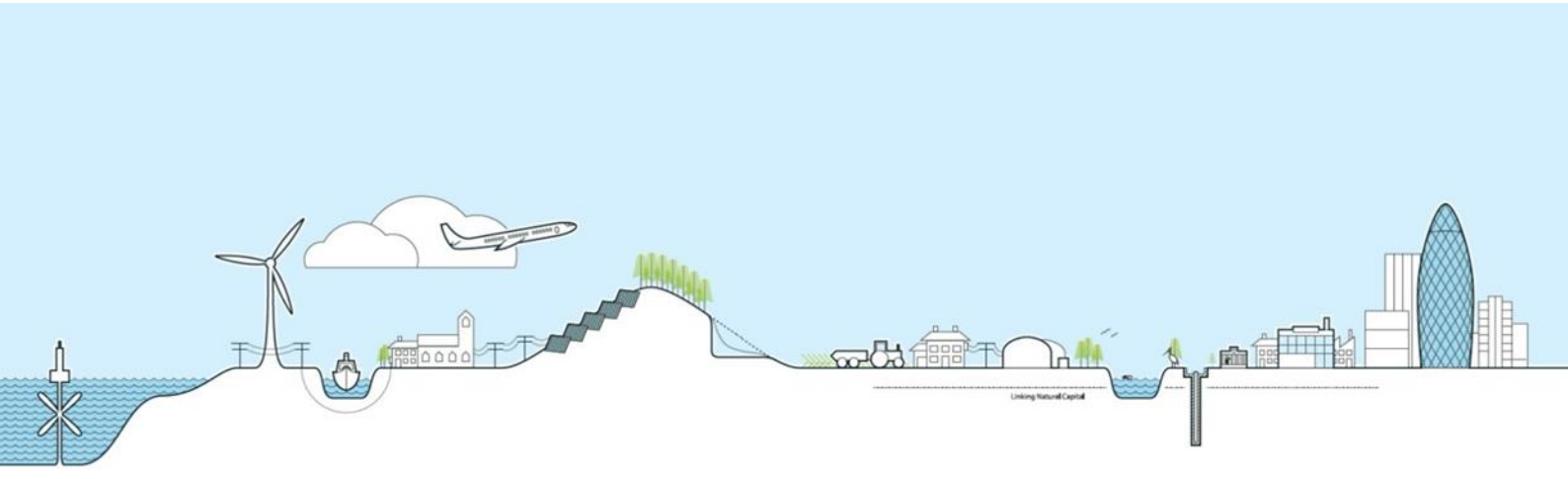
Environmental Permit Application

Site Condition Report

December 2019

Prepared By

aardvark
environment matters



Project Quality Control Sheet

VERSION 2	Author	Checked by	Approved by
Signature			
Date	14/07/2020	15/07/2020	16/07/2020
Company	Aardvark EM Ltd	Aardvark EM Ltd	Aardvark EM Ltd

Location: **Lead Road, Hedley, Gateshead, Northumberland, NE40 4BS**

Grid Reference: **NZ 12119 60577**

Project Manager: Ross Malton BSc GradIEMA

Report Author: Ross Malton BSc GradIEMA

Report Number: **1945-R006**

Report Status: Final v2

Copyright: All copyright in this document is reserved.

Liability: This document contains information and may contain conclusions and recommendations. Every effort has been made to ensure that the information is accurate and that the opinions expressed are sound. However, Aardvark EM Limited cannot be made liable for any errors or omissions or for any losses or consequential losses resulting from decisions based on the information.

Report Written and Produced By

Aardvark EM Limited, Higher Ford, Wiveliscombe, Taunton, Somerset, TA4 2RL

Telephone: 01984 624989, Facsimile: 01984 623912

Email: environment@aardvarkem.co.uk, Web: www.aardvarkem.co.uk

Contents

1 Introduction 1
1.1 Site Location 2
2 Site Operations 3
2.1 Details of Installation 3
2.2 Permitted Operations 3
2.3 Site Layout 3
3 Site History 4
3.1 Current Land Use 4
3.2 Previous History 4
4 Environmental Setting and Condition of the Land 6
4.1 Geological Data 6
4.2 Hydrogeological and Hydrological Data 6
4.3 Surface Water Features 7
4.4 Flood Risk 7
4.5 Pollution History 7
4.6 Environmental Designations 7
4.7 Other Activities 9
4.7.1 Discharge Licenses 9
4.7.2 Permitted Sites 9
4.7.3 Historic Landfills 9
5 Site Investigations 10
5.1 Enzygo, Phase 1 Preliminary Risk Assessment, April 2018 10
5.2 Aardvark EM Walkover Survey 10
6 Site Photographs 11
Appendices 15
Appendix 1 – Site Boundary 15
Appendix 2 – Historic Maps 16
Appendix 3 – Geology 17
Appendix 4 – Enzygo Phase 1 Preliminary Risk Assessment 18

Figures

Figure 1: Site Location 2

Figure 2: Site entrance 11

Figure 3: Site entrance and southern boundary 11

Figure 4: Looking north along the sites eastern boundary 12

Figure 5: Looking north-east towards the centre of the site 12

Figure 6: Looking west along the sites southern boundary 13

Figure 7: Looking south east from the top of the site 13

Figure 8: Looking south along the sites eastern boundary 14

Figure 9: Site entrance 14

Tables

Table 1: Historical land use 5

Table 2: Local geology 6

Table 3: Surface water features 7

Table 4: Previous pollution incidents 7

Table 5: Discharge licenses within 1km of the site 9

Table 6: Permitted sites within 1km of the site 9

Table 7: Waste carries and broker sites within 1km of the site 9

1 Introduction

This document represents the Site Condition Report (SCR) for the proposed ARL 019 Ltd (company registration number: 11306585) site located at Lead Road, submitted as part of an application to the Environment Agency for a permit to operate under the Environmental Permitting (England and Wales) Regulations 2016.

Records of the site and surrounding areas have been reviewed in order to describe its condition at the time of making the application, and in particular, to identify any substances in, on or under the land that may constitute a pollution risk to the land.

The report satisfies the Environment Agency's requirements for a SCR by identifying:

- Determine the existing condition of the site at the time of making this application
- Determine the proposed operations on-site as part of the permit application
- Provide information about the surrounding area which may act as potential sources of pollution, or be receptors in the event of a pollution incident.

A desk study has been undertaken reviewing the information available from the following sources:

- The Landmark Information Group via a Envirocheck report
- The MAGIC Maps database

This information is used to describe ground conditions at the site and in particular, to establish baseline conditions by identifying any polluting substances that may be present at the site. The report is written to satisfy the requirement for a "baseline report" by the Industrial Emissions Directive. Polluting substances that may be used or generated on site and pollution prevention measures are identified and described.

The facility will be operated in accordance with an appropriate environmental permit, the proposed boundary of which can be found in Appendix 1.

1.1 Site Location

The site is located at Lead Road, Hedley, Gateshead, Northumberland, NE40 4BS. The centre of the site is at National Grid Reference NZ 12119 60577, as indicated by the red marker on Figure 1 below.

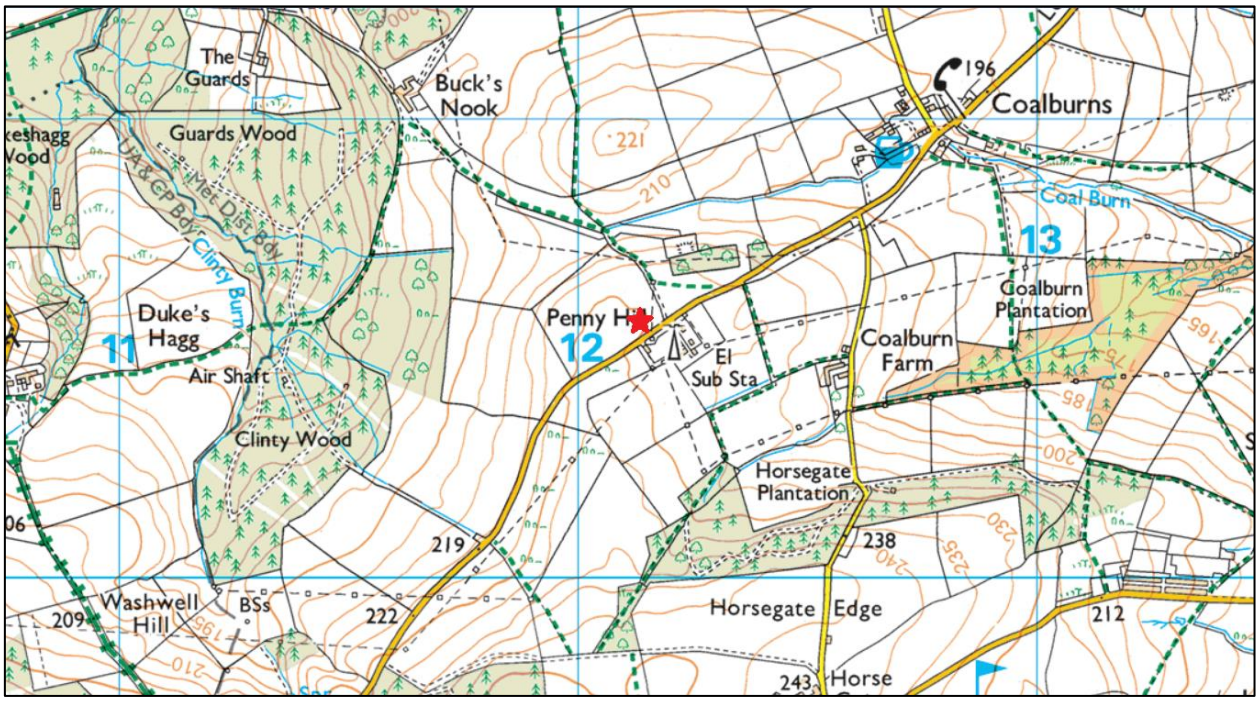


Figure 1: Site Location

2 Site Operations

2.1 Details of Installation

The Lead Road gas peaking plant will comprise 16 x 2.5MW_e MTU 20V4000GS natural gas fired engines. The electricity generated by the engines will be exported to the national grid. The gas peaking plant will operate for up to 2,500 hours per annum.

2.2 Permitted Operations

Under the Environmental Permitting (England and Wales) Regulations 2016 the burning of any fuel in an appliance with a rated thermal input of 50 or more megawatts is listed as a Part A(1) activity under Schedule 1, Part 2, Section 1.1.

The facility will be fuelled by natural gas and generate electricity to be exported to the national grid. The facility will operate for up to 2,500 hours per annum.

2.3 Site Layout

Please refer to Appendix 1 to view the site layout.

3 Site History

3.1 Current Land Use

The site is currently an open field used to grow agricultural crops.

3.2 Previous History

Historical records of the site and surround area, dating back to 1857, show that the site has been an agricultural field right up to the present day. Mapping data published in 1961 appears to show a wooded area across some of the site. However, this no longer appears in maps from 1981 onwards. Arial imagery of the site also shows a wooded area across some of the site which appears to have been cleared in 2012.

The surrounding area has seen a greater level of change, albeit still negligible. Maps from 1961 show the development of the substation located to the south of Lead Road. The development of the substation is accompanied by a series of overhead powerlines. Maps from the same year also show that the Penny Planation had been felled. Maps from 1939 show that the West Pit House has been demolished.

Historical mapping indicates that it is unlikely that there was a previous industrial land use that could present a contamination hazard to the site.

Table 1 provides a complete overview of the historic maps and images reviewed. Complete copies of these maps and images can be found in Appendix 3.

Date	Key Features on Site	Adjacent Features
1857	Open field, likely to be for agricultural use.	Further fields to the north of the site. The Penny Planation is located to the south of the site on the other side of the road. A further plantation is shown to the east of the site, this is labelled as 'Old Quarry'. West Pit House is located to the east of the site.
1887	No change from previous entry.	No change from previous entry.
1896	No change from previous entry.	An open coal shaft is now marked to the south of the site in the Penny Planation.
1919	No change from previous entry.	No change from previous entry.
1939	No change from previous entry.	West Pit House no longer appears on the map.
1961	A wooded area appears across the centre of the site.	The substation located to the south of the site has been developed along with a series of overhead powerlines. The Penny Planation no longer appears to the south of the site.
1978	No change from previous entry.	No change from previous entry.
1993	No change from previous entry.	Additional overhead powerlines are added to the substation.
2001	No change from previous entry.	No change from previous entry.
2012	Wooded area across the centre of the site is cleared.	No change from previous entry.

Table 1: Historical land use

4 Environmental Setting and Condition of the Land

4.1 Geological Data

The geology of the site area is shown in Appendix 3 and is summarised in Table 2 with the general engineering geology and geotechnical characteristics of the materials underlying the site (and its immediate surroundings).

	Age	Stratigraphic Name	Description and Characteristics
Superficial Geology	Devensian	Till	Unsorted and unstratified drift, generally over consolidated, deposited directly by and underneath a glacier without subsequent reworking by water from the glacier.
	Devensian	Glaciofluvial Deposits	Includes mostly coarse-grained sediments (i.e. sand and gravel) with some finer- grained layers (i.e. clay and silt).
Bedrock	Duckmantian Substage – Bolsovian Substage	Pennine Middle Coal Measures Formation – mudstone, siltstone and sandstone	Interbedded grey mudstone, siltstone, pale grey sandstone and commonly coal seams, with a bed of mudstone containing marine fossils at the base, and several such marine fossil-bearing mudstones in the upper half of the unit.
		Pennine Middle Coal Measures Formation - sandstone	
	Langsettian Substage – Langsettian Substage	Pennine Lower Coal Measures Formation – mudstone, siltstone and sandstone	Interbedded grey mudstone, siltstone and pale grey sandstone, commonly with mudstones containing marine fossils in the lower part, and more numerous and thicker coal seams in the upper part.
		Pennine Lower Coal Measures Formation - sandstone	

Table 2: Local geology

4.2 Hydrogeological and Hydrological Data

Groundwater exists beneath the site and is designated as a Secondary A Aquifer. Surface water is likely to run off the sites in a southerly direction towards Lead Road.

The site is not within a Source Protection Zone (SPZ). At the time of writing the proximity of the nearest ground water abstraction is not known.

An enquiry has been made to the Environment Agency to provide details of all ground water abstractions licences within 1km of the site and they have affirmed that they do not hold records of any current abstraction licences.

Gateshead Council were also contacted to provide records of any unlicensed private water abstractions within 1km. The only borehole water abstraction they were aware of is located at a farm adjacent to the southern end of Horsegate bank 900m to the south east of the site.

4.3 Surface Water Features

The surface water features in the vicinity of the site are listed in Table 3. There are no surface water features on the site.

Feature	Location Relative to Site
Drainage ditch	To the south and north of the site. >200m
Clinty Burn stream/river	North west of the site. >500m
Coal Burn Gill stream/river	South east of the site. >750m
Coal Burn stream/river	North east of the site. >550m

Table 3: Surface water features

4.4 Flood Risk

The site is not located within a flood zone for fluvial or tidal flooding.

4.5 Pollution History

	On Site	0 to 250m	251 to 500m	501 to 1,000m (up to 2,000)
Contaminated Land Register Entries and Notices	0	0	0	0
Prosecutions Relating to Controlled Waters	0	0	0	0
Enforcement and Prohibition Notices	0	0	0	0
Pollution Incidents in Controlled Waters	0	0	0	0
Prosecutions Relating to Authorised Processes	0	0	0	0
Potentially Infilled Land (Non-Water)	0	3	4	16

Table 4: Previous pollution incidents

4.6 Environmental Designations

There are no designated sites within 1km of the site.

There are no Sites of Special Scientific Interest (SSSI) within 2km of the site. There are 10 SSSI's within 10km of the site boundary. There are 17 Local Nature Reserves (LNR) within 10km of the site

boundary. These are listed in Table 5. There are no Special Areas of Conversation (SACs), Ramsar sites or National Nature Reserves (NNR) within 10km of the site.

Site Name	Designation	Distance (km)
Hallow Hill	SSSI	6.2km
Close House Riverside	SSSI	4.2km
Causey Bank Mires	SSSI	9.4km
Thornley Wood	SSSI	5.1km
Ryton Willows	SSSI	5.4km
Strother Hills	SSSI	3.8km
Gibside	SSSI	5.6km
Shibdon Pond	SSSI	7.5km
River Tyne at Ovingham	SSSI	4.5km
Lower Derwent Meadows	SSSI	6.8km
Castlefields Wood	LNR	3.2km
Clara Vale	LNR	4.3km
Deep Dene	LNR	7.5km
Denton Dene	LNR	8.4km
Cross Lane Meadows	LNR	9.1km
Heddon Common	LNR	5.9km
Kyo Bogs	LNR	9.8km
Harperley & Pea Woods	LNR	9.4km
Priestclose Wood	LRN	2.3km
Wylam Haughs	LNR	3.8km
Walbottle Brickwords	LNR	6.9km
Walbottle Dene	LNR	7.1km
Tanfield Lea March	LNR	9.5km
Sugley Dene	LNR	7.8km
Shibdon Pond	LNR	7.6km
Throckley & Walbottle Dene	LNR	7.1km
Ryton Willows	LNR	5.8km

Table 5: Designated sites

4.7 Other Activities

There are a number of other licensed activities which are shown to be within the vicinity of the site. These can be found in the sections below.

4.7.1 Discharge Licenses

Site Name	Distance from Site (km)	Grid Reference	Permit Number
Northumbrian Water Ltd	0.6	NZ1450862253	NE/EPRBB3791AL/001

Table 5: Discharge licenses within 1km of the site

4.7.2 Permitted Sites

Operation	Site Name	Distance from site (km)	Permit Number/ Registration Number
Waste Exemption Registrations for England	Evelyn Priestley	0.8	WEX185706
Waste Operation	Suez Recycling and Recovery North East Ltd	0.9	SP3893NR/V006

Table 6: Permitted sites within 1km of the site

Operation	Site Name	Distance from site (km)	Permit Number/ Registration Number
Waste Carriers and Brokers	James Lee	0.3	CBDL32761
Waste Carriers and Brokers	K A Scrap Metal	0.5	CBDU80501
Waste Carriers and Brokers	John Proctor Haulage Ltd	0.5	CBDU140760
Waste Carriers and Brokers	JC & EM Robson	0.7	CBDU87023

Table 7: Waste carries and broker sites within 1km of the site

4.7.3 Historic Landfills

There are no historical landfill sites within 2km of the site.

5 Site Investigations

The following site investigation reports have been undertaken at the site:

- Enzygo, Phase 1 Preliminary Risk Assessment, April 2018
- Aardvark EM Walkover Survey, August 2019

Copies of the aforementioned report can be found in Appendix 5.

5.1 Enzygo, Phase 1 Preliminary Risk Assessment, April 2018

Enzygo undertook a Phase 1 Preliminary Risk Assessment in April 2018 in support of the Planning Application. As part of the study the following aspects where reviewed:

- Site history
- Ground conditions
- Groundwater
- Coal mining
- Non coal mining and cavities
- Ground workings
- Hydrology
- Radon risk potential
- Natural hazards
- Sensitive land uses
- Environmental sensitivity
- Industrial land use
- Regulatory databases
- Waste sites

The work undertaken in the report concluded that there was no existing environmental risk to the site.

5.2 Aardvark EM Walkover Survey

A walk over survey was conducted by Aardvark EM. No evidence of contamination from previous usage was identified during this survey.

Photographs from the survey can be found below.

6 Site Photographs

Figure 2: Site entrance

Figure 3: Site entrance and southern boundary

Figure 4: Looking north along the sites eastern boundary

Figure 5: Looking north-east towards the centre of the site

Figure 6: Looking west along the sites southern boundary

Figure 7: Looking south east from the top of the site

Figure 8: Looking south along the sites eastern boundary

Figure 9: Site entrance

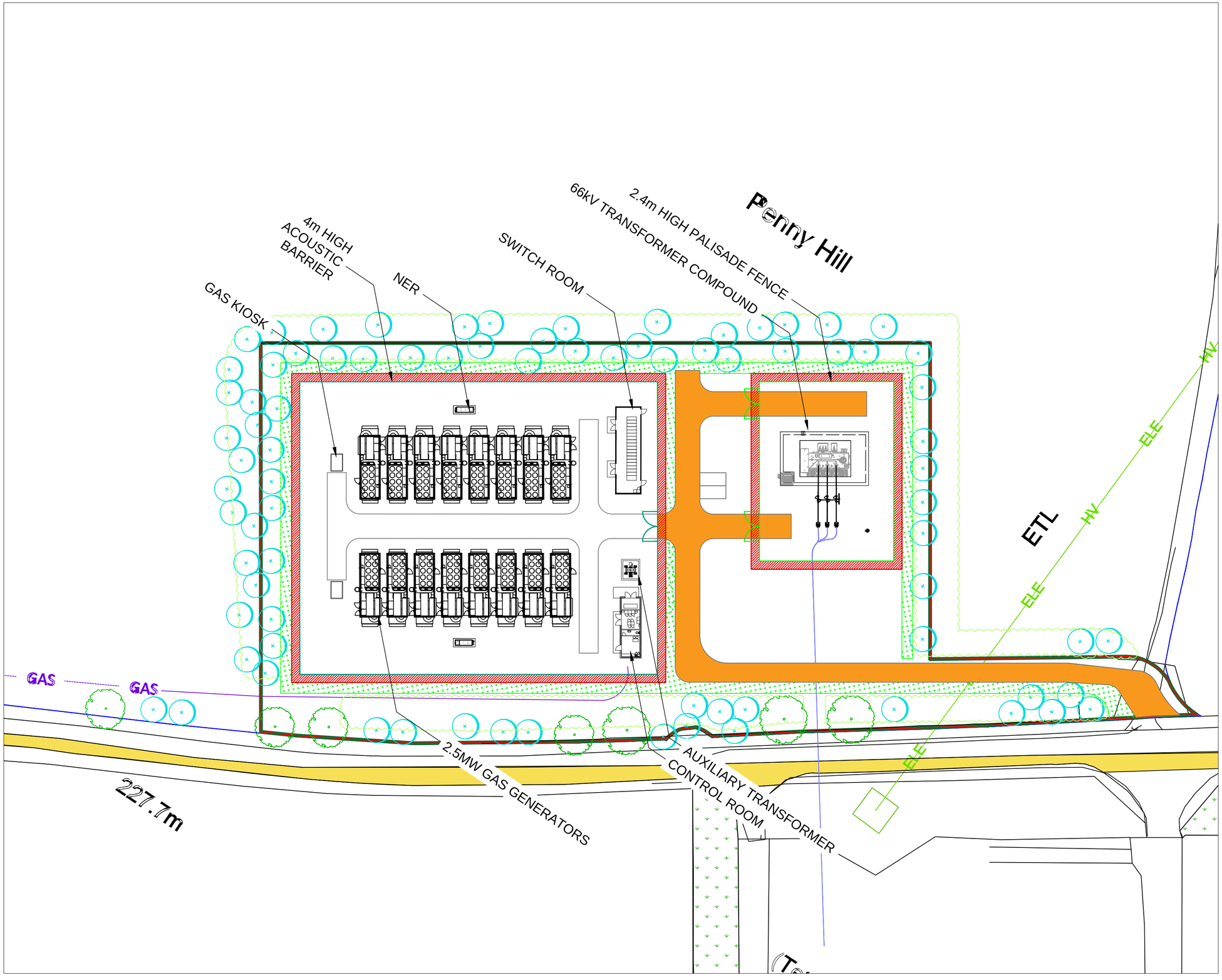
Appendices

Appendix 1 – Site Boundary

Appendix 2 – Historic Maps

Appendix 3 – Geology

Appendix 4 – Enzygo Phase 1 Preliminary Risk Assessment



Key

- PROPSED SITE
- SITE ACCESS / MAINTENANCE
- GAS — PROPSED GAS PIPE — GAS
- ELE HV — 132kV CONNECTION — ELE HV
- 2.5MW MTU GENERATOR (TYPE C ENCLOSURE)
- LV ROOM
- GENERATOR CONTROL ROOM
- WELFARE
- AUXILIARY TRANSFORMER
- GENERATOR NER
- 11kV SUBSTATION GRP HOUSING
- 66kV TRANSFORMER COMPOUND
- EXISTING PLANTING
- PROPOSED PLANTING
- LIGHTING COLUMN (6m FROM GROUND LEVEL)
- MAINTENANCE STRIP
- AMENITY GRASSLAND
- PROPOSED NATIVE SHRUB MIXES

REV.	DSGD	DATE	MODIFICATION

PROJECT NAME: Lead Road

DRAWING TITLE: Site Plan

DRAWING No: 1945/D001

REVISION: v.b

SCALE: 1:500

FORMAT: A2

DATE: 13-Aug-20

Drawn By: DP

Checked By: RM

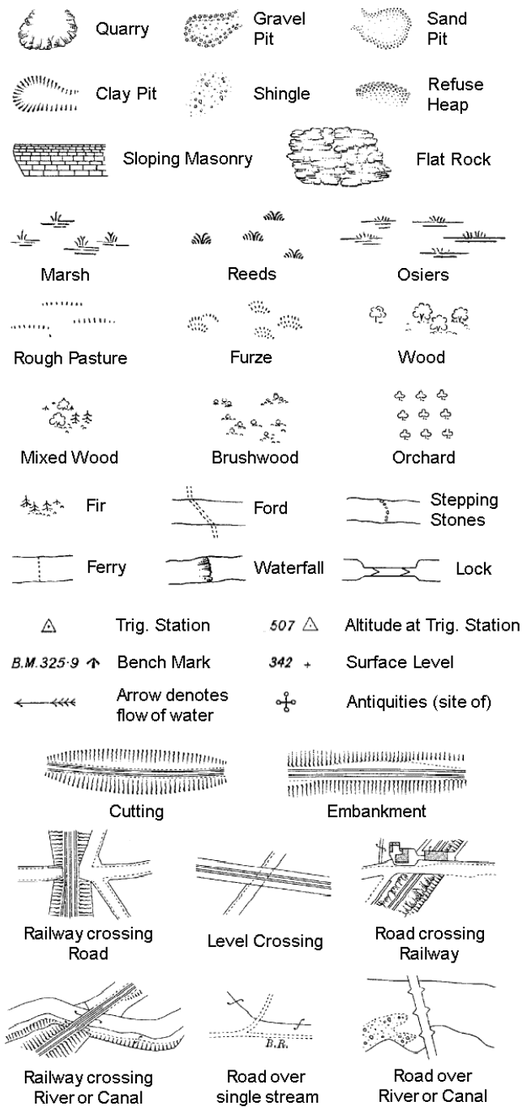
Aardvark EM Limited
Higher Ford ● Wiveliscombe
Taunton ● Somerset ● TA4 2RL
Tel: 01984 624989
Fax: 01984 623912
environment@aardvarkem.co.uk
www.aardvarkem.co.uk

* This document is exclusive property of Aardvark EM Limited. Copying, reproduction or disclosure to third parties is prohibited without written permission of Aardvark EM Limited and in case of infringement, Aardvark EM Limited seek damages for breach of statutory or contractual obligations.

File:\\\AARDVARK-3\Nick E\Data 2019\1945 Lead Road Gas Peaking Part A(1) Permit\Data & Drawings\CAD\1945-D001-Site Plan-v.2.dwg

Historical Mapping Legends

Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



County Boundary (Geographical)

County & Civil Parish Boundary

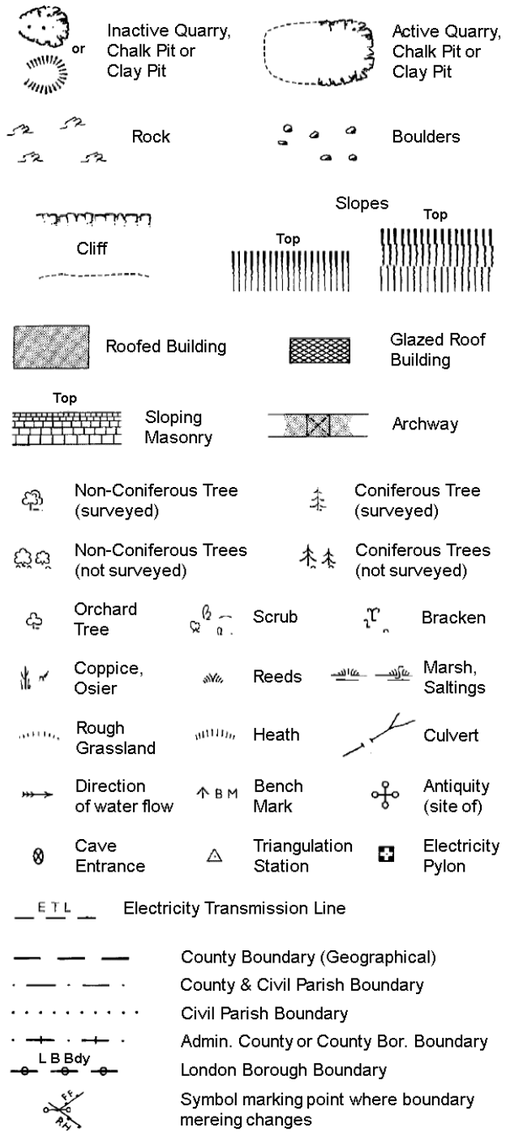
Administrative County & Civil Parish Boundary

Co. Boro. Bdy. County Borough Boundary (England)

Co. Burgh Bdy. County Burgh Boundary (Scotland)

B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



County Boundary (Geographical)

County & Civil Parish Boundary

Civil Parish Boundary

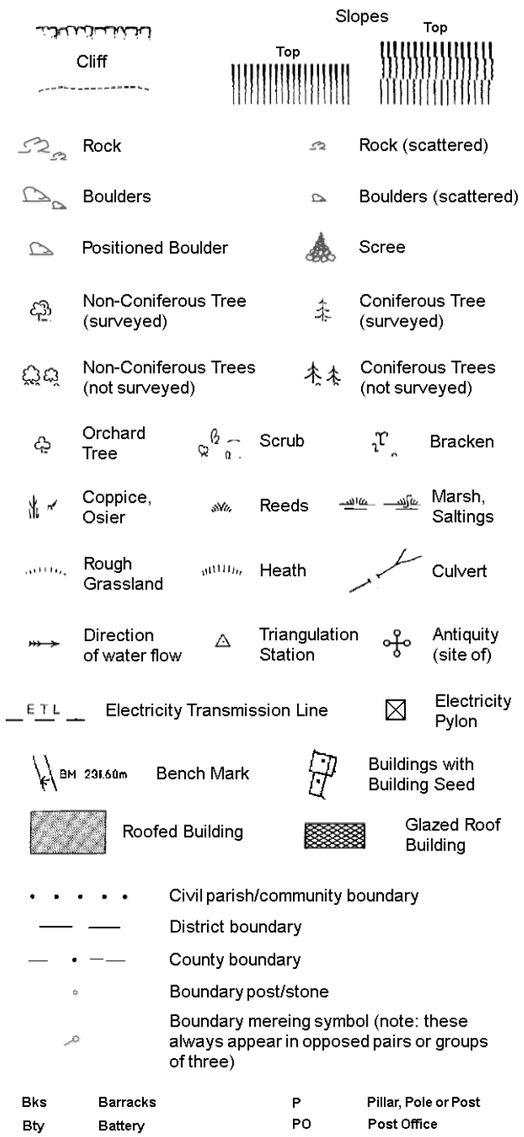
Admin. County or County Bor. Boundary

L B Bdy London Borough Boundary

Symbol marking point where boundary mereing changes

BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

Large-Scale National Grid Data 1:2,500 and 1:1,250



Civil parish/community boundary

District boundary

County boundary

Boundary post/stone

Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)

Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

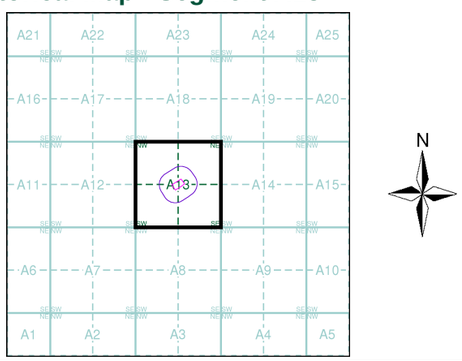
Envirocheck®

LANDMARK INFORMATION GROUP®

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Durham	1:2,500	1857	2
Northumberland	1:2,500	1895	3
Durham	1:2,500	1896	4
Northumberland	1:2,500	1897	5
Durham	1:2,500	1919	6
Durham	1:2,500	1939	7
Ordnance Survey Plan	1:2,500	1961	8
Additional SIMs	1:2,500	1961	9
Additional SIMs	1:2,500	1978	10
Large-Scale National Grid Data	1:2,500	1993	11
Historical Aerial Photography	1:2,500	2001	12

Historical Map - Segment A13



Order Details

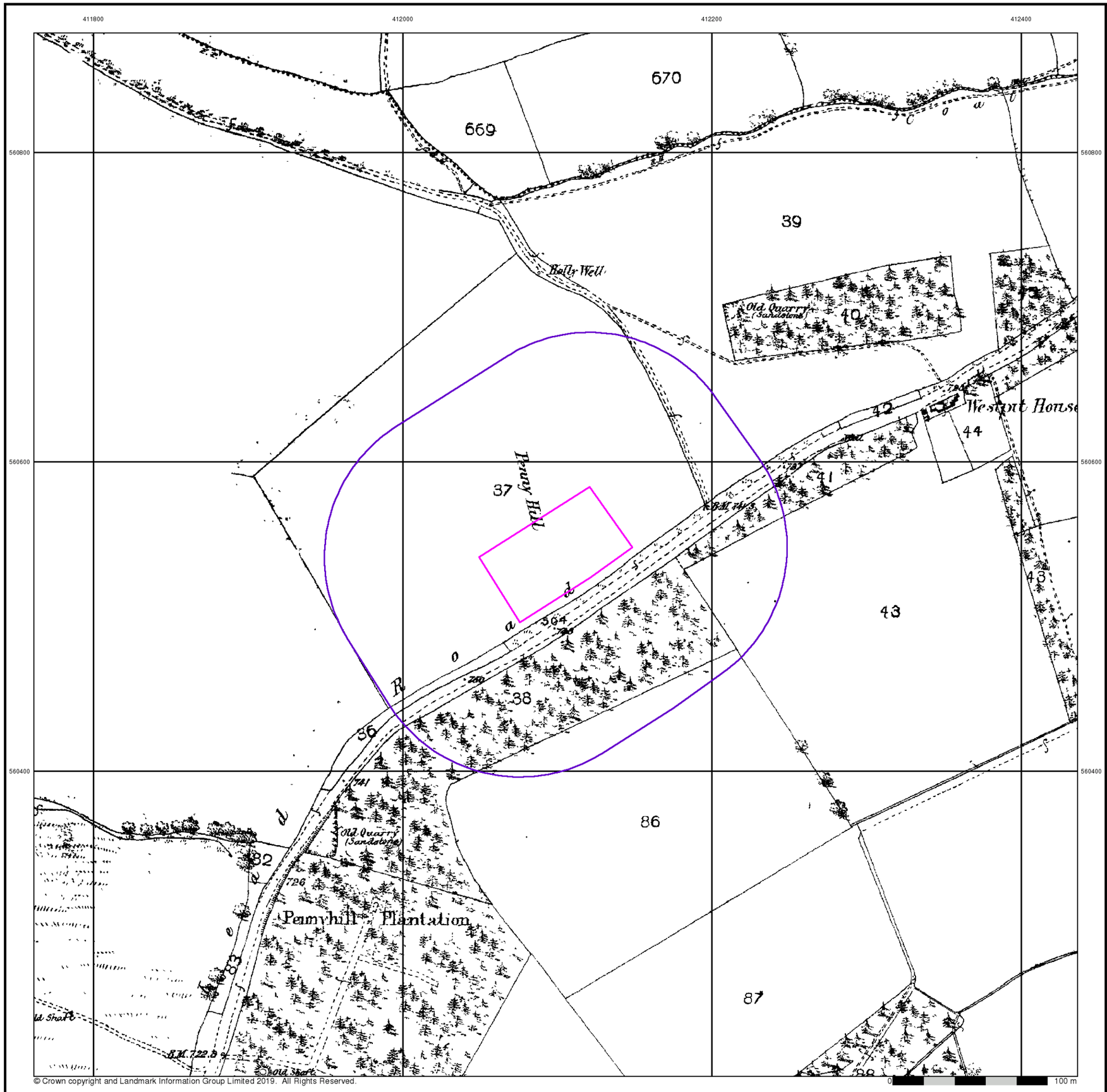
Order Number:	215346860_1_1
Customer Ref:	AP2593
National Grid Reference:	412100, 560540
Slice:	A
Site Area (Ha):	0.43
Search Buffer (m):	100

Site Details

Site at, Greenside, Gateshead

Landmark® INFORMATION GROUP

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



© Crown copyright and Landmark Information Group Limited 2019. All Rights Reserved.

Envirocheck®

LANDMARK INFORMATION GROUP®

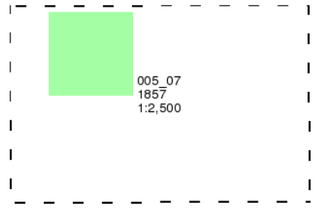
Durham

Published 1857

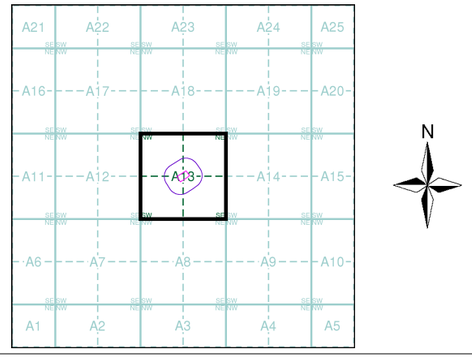
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

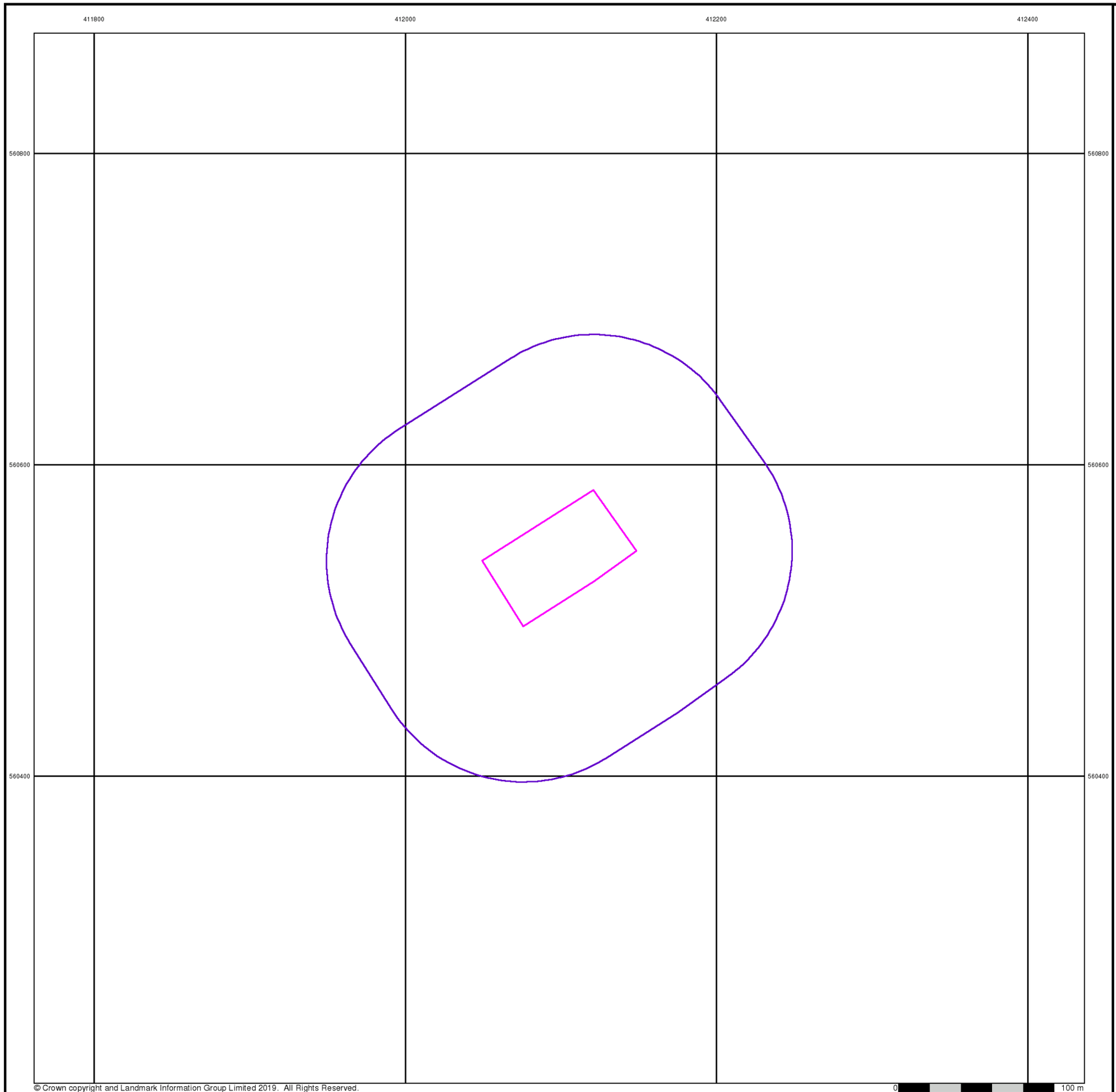
Order Number:	215346860_1_1
Customer Ref:	AP2593
National Grid Reference:	412100, 560540
Slice:	A
Site Area (Ha):	0.43
Search Buffer (m):	100

Site Details

Site at, Greenside, Gateshead

Landmark® INFORMATION GROUP

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



Envirocheck®

LANDMARK INFORMATION GROUP®

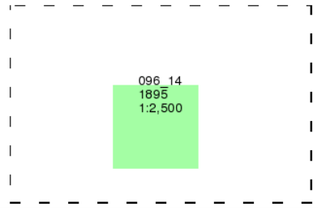
Northumberland

Published 1895

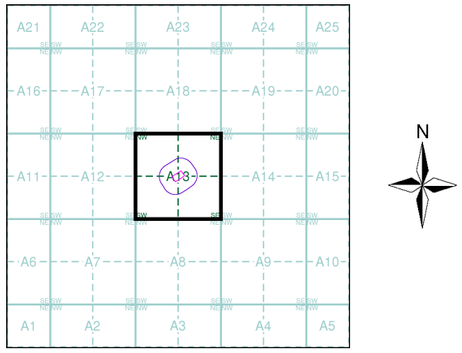
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

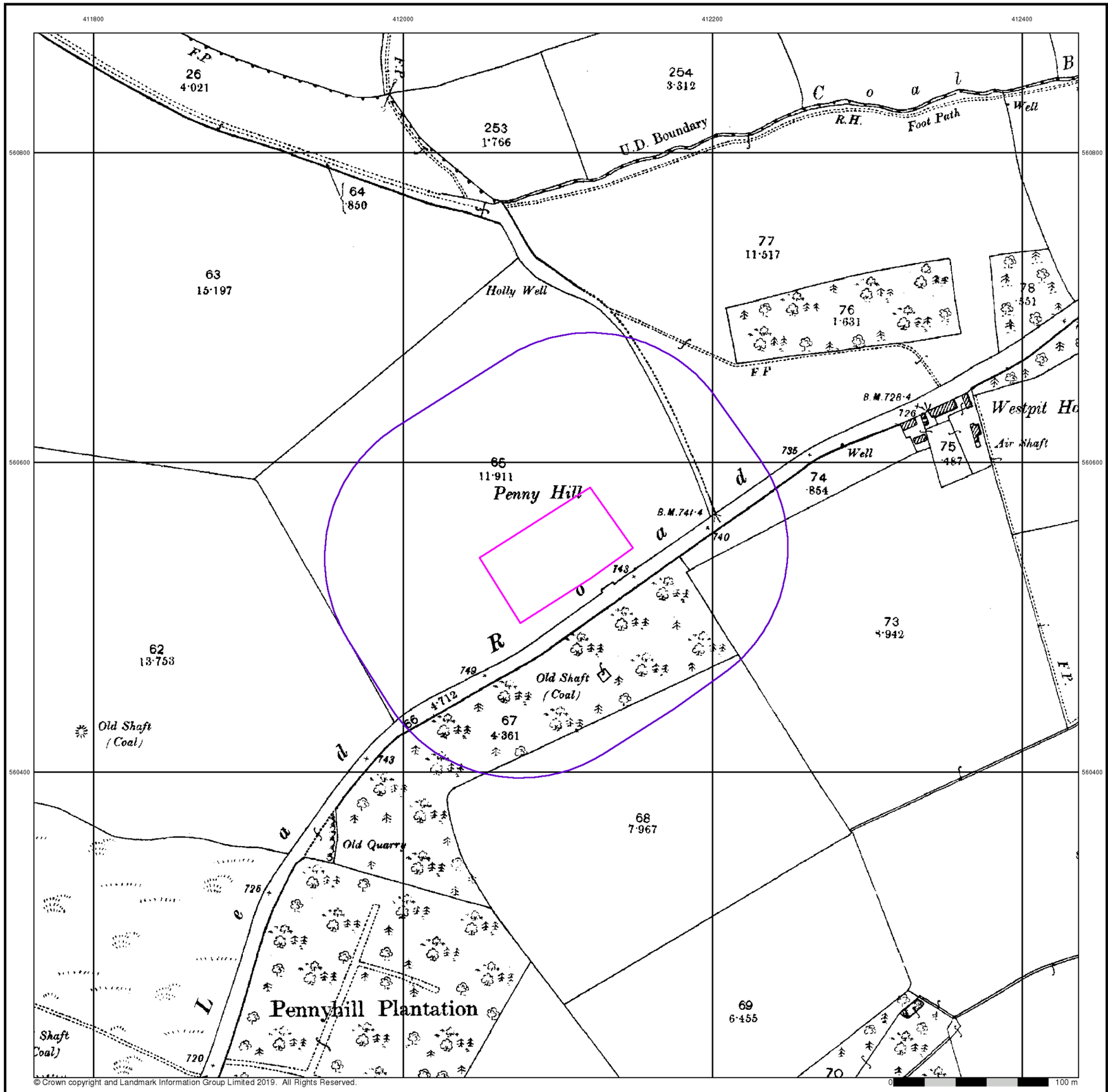
Order Number:	215346860_1_1
Customer Ref:	AP2593
National Grid Reference:	412100, 560540
Slice:	A
Site Area (Ha):	0.43
Search Buffer (m):	100

Site Details

Site at, Greenside, Gateshead

Landmark INFORMATION GROUP

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



Envirocheck®

LANDMARK INFORMATION GROUP®

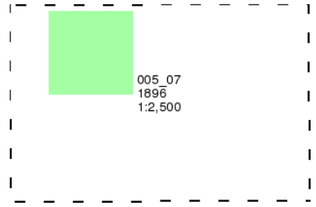
Durham

Published 1896

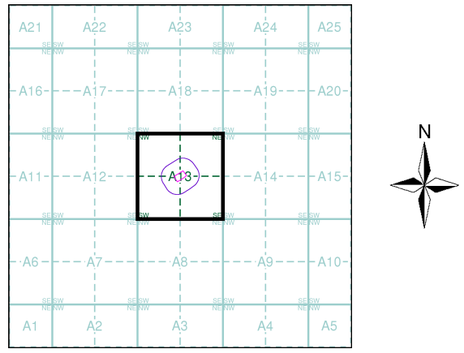
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



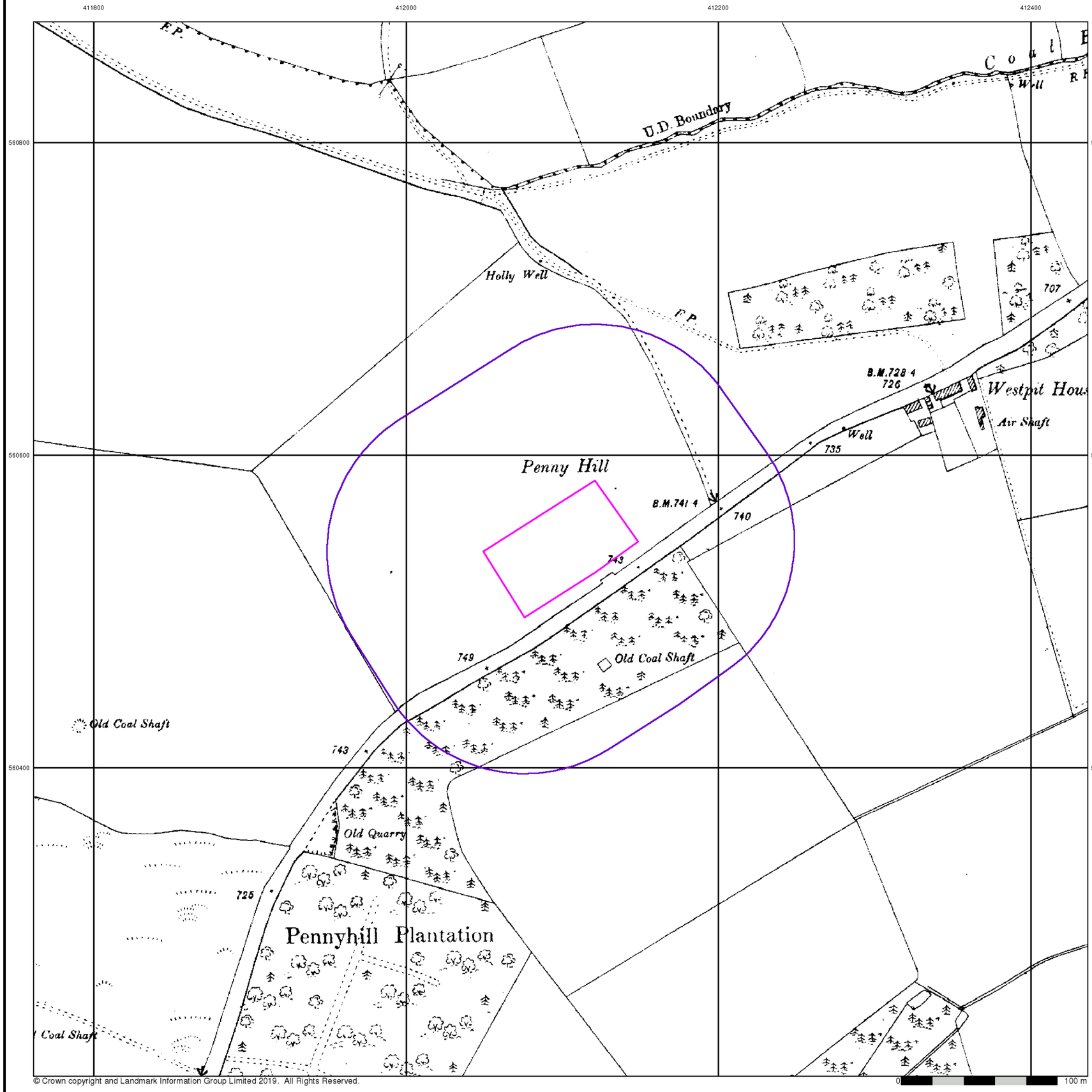
Order Details

Order Number:	215346860_1_1
Customer Ref:	AP2593
National Grid Reference:	412100, 560540
Slice:	A
Site Area (Ha):	0.43
Search Buffer (m):	100

Site Details

Site at, Greenside, Gateshead

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



© Crown copyright and Landmark Information Group Limited 2019. All Rights Reserved.

Envirocheck®

LANDMARK INFORMATION GROUP®

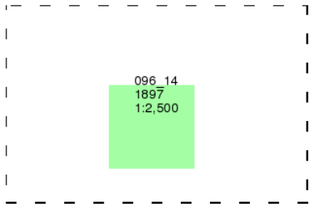
Northumberland

Published 1897

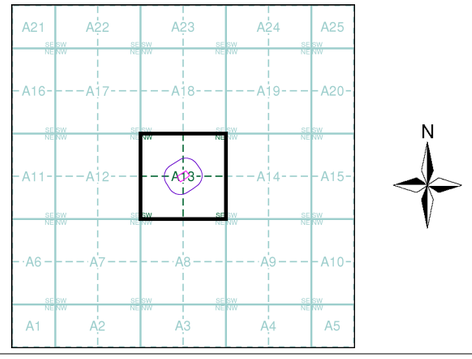
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

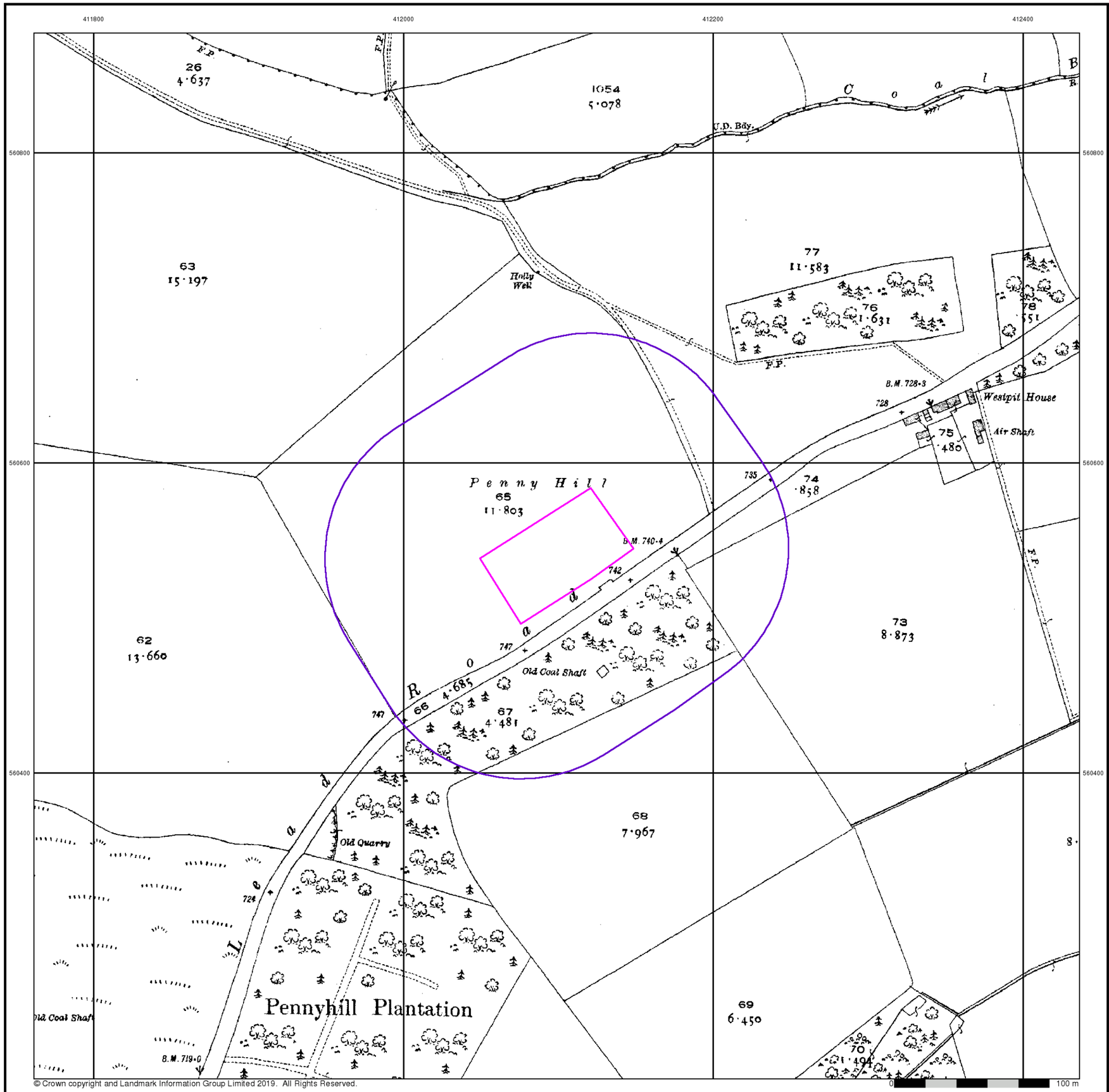
Order Number:	215346860_1_1
Customer Ref:	AP2593
National Grid Reference:	412100, 560540
Slice:	A
Site Area (Ha):	0.43
Search Buffer (m):	100

Site Details

Site at, Greenside, Gateshead

Landmark INFORMATION GROUP

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



© Crown copyright and Landmark Information Group Limited 2019. All Rights Reserved.

Envirocheck®

LANDMARK INFORMATION GROUP®

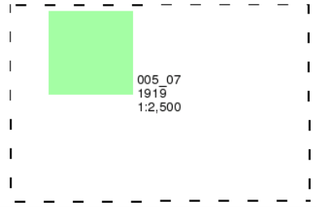
Durham

Published 1919

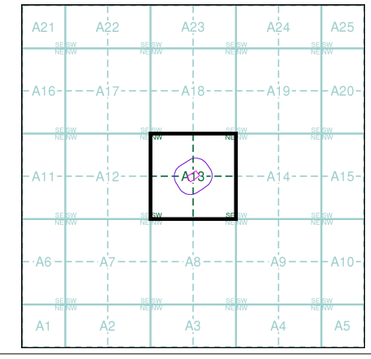
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

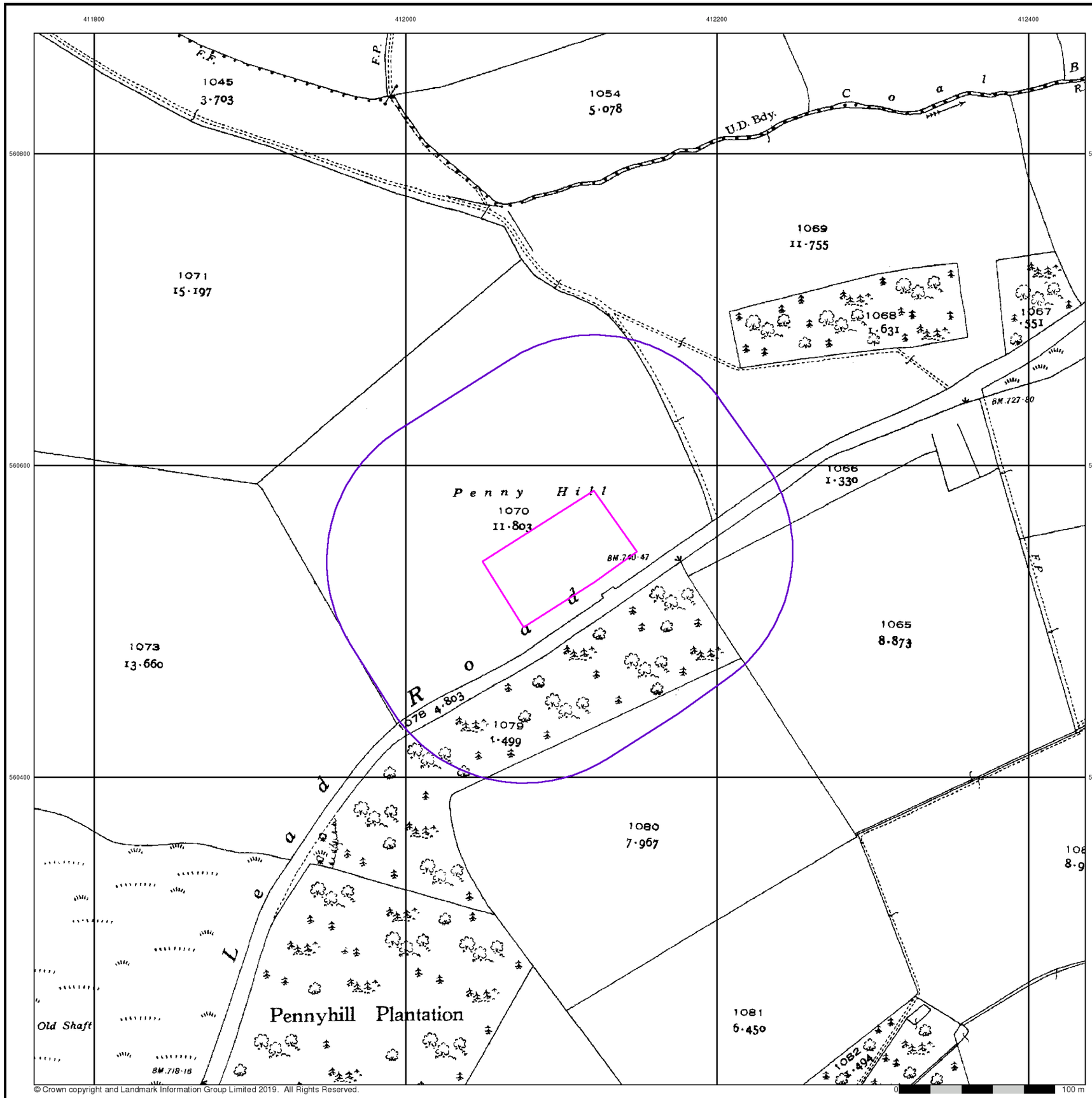
Order Number:	215346860_1_1
Customer Ref:	AP2593
National Grid Reference:	412100, 560540
Slice:	A
Site Area (Ha):	0.43
Search Buffer (m):	100

Site Details

Site at, Greenside, Gateshead

Landmark INFORMATION GROUP

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



© Crown copyright and Landmark Information Group Limited 2019. All Rights Reserved.

Envirocheck®

LANDMARK INFORMATION GROUP®

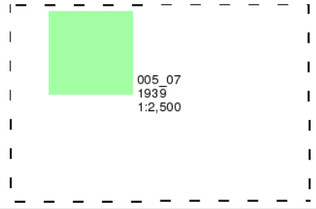
Durham

Published 1939

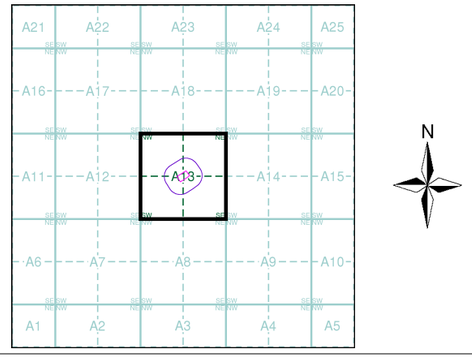
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



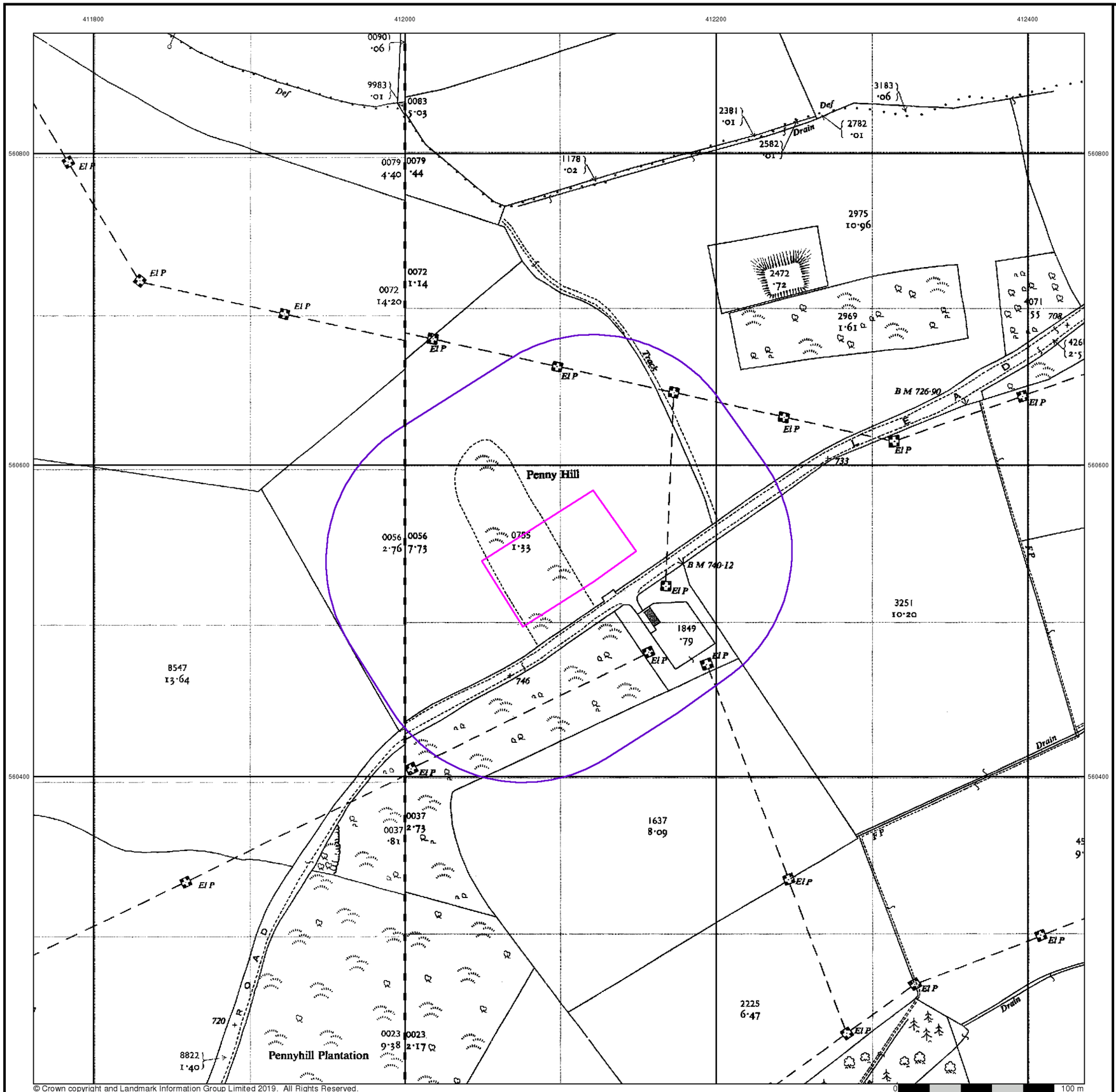
Order Details

Order Number:	215346860_1_1
Customer Ref:	AP2593
National Grid Reference:	412100, 560540
Slice:	A
Site Area (Ha):	0.43
Search Buffer (m):	100

Site Details

Site at, Greenside, Gateshead

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



Envirocheck®

LANDMARK INFORMATION GROUP®

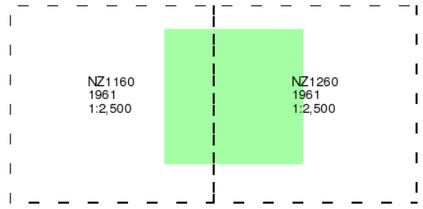
Ordnance Survey Plan

Published 1961

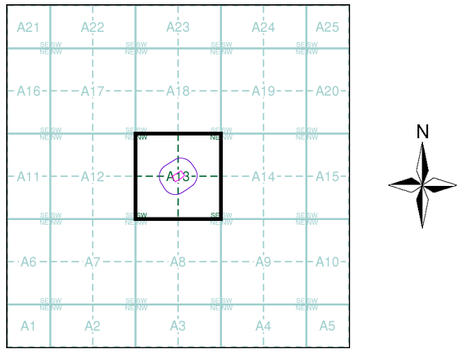
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

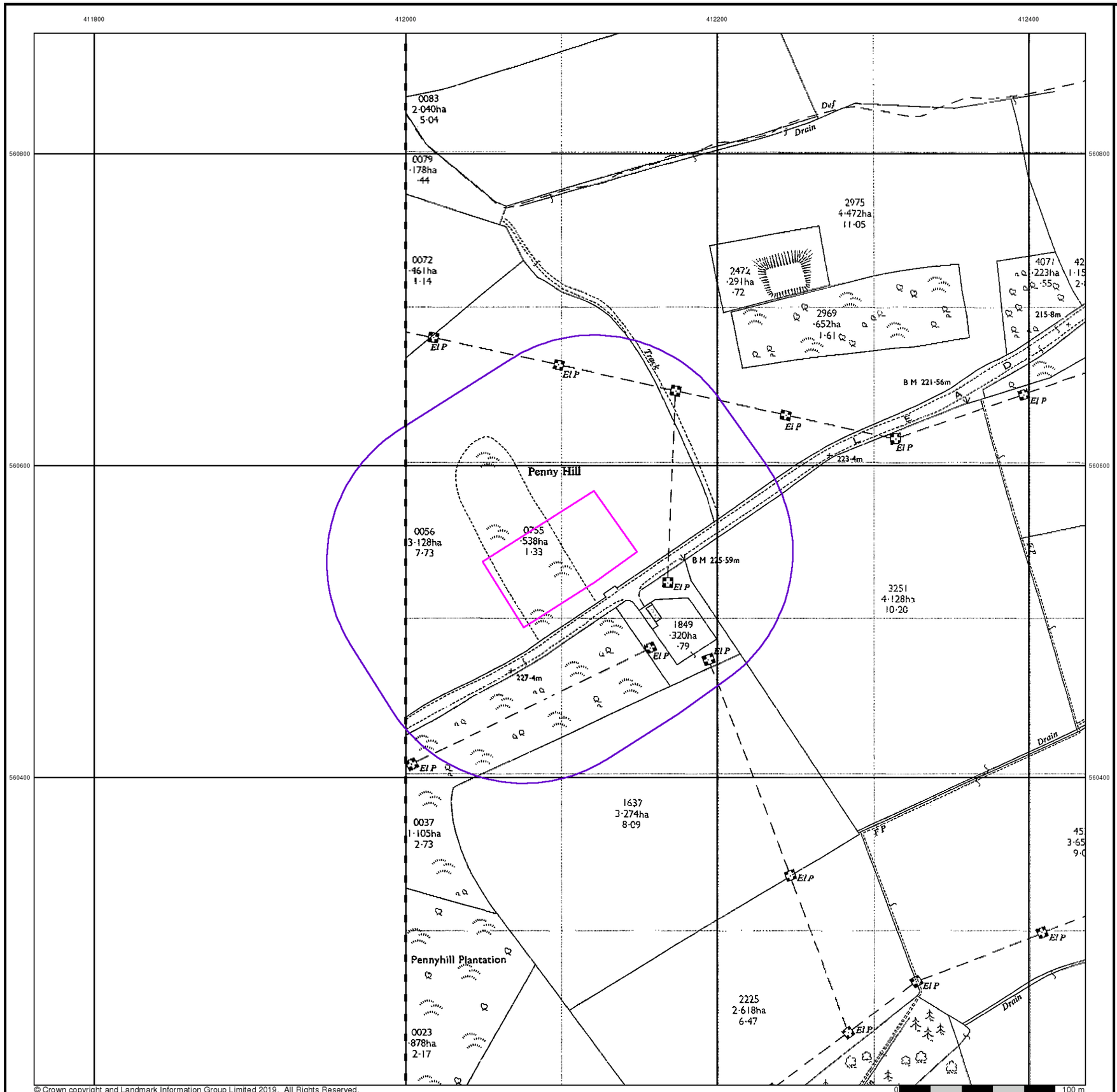
Order Number:	215346860_1_1
Customer Ref:	AP2593
National Grid Reference:	412100, 560540
Slice:	A
Site Area (Ha):	0.43
Search Buffer (m):	100

Site Details

Site at, Greenside, Gateshead

Landmark INFORMATION GROUP

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



© Crown copyright and Landmark Information Group Limited 2019. All Rights Reserved.

Envirocheck®

LANDMARK INFORMATION GROUP®

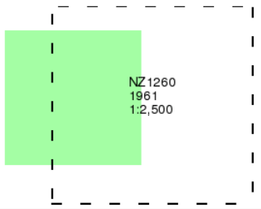
Additional SIMs

Published 1961

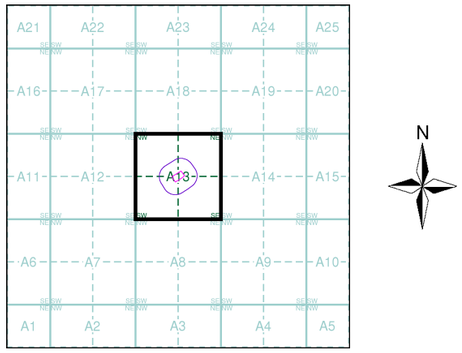
Source map scale - 1:2,500

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

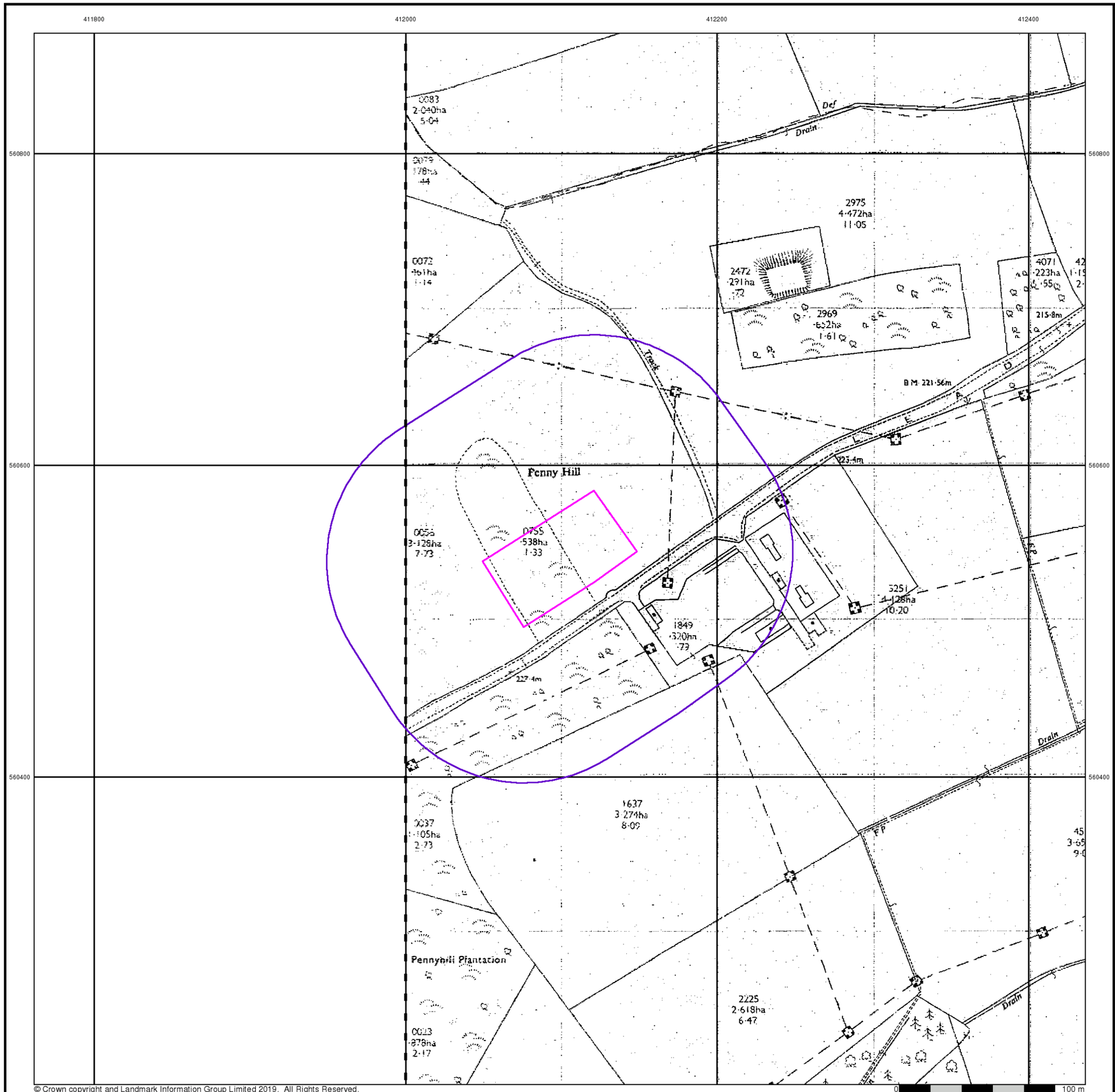
Order Number:	215346860_1_1
Customer Ref:	AP2593
National Grid Reference:	412100, 560540
Slice:	A
Site Area (Ha):	0.43
Search Buffer (m):	100

Site Details

Site at, Greenside, Gateshead

Landmark INFORMATION GROUP

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



© Crown copyright and Landmark Information Group Limited 2019. All Rights Reserved.

Envirocheck®

LANDMARK INFORMATION GROUP®

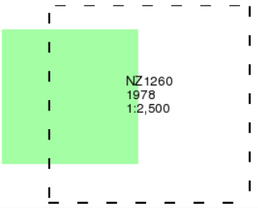
Additional SIMs

Published 1978

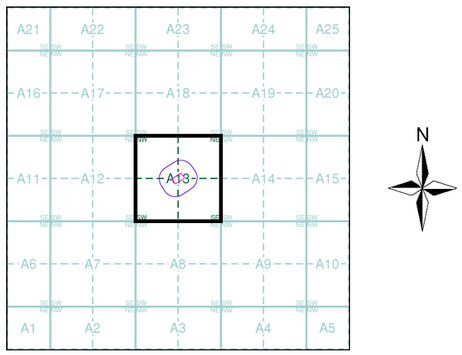
Source map scale - 1:2,500

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

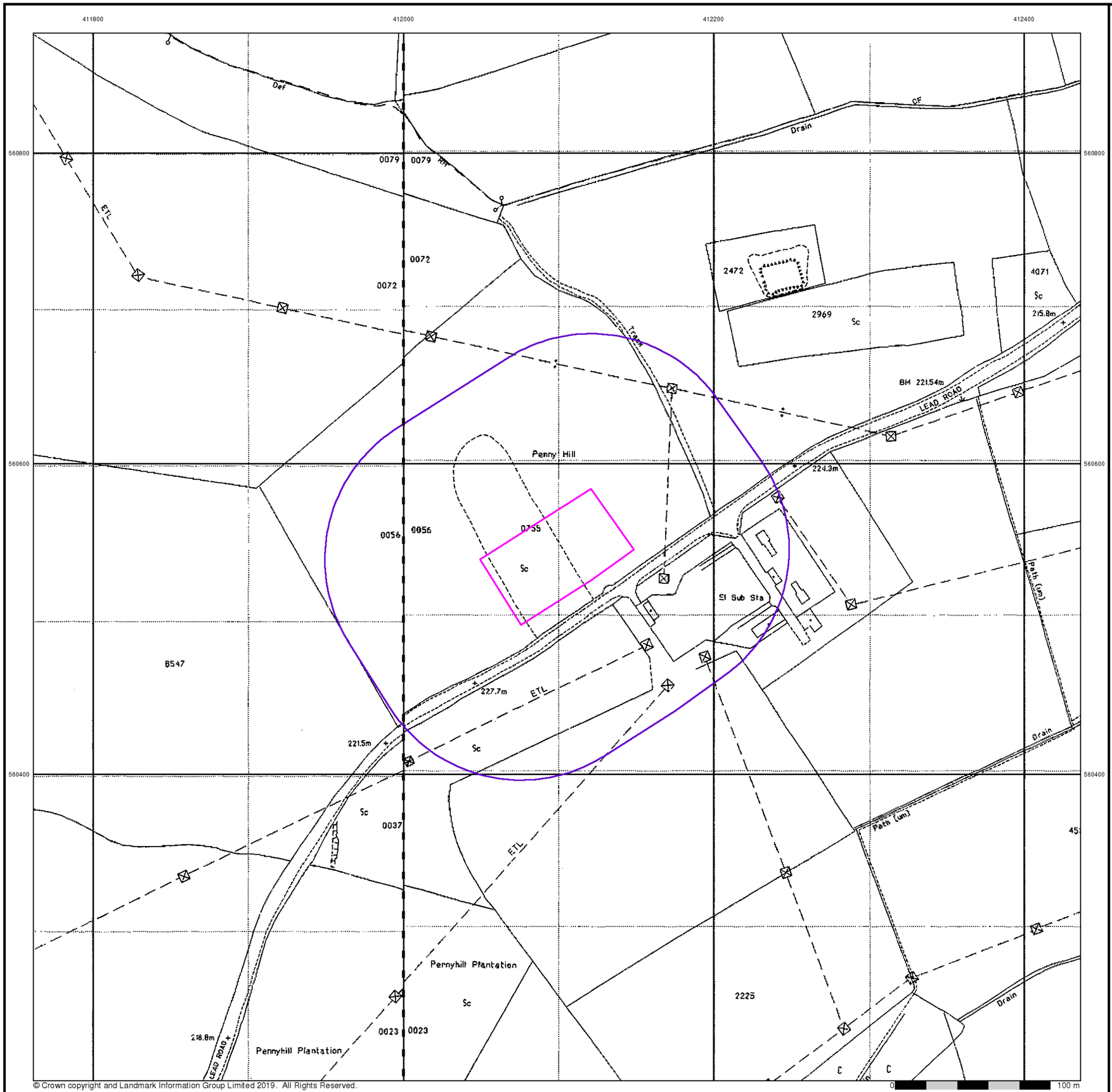
Order Number:	215346860_1_1
Customer Ref:	AP2593
National Grid Reference:	412100, 560540
Slice:	A
Site Area (Ha):	0.43
Search Buffer (m):	100

Site Details

Site at, Greenside, Gateshead

Landmark INFORMATION GROUP

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



© Crown copyright and Landmark Information Group Limited 2019. All Rights Reserved.

Envirocheck®

LANDMARK INFORMATION GROUP®

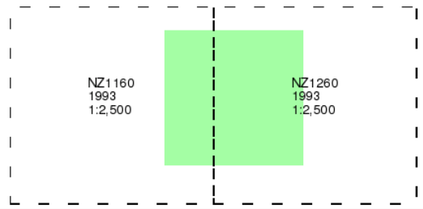
Large-Scale National Grid Data

Published 1993

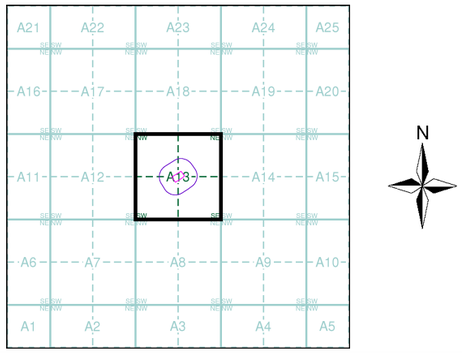
Source map scale - 1:2,500

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number:	215346860_1_1
Customer Ref:	AP2593
National Grid Reference:	412100, 560540
Slice:	A
Site Area (Ha):	0.43
Search Buffer (m):	100

Site Details

Site at, Greenside, Gateshead

Landmark INFORMATION GROUP

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

Envirocheck®

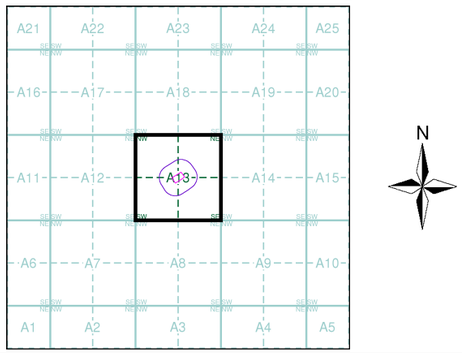
LANDMARK INFORMATION GROUP®

Historical Aerial Photography

Published 2001

This aerial photography was produced by Getmapping, these vertical aerial photographs provide a seamless, full colour survey of the whole of Great Britain

Historical Aerial Photography - Segment A13



Order Details

Order Number:	215346860_1_1
Customer Ref:	AP2593
National Grid Reference:	412100, 560540
Slice:	A
Site Area (Ha):	0.43
Search Buffer (m):	100

Site Details

Site at, Greenside, Gateshead

Landmark® INFORMATION GROUP

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

Geology 1:50,000 Maps Legends

Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	WMGR	Infilled Ground	Artificial Deposit	Not Supplied - Holocene
	MGR	Made Ground (Undivided)	Artificial Deposit	Not Supplied - Holocene

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	TILLD	Till, Devensian	Diamicton	Not Supplied - Devensian
	GFDUD	Glaciofluvial Deposits, Devensian	Sand and Gravel	Not Supplied - Devensian

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	PMCM	Pennine Middle Coal Measures Formation	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	PMCM	Pennine Middle Coal Measures Formation	Sandstone	Not Supplied - Westphalian
	PLCM	Pennine Lower Coal Measures Formation	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	PLCM	Pennine Lower Coal Measures Formation	Sandstone	Not Supplied - Westphalian
		Rock Segments		
		Faults		

Envirocheck®

LANDMARK INFORMATION GROUP®

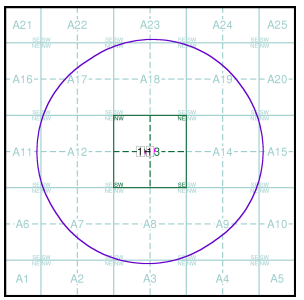
Geology 1:50,000 Maps

This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published paper maps.
The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page. Not all layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

Geology 1:50,000 Maps Coverage

Map ID:	**1**
Map Sheet No:	**020**
Map Name:	**Newcastle upon**
Map Date:	**1992**
Bedrock Geology:	**Available**
Superficial Geology:	**Available**
Artificial Geology:	**Available**
Faults:	**Not Supplied**
Landslip:	**Available**
Rock Segments:	**Not Supplied**

Geology 1:50,000 Maps - Slice A

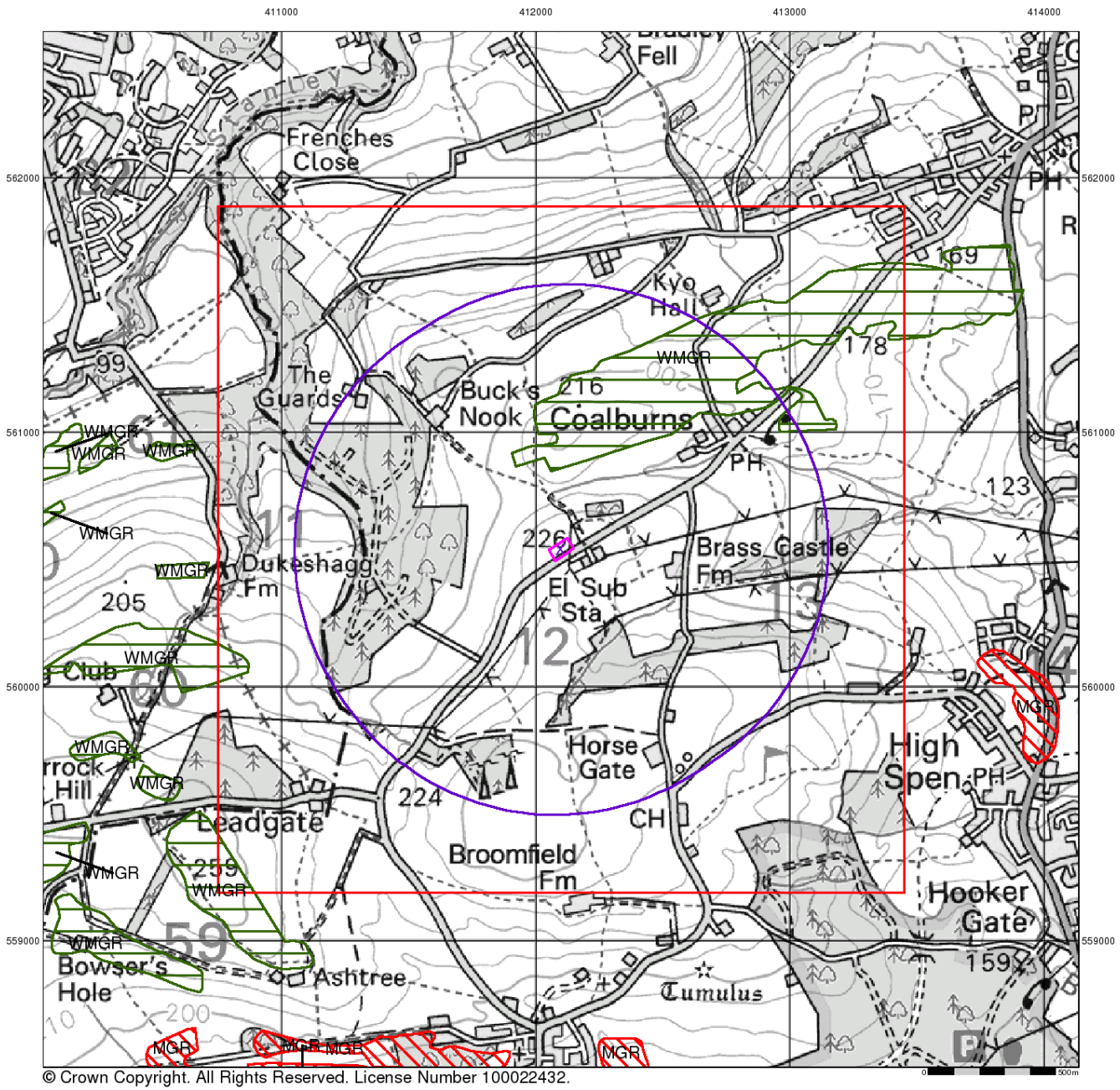


Order Details:

Order Number:	215346860_1_1
Customer Reference:	AP2593
National Grid Reference:	412100, 560540
Slice:	A
Site Area (Ha):	0.43
Search Buffer (m):	1000

Site Details:

Site at, Greenside, Gateshead



© Crown Copyright. All Rights Reserved. License Number 100022432.

Envirocheck®

LANDMARK INFORMATION GROUP®

Artificial Ground and Landslip

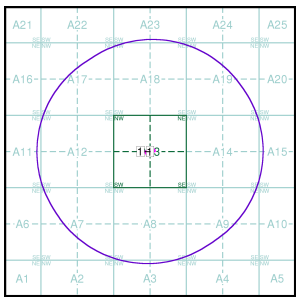
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions and unstable ground.

Artificial ground includes:

- Made ground - man-made deposits such as embankments and spoil heaps on the natural ground surface.
- Worked ground - areas where the ground has been cut away such as quarries and road cuttings.
- Infilled ground - areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground - areas where the surface has been reshaped.
- Disturbed ground - areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes foundered strata, where the ground has collapsed due to subsidence.

Artificial Ground and Landslip Map - Slice A



Order Details:

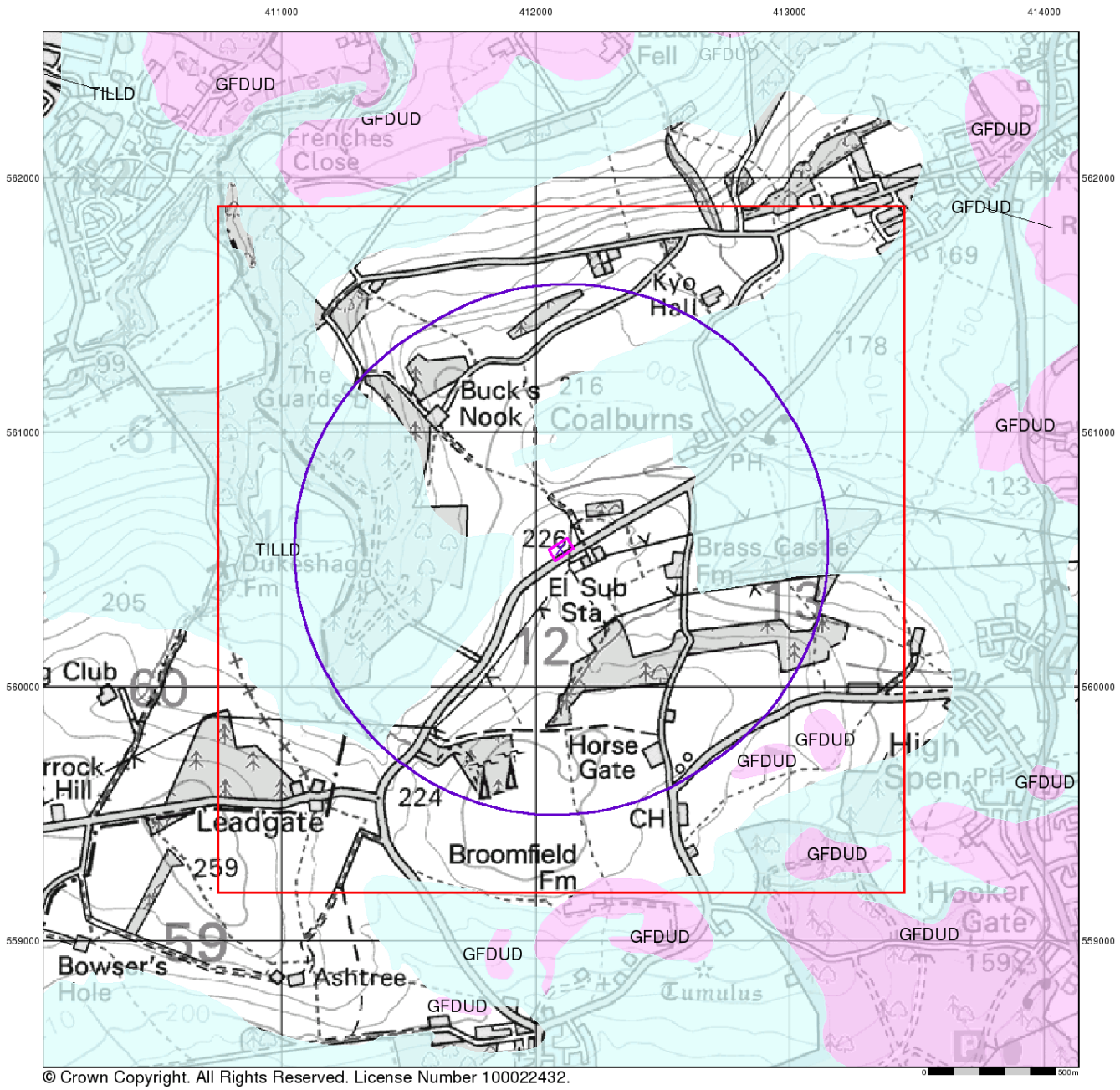
Order Number:	215346860_1_1
Customer Reference:	AP2593
National Grid Reference:	412100, 560540
Slice:	A
Site Area (Ha):	0.43
Search Buffer (m):	1000

Site Details:

Site at, Greenside, Gateshead

Landmark® INFORMATION GROUP

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



© Crown Copyright. All Rights Reserved. License Number 100022432.

Envirocheck®

LANDMARK INFORMATION GROUP®

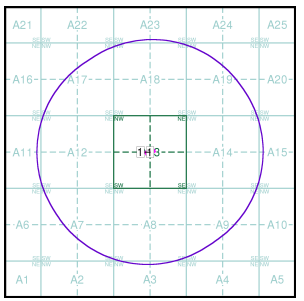
Superficial Geology

Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, the Quaternary, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

Superficial Geology Map - Slice A



Order Details:

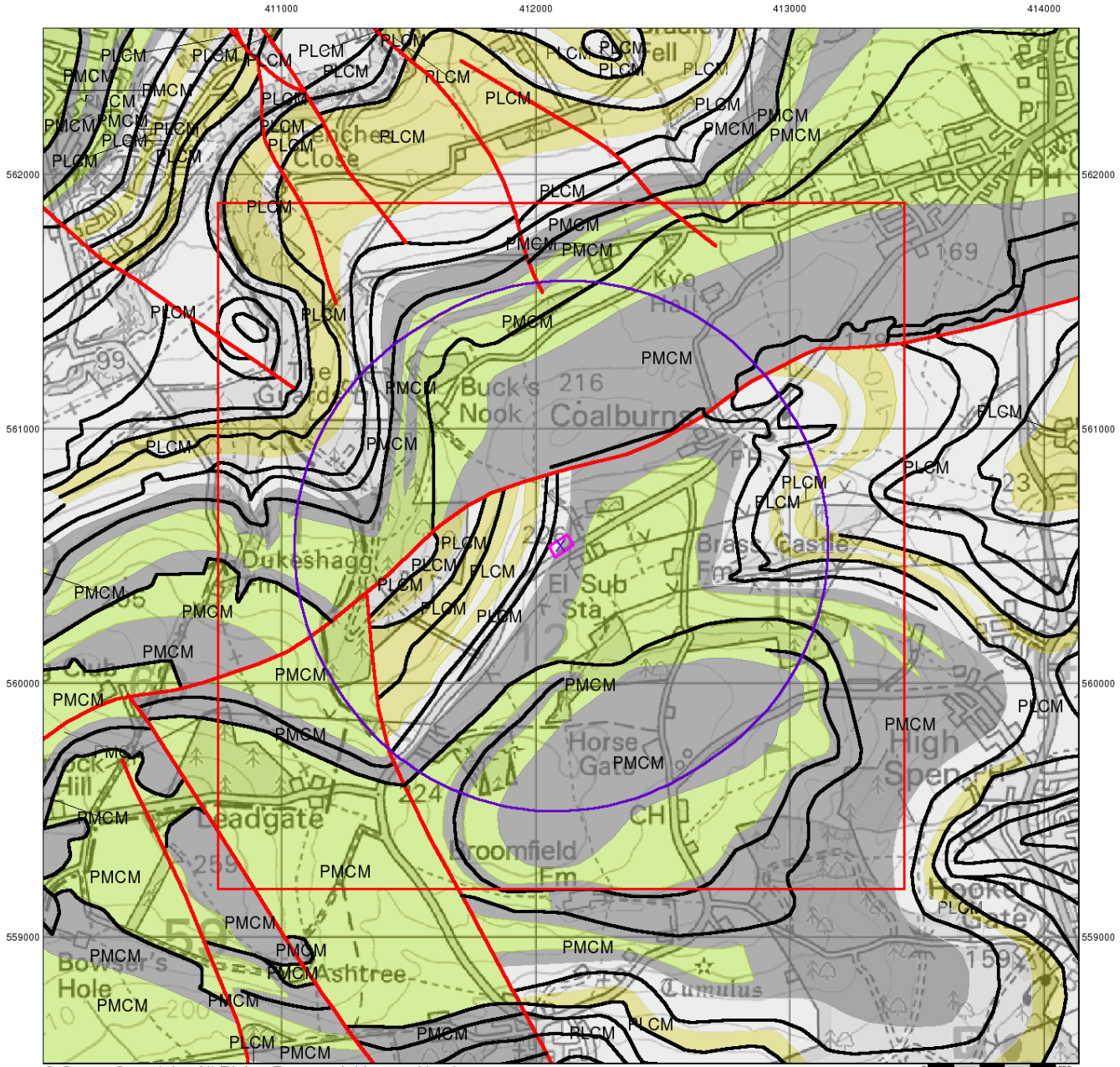
Order Number:	215346860_1_1
Customer Reference:	AP2593
National Grid Reference:	412100, 560540
Slice:	A
Site Area (Ha):	0.43
Search Buffer (m):	1000

Site Details:

Site at, Greenside, Gateshead

Landmark® INFORMATION GROUP

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



© Crown Copyright. All Rights Reserved. License Number 100022432.

Envirocheck®

LANDMARK INFORMATION GROUP®

Bedrock and Faults

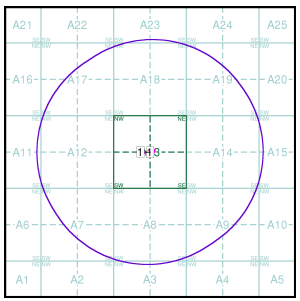
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults (e.g. normal, thrust), and thin beds mapped as lines (e.g. coal seam, gypsum bed). Some of these are linked to other particular 1:50,000 Geology datasets, for example, coal seams are part of the bedrock sequence, most faults and mineral veins primarily affect the bedrock but cut across the strata and post date its deposition.

Bedrock and Faults Map - Slice A



Order Details:

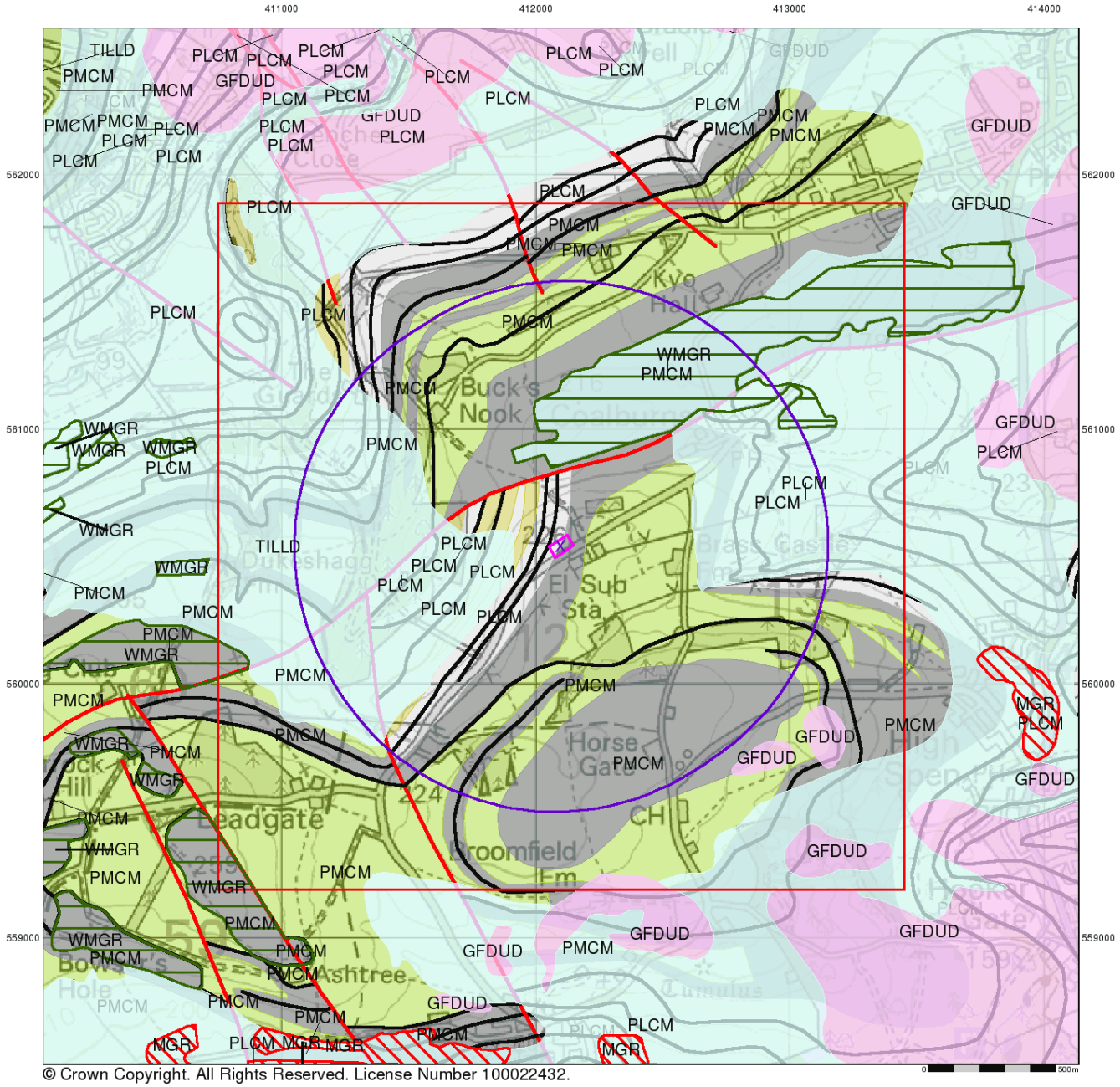
Order Number:	215346860_1_1
Customer Reference:	AP2593
National Grid Reference:	412100, 560540
Slice:	A
Site Area (Ha):	0.43
Search Buffer (m):	1000

Site Details:

Site at, Greenside, Gateshead

Landmark® INFORMATION GROUP

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



© Crown Copyright. All Rights Reserved. License Number 100022432.

Envirocheck®

LANDMARK INFORMATION GROUP®

Combined Surface Geology

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

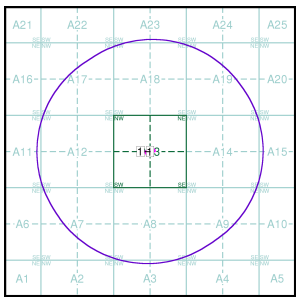
Additional Information

More information on 1:50,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

Contact

British Geological Survey
Kingsley Dunham Centre
Keyworth
Nottingham
NG12 5GG
Telephone: 0115 936 3143
Fax: 0115 936 3276
email: enquiries@bgs.ac.uk
website: www.bgs.ac.uk

Combined Geology Map - Slice A



Order Details:

Order Number:	215346860_1_1
Customer Reference:	AP2593
National Grid Reference:	412100, 560540
Slice:	A
Site Area (Ha):	0.43
Search Buffer (m):	1000

Site Details:

Site at, Greenside, Gateshead

enzygo
environmental consultants

Phase I Preliminary Risk Assessment

Land off Lead Road, Gateshead, NE40 4JP

For:

Enso Energy Ltd

'Experience and expertise working in unison'

www.enzygo.com

Contact Details:

Enzygo Ltd.
The Byre
Woodend Lane
Cromhall
Gloucestershire
GL12 8AA

tel: 01454 269237
fax: 01454 269760
email: steve.rhodes@enzygo.com
www: enzygo.com

Phase I Preliminary Risk Assessment

Project:	Lead Road, Gateshead, NE40 4JP
For:	Enso Energy Ltd
Ref:	CRM.349.008.GE. R.006.A
Status:	Final
Date:	April 2018
Author:	Richard Hamilton – **Associate Director**
Reviewer:	Steve Rhodes - **Technical Director**

TABLE OF CONTENTS

1.0 INTRODUCTION 1

Background *1*

Proposed Development *1*

Objectives *2*

Risk Classification *3*

2.0 SITE SETTING 4

Current Site Description *4*

Surrounding Area *4*

3.0 SITE HISTORY 5

4.0 ENVIRONMENTAL SETTING 6

Ground Conditions *6*

Groundwater *6*

Coal Mining *6*

Non Coal Mining and Cavities *7*

Ground Workings *7*

Hydrology *7*

Radon Risk Potential *7*

Natural Hazards Finding *8*

Sensitive Land Uses *8*

Environmental Sensitivity *8*

Industrial Land Uses *8*

Regulatory Database *9*

Landfill Sites and Waste Treatment Sites *9*

5.0 DESIGN ENHANCEMENT MEASURES 10

General *10*

Transformer and Electricity Connection *10*

6.0 PRELIMINARY RISK ASSESSMENT 13

7.0 CONCLUSION AND RECOMMENDATIONS 14

Environmental *14*

Geotechnical *14*

Photographs 1

Appendix A – Desk Study Information 2

1.0 INTRODUCTION

Background

1.1 Enzygo Ltd has been commissioned to undertake a Phase One assessment by Enso Energy Ltd to support of a planning application for a gas powered standby generation plant at land off Lead Road, Gateshead, NE40 4JP. The red line boundary includes the entire site area however the proposed development is only within the south east section of the northern field. The desk study information has been obtained for the large site area within the red line boundary however this report refers to the area for the purposed development which is confined to the south east section of the northern field.

Proposed Development

1.2 The proposed development site would be for the provision of a gas powered standby generation facility. The site layout will consist of the following equipment:

- Gensets units
- Gas Governor
- Switchgear cabin
- Customer Transformer
- Control Relay Room
- 6m high Security Column
- Substation/Switch Room
- Radiator Units
- Transformer
- Gas module
- 4m High Timber Acoustic Fence
- 1.2m high stock fence
- 2.4m high security fence

1.2 The above equipment will be mounted on concrete plinths or rafts.

Objectives

1.4 The objectives of the study are to:

- Review historical plans, geology, hydrogeology, site sensitivity, mining records and contaminated land information provided by the local authority in order to complete a Desk Study. A Groundsure report has been provided, a copy of which is included in Appendix A;
- Assess the implications of any potential environmental risks, liabilities and development constraints associated with the proposed development of the site; and
- Provide a factual and interpretative report relating to the desk study.
- Provide a Preliminary Risk Assessment with recommendations for further works where requirements are identified.

Risk Classification

1.5 Enzygo has utilised the available information, together with our experience to assess the likely risks to development from land quality issues. Definitions of the risk terms used are provided on the following table.

Risk	Description
Dismissed	No contamination risk has been identified associated with the proposed development.
Low	No significant contamination risks have been encountered and there is a low risk that remediation will be required.
Low-Moderate	There are unlikely to be significant contamination issue associated with the development. However, minor or localised contamination may be present requiring remediation. Remediation should be possible under a discovery strategy and with a call out service.
Moderate	Some potential contamination risks have been encountered or identified. Remediation is considered feasible as part of the development process and no further investigation is considered necessary.
Moderate-High	Some potentially significant contamination risks have been identified that requires remediation. It is recommended that a separate remedial methodology is prepared supported by a site-specific risk assessment.
High	Significant potential contamination risks have been identified and general remediation is likely to be required supported by further intrusive ground investigation, risk assessment and remedial design.

2.0 SITE SETTING

Site Description

Item	Description
Site Address	Lead Road, Gateshead, NE40 4JP
National Grid Reference	411926,560379

Current Site Description

2.1 The following site description has been compiled from a site inspection undertaken by an environmental consultant from Enzygo limited together with current maps and aerial photographs.

2.2 The site is occupied by a single field vegetated with grass with some trees and vegetation present on the southern site boundary.

2.3 Mature trees are present along the south west boundary.

2.4 A road is shown to the south of the site and the site is accessed off this road.

2.5 A sub station is shown to the south of the road.

2.6 The proposed site generally slopes to the north east.

2.7 Photographs are included at the back of the report.

Surrounding Area

2.8 Land uses surrounding the site are summarised as follows:

Direction	Land Use
South	Road, substation and fields Field.
East	Overhead cables, Track and fields.
North	Fields with a Wood to the NW.
West	Fields.

2.9 No evidence of significant contamination sources were identified on or adjacent to the site.

3.0 SITE HISTORY

3.1 A review of historical Ordnance Survey maps and information pertinent to the site and within a 250m radius is summarised below:

Potentially Contaminative Historical Land Use		
Map Edition	**Site**	**Surrounding Area**
1856	Open field referenced Penny Hill	Holly Well located 50m N. Old coal shaft 40m S. Old Quarry 50-80m SE. Westpit House 150m NE. air shaft 150m NE. Lead road 0m S. Trees 5m S and 80m NE. Coal Burn 150m N.
1939-1957	No change.	Old coal shaft, Westpit House, air shaft and quarry not referenced.
1960-1977	Area of rough pasture shown in the southern part of the site.	Substation shown 10m S. Pylon shown 15m S, 50m NE and 60m N. Overhead cables connecting the pylons from the substation to the pylons to the NE and N of site. Earthworks shown 120m NE.
1993	No changes.	Substation has enlarged to the NE. Track shown 20m NE on field boundary.
2002	No changes.	Mast is shown in the sub station.
2010-2014	No significant changes.	No significant changes.

3.2 No potential significant contamination sources are identified from the historical maps.

4.0 ENVIRONMENTAL SETTING

Ground Conditions

4.1 The British Geological Survey (BGS) indicates that the site is underlain by the following geological sequence:

Geological Unit	Type	Description	Aquifer Classification
Drift.	None Present.	Not Applicable.	Not Applicable.
Drift	Glacial Till 50m W	Clay and Diamicton	Secondary – Undifferentiated layers
Solid.	Pennine Lower Coal Measures.	Sandstone, mudstone and siltstone.	Secondary A.

4.2 No Made Ground is shown near to the site.

4.3 There are no records of landslips within 500m of the site.

4.4 There are no records of background soil chemistry for the site.

4.5 BGS borehole records available close to the site indicate superficial materials to a depth of 1.30m with the shallowest coal recorded at 15.28m bgl and the shallowest worked coal at 30m and 36m bgl. This borehole reflects a mine shaft from the Chopwell North Pit. A copy of this mine shaft is given in the appendices.

Groundwater

4.6 The recorded permeability of the solid geology is low to high and has a fracture flow. The recorded permeability of the drift geology to the west and north of the site is low to high and has a mixed flow reflecting the variable natural of the drift materials.

4.7 The Ground Sure Report shows that the site is not within a Source Protection Zone.

4.8 There are no groundwater abstraction licenses within 1000m of the site.

Coal Mining

4.9 The site is identified as being within an area of coal mining risk and a separate coal mining report has been obtained for the proposed site. A copy of this is given in the appendices. This confirms that the site is underlain by a four seams at shallow depths (less than 35m) to

90m depth and last worked in 1960. There are also a number of coal shafts located within the vicinity of the site, with the closest being 36m south east. These mine shafts are related to coal mining activities underneath the site from The Chopwell Pennyhill pit colliery and north pit. With the Brockwell and Hutton seams being worked. The interactive Coal Authority service indicates that the site is surrounded by high risk developable areas with shallow workings to the north, west and south of the proposed site area.

4.10 Given the presence of shallow seams it is likely that investigation works will be required to confirm the depth of the underlying coal seams and if they have been worked.

Non Coal Mining and Cavities

4.10 No significant non-coal mining activities have been identified close to the site.

4.11 No natural cavities have been identified close to the site.

Ground Workings

4.12 There are a number of historical ground working surrounding the site with the closest being 36m south east (coal shaft) and numerous small quarries (closest is 50m south west) and unspecified heaps (61m north). The coal shafts and pits will be assessed as part of the coal mining assessment. Given the distance of the unspecified heaps these are not considered a risk to the site. The small scale quarry was for open cast sandstone and has ceased operation and is separated from the site by the road to the south of the site and therefore any direct contamination risk is minimised, however if infilled there could be resulting gas risk which will be assessed as part of the mitigation measures.

Hydrology

4.13 There are no surface water courses on the site.

4.14 The closest is 67m north or 111m SE. Both of these are drains and drain to the east and away from the site. Given the distance these are not considered to be a viable receptor and is dismissed.

Radon Risk Potential

4.15 The Groundsure GeoInsight Report indicates that the site is not within a Radon Affected Area and no protective measures are required.

Natural Hazards Finding

4.16 BGS information presented within the Groundsure Geoinsight report identifies the following ground conditions:

Hazard	Risk Designation (Groundsure)
Coal Mining	Coal mining risk identified
Collapsible Ground	Very Low.
Compressible Ground	Negligible.
Ground Dissolution	Negligible.
Landslide	Very Low to low.
Running Sand	Negligible.
Swelling / Shrinking Clay	Very Low.

4.17 No significant ground risks are identified apart from the coal mining risk which is discussed in the coal mining section.

Sensitive Land Uses

4.18 The site is fields which are considered to be low sensitivity.

4.19 No historical features are identified on the site.

Environmental Sensitivity

4.20 Overall the site is currently considered to be of **Moderate** sensitivity due to the following:

- Site is a field;
- The site is underlain by a Secondary A Aquifer;
- There are no groundwater abstractions close by; and
- There are no surface water courses on the site.

4.21 The proposed end use of the site is for storage and standby generators and as such future sensitivity will be low for end users.

Industrial Land Uses

4.22 No significant Industrial land uses are identified within 250m of the site, other than pylons, electricity substations, masts, which are not considered a significant risk.

4.23 There are no fuel filling stations within 250m of the site.

4.24 There are no high-pressure gas or oil pipelines within 250m of the site.

4.25 No new significant risks are identified from the register of industrial land uses.

Regulatory Database

4.26 The following information has been obtained from a commercially available environmental database.

Environmental Permits, Incidents and Registers	On site	0-250m	Details
Site determined as contaminated land	0	0	Not applicable
Authorised industrial processes & dangerous substances inventory sites.	0	0	Not applicable
Registered radioactive substances	0	0	Not applicable
Enforcements, prohibitions or prosecutions	0	0	Not applicable.
Pollution Incidents	0	0	Not applicable.
Consents issued under the Planning (Hazardous Substances) Act 1990	0	0	Not applicable.
Control of Major Accident Hazard (COMAH)/ Notification of Installations Handling Hazardous Substances (NIHHS) sites	0	0	Not applicable
Records of Licensed Discharge Consents	0	2	Closest 318m East. Sewage Discharges Not considered a risk to the site.

4.27 No risks are identified from the regulatory data base.

Landfill Sites and Waste Treatment Sites

4.28 No active or historic landfills are identified within 250m of the site.

4.29 No new significant potential risks are identified from waste activities.

5.0 DESIGN ENHANCEMENT MEASURES

General

5.1 The proposed development comprises:

- Gensets units
- Gas Governor
- Switchgear cabin
- Customer Transformer
- Control Relay Room
- 6m high Security Column
- Substation/Switch Room
- Radiator Units
- Transformer
- Gas module
- 4m High Acoustic Fence
- 1.2m High Stock Fence
- 2.4m High Security Fence

5.2 The above equipment will be mounted on concrete plinths or rafts.

5.3 No significant substructure excavation is proposed.

Hazardous Chemical Storage

5.4 No hazardous chemical storage is proposed at the site.

5.5 Based on this no new contamination risks will be introduced to the site which can impact controlled waters. This risk is therefore dismissed on the absence of a viable pollutant linkage.

Transformer and Electricity Connection

5.6 The transformer is of modern construction and will be PCB free. It will be located on a concrete slab with a containment bund. This will address potential risk of leakage.

5.7 Power cables will be solid and will not have an oil jacket. Therefore, this is not a potential contamination source.

5.8 Switch gear will not contain chemicals and will be located within a structure with a concrete floor slab. This will mitigate potential risks from lubricants if used.

5.9 Based on this no new contamination risks will be introduced to the site which can impact controlled waters. This risk is therefore dismissed on the absence of a viable pollutant linkage.

Management and Maintenance

5.10 The site will be subject to regular inspections and maintenance. Spill response kits will be provided and used to deal with any localised spillage which does occur. This will manage the potential risk from accidental spillage and leakage on site.

Design Remedial Measures

5.11 The proposed development is a low sensitivity commercial use and will utilise hard standing, including hard-core across the site. This will mitigate any risk to future end users from unforeseen contamination by providing a physical barrier and breaking the pollutant linkage.

5.12 If unforeseen contamination is encountered during construction works such as localised spillage an Environmental consultant will be available on a 'call out' basis to undertake an assessment of risk. If 'unforeseen contamination' is encountered the discovery strategy will be to remove the source as it is likely to be very limited in extent and the Local Planning Authority advised. Remediation will be undertaken to provide environmental betterment.

Risk To Construction Workers

5.13 No significant contamination risks are identified. Potential risks from unforeseen contamination will be addressed through normal site management and welfare procedures, including use of PPE.

Assessment of Pollutant Pathways

5.14 No source is identified. This risk is therefore dismissed.

5.15 The risk to surface water receptors is dismissed as no significant contamination sources have been identified on site.

5.16 It is considered likely that structures can be constructed off a concrete base acting as a raft and no deep foundations are anticipated.

6.0 PRELIMINARY RISK ASSESSMENT

Source	Location	Exposure Pathway	Potential Receptor	Probability of Exposure	Details
Human Health					
Asbestos, Hydrocarbon and metals.	Potential on-site contamination.	Ingestion dermal and inhalation.	Construction Workers. Site users.	Dismissed.	No source identified, and Design mitigation measures proposed.
Asbestos, Hydrocarbon and metals	Unforeseen contamination.	Ingestion dermal and inhalation.	Construction Workers. Site users	Dismissed.	No source identified.
Hydrocarbon and metals.	Potential migration from off-site source.	Ingestion dermal and inhalation.	Construction Workers. Site users.	Dismissed.	No source identified.
Ground Gas.	Landfills	Inhalation & Explosive.	Construction Workers. Site users.	Dismissed.	No source identified.
	Made Ground.	Inhalation & Explosive.	Construction Workers. Site users.	Dismissed.	No source identified.
Groundwater					
Hydrocarbon and metals.	On site source.	Vertical Migration.	Groundwater.	Dismissed.	No source identified.
Surface Water					
Hydrocarbon and metals.	On site source.	Horizontal Migration.	River Network.	Dismissed.	No source identified.
Environmental Receptors					
On site contaminants		Ingestion dermal and inhalation.	Ecology.	Dismissed.	No source.
		Direct.	Archaeology.	Dismissed.	None receptor.
		Direct.	Geology.	Dismissed.	None receptor.
		Phytotoxic.	Woodland.	Dismissed.	No source.
		Phytotoxic.	Crops.	Dismissed.	None receptor.
		Ingestion dermal and inhalation.	Livestock.	Dismissed.	None receptor.
Building Services					
On site contaminants		Direct.	Historic Buildings.	Dismissed.	None receptor.
		Direct.	Proposed Buildings.	Dismissed.	None receptor.

7.0 CONCLUSION AND RECOMMENDATIONS

Environmental

7.1 The proposed development will utilise hardstanding and be used for low sensitivity commercial use. Risk to end users is therefore dismissed as there will be no significant source and no viable pollutant linkage.

7.2 Risk to surface waters and groundwater are dismissed due to the absence of a viable significant source and absence of a viable receptor.

7.3 In the unlikely event that unforeseen contamination is encountered during construction works removal of the material will lead to environmental betterment.

7.4 Potential impact of potable water pipes will be mitigated by using appropriate pipework agreed with the water authority.

7.5 Given the absence of significant risks identified by the Preliminary Risk Assessment it is considered that no further investigation is necessary.

Geotechnical

7.6 The proposed site area has identified shallow coal working at depths less than 30m bgl. Coal outcrops are also noted to the north and west of the site which may result in shallow coal workings underneath the site.

General View

General View

EmapSite

Masdar House, 1 Reading Road,
Eversley, RG27 0RP

Report Reference: EMS-470471_631890

Your Reference: EMS_470471_631890

Report Date 4 Apr 2018

Report Delivery Method: Email - pdf

Geo Insight

Address: Lead Road, NE40 4JN,

Dear Sir/ Madam,

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

If you would like further assistance regarding this report then please contact the emapsite customer services team on 0118 9736883 quoting the above report reference number.

Yours faithfully,

emapsite customer services team

Enc.
Groundsure Geo Insight

Geo Insight

Address:	**Lead Road, NE40 4JN,**
Date:	**4 Apr 2018**
Reference:	**EMS-470471_631890**
Client:	**EmapSite**

NW N NE

W E

SW S SE

Aerial Photograph Capture date:	02-Oct-2014
Grid Reference:	411926,560379
Site Size:	9.71ha

Contents Page

Contents Page ... 3
Overview of Findings ... 5
1:10,000 Scale Availability ... 8
Availability of 1:10,000 Scale Geology Mapping ... 9
1 Geology (1:10,000 scale) ... 10
1.1 Artificial Ground map (1:10,000 scale) ... 10
1. Geology 1:10,000 scale ... 11
1.1 Artificial Ground ... 11
1.2 Superficial Deposits and Landslips map (1:10,000 scale) ... 12
1.2 Superficial Deposits and Landslips ... 13
1.2.1 Superficial Deposits/ Drift Geology ... 13
1.2.2 Landslip ... 13
1.3 Bedrock and linear features map (1:10,000 scale) ... 14
1.3 Bedrock and linear features ... 15
1.3.1 Bedrock/ Solid Geology ... 15
1.3.2 Linear features ... 16
2 Geology 1:50,000 Scale ... 17
2.1 Artificial Ground map ... 17
2. Geology 1:50,000 scale ... 18
2.1 Artificial Ground ... 18
2.1.1 Artificial/ Made Ground ... 18
2.1.2 Permeability of Artificial Ground ... 18
2.2 Superficial Deposits and Landslips map (1:50,000 scale) ... 19
2.2 Superficial Deposits and Landslips ... 20
2.2.1 Superficial Deposits/ Drift Geology ... 20
2.2.2 Permeability of Superficial Ground ... 20
2.2.3 Landslip ... 20
2.2.4 Landslip Permeability ... 20
2.3 Bedrock and linear features map (1:50,000 scale) ... 21
2.3 Bedrock, Solid Geology & linear features ... 22
2.3.1 Bedrock/Solid Geology ... 22
2.3.2 Permeability of Bedrock Ground ... 23
2.3.3 Linear features ... 23
3 Radon Data ... 24
3.1 Radon Affected Areas ... 24
3.2 Radon Protection ... 24
4 Ground Workings map ... 25
4 Ground Workings ... 26
4.1 Historical Surface Ground Working Features derived from Historical Mapping ... 26
4.2 Historical Underground Working Features derived from Historical Mapping ... 27
4.3 Current Ground Workings ... 30
5 Mining, Extraction & Natural Cavities ... 32
5.1 Historical Mining ... 32
5.2 Coal Mining ... 35
5.3 Johnson Poole and Bloomer ... 35
5.4 Non-Coal Mining ... 35
5.5 Non-Coal Mining Cavities ... 35
5.6 Natural Cavities ... 36
5.7 Brine Extraction ... 36
5.8 Gypsum Extraction ... 36
5.9 Tin Mining ... 36
5.10 Clay Mining ... 36
6 Natural Ground Subsidence ... 37
6.1 Shrink-Swell Clay map ... 37
6.2 Landslides map ... 38
6.3 Ground Dissolution of Soluble Rocks map ... 39
6.4 Compressible Deposits map ... 40
6.5 Collapsible Deposits map ... 41
6.6 Running Sand map ... 42

6 Natural Ground Subsidence..... 43
6.1 Shrink-Swell Clays.....43
6.2 Landslides.....44
6.3 Ground Dissolution of Soluble Rocks.....45
6.4 Compressible Deposits.....45
6.5 Collapsible Deposits.....45
6.6 Running Sands.....46
7 Borehole Records..... 48
8 Estimated Background Soil Chemistry..... 49
9 Railways and Tunnels map..... 50
9 Railways and Tunnels..... 51
9.1 Tunnels 51
9.2 Historical Railway and Tunnel Features 51
9.3 Historical Railways.....52
9.4 Active Railways.....52
9.5 Railway Projects.....52

Overview of Findings

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

The report is based on the BGS 1:50,000 and 1:10,000 Digital Geological Map of Great Britain, BGS Geosure data; BRITPITS database; Non-coal mining data and Borehole Records, Coal Authority data including brine extraction areas, PBA non-coal mining and natural cavities database, Johnson Poole and Bloomer mining data and Groundsure's unique database including historical surface ground and underground workings.

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

Section 1: Geology 1:10,000 Scale		
1.1 Artificial Ground	1.1 Is there any Artificial Ground/ Made Ground present beneath the study site at 1:10,000 scale?	No
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site at 1:10,000 scale?*	Yes
	1.2.2 Are there any records of landslip within 500m of the study site boundary at 1:10,000 scale?	No
1.3 Bedrock, Solid Geology and linear features	1.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
	1.3.2 Are there any records of linear features within 500m of the study site boundary at 1:10,000 scale?	Yes

Section 2: Geology 1:50,000 Scale		
2.1 Artificial Ground	2.1.1 Is there any Artificial Ground/ Made Ground present beneath the study site?	No
	2.1.2 Are there any records relating to permeability of artificial ground within the study site*boundary?	No
2.2 Superficial Geology and Landslips	2.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?*	Yes
	2.2.2 Are there any records of permeability of superficial ground within 500m of the study site?	Yes
	2.2.3 Are there any records of landslip within 500m of the study site boundary?	No
	2.2.4 Are there any records relating to permeability of landslips within the study site* boundary?	No

Section 2: Geology 1:50,000 Scale

2.3 Bedrock, Solid Geology and linear features	2.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
	2.3.2 Are there any records relating to permeability of bedrock ground within the study site boundary?	Yes
	2.3.3 Are there any records of linear features within 500m of the study site boundary?	Yes

Section 3: Radon

3. Radon	3.1Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.
	3.2Radon Protection	No radon protective measures are necessary.

Section 4: Ground Workings	On-site	0-50m	51-250	251-500	501-1000
4.1 Historical Surface Ground Working Features from Small Scale Mapping	0	8	5	Not Searched	Not Searched
4.2 Historical Underground Workings from Small Scale Mapping	0	12	11	18	34
4.3 Current Ground Workings	1	0	0	2	4

Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.1 Historical Mining	0	12	11	18	34
5.2 Coal Mining	1	0	0	0	0
5.3 Johnson Poole and Bloomer Mining Area	0	0	0	0	0
5.4 Non-Coal Mining*	0	0	0	0	0
5.5 Non–Coal Mining Cavities	0	0	0	0	0
5.5 Natural Cavities	0	0	0	0	0

Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.6 Brine Extraction	0	0	0	0	0
5.7 Gypsum Extraction	0	0	0	0	0
5.8 Tin Mining	0	0	0	0	0
5.9 Clay Mining	0	0	0	0	0

Section 6: Natural Ground Subsidence	On-site
6.1 Shrink-Swell Clay	Very Low
6.2 Landslides	Low
6.3 Ground Dissolution of Soluble Rocks	Negligible
6.4 Compressible Deposits	Negligible
6.5 Collapsible Deposits	Very Low
6.5 Running Sand	Very Low

Section 7: Borehole Records	On-site	0-50m	51-250
7 BGS Recorded Boreholes	1	0	2

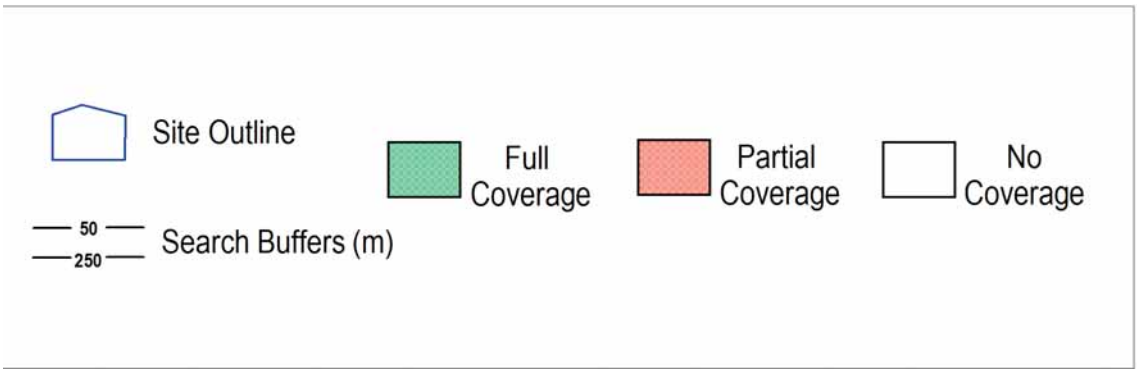
Section 8: Estimated Background Soil Chemistry	On-site	0-50m	51-250
8 Records of Background Soil Chemistry	15	9	0

Section 9: Railways and Tunnels	On-site	0-50m	51-250	250-500
9.1 Tunnels	0	0	0	Not Searched
9.2 Historical Railway and Tunnel Features	0	0	0	Not Searched
9.3 Historical Railways	0	0	0	Not Searched
9.4 Active Railways	0	0	0	Not Searched
9.5 Railway Projects	0	0	0	0

1:10,000 Scale Availability

1_10,000 Availability Legend

© Crown copyright and database rights 2018.
Ordnance Survey license 100035207.



Availability of 1:10,000 Scale Geology Mapping

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

ID	Distance	Artificial Coverage	Superficial Coverage	Bedrock Coverage	Mass Movement Coverage
1	0.0	No deposits are mapped	No coverage	No coverage	No coverage
2	0.0	Some deposits are mapped	Full	Full	Some deposits are mapped

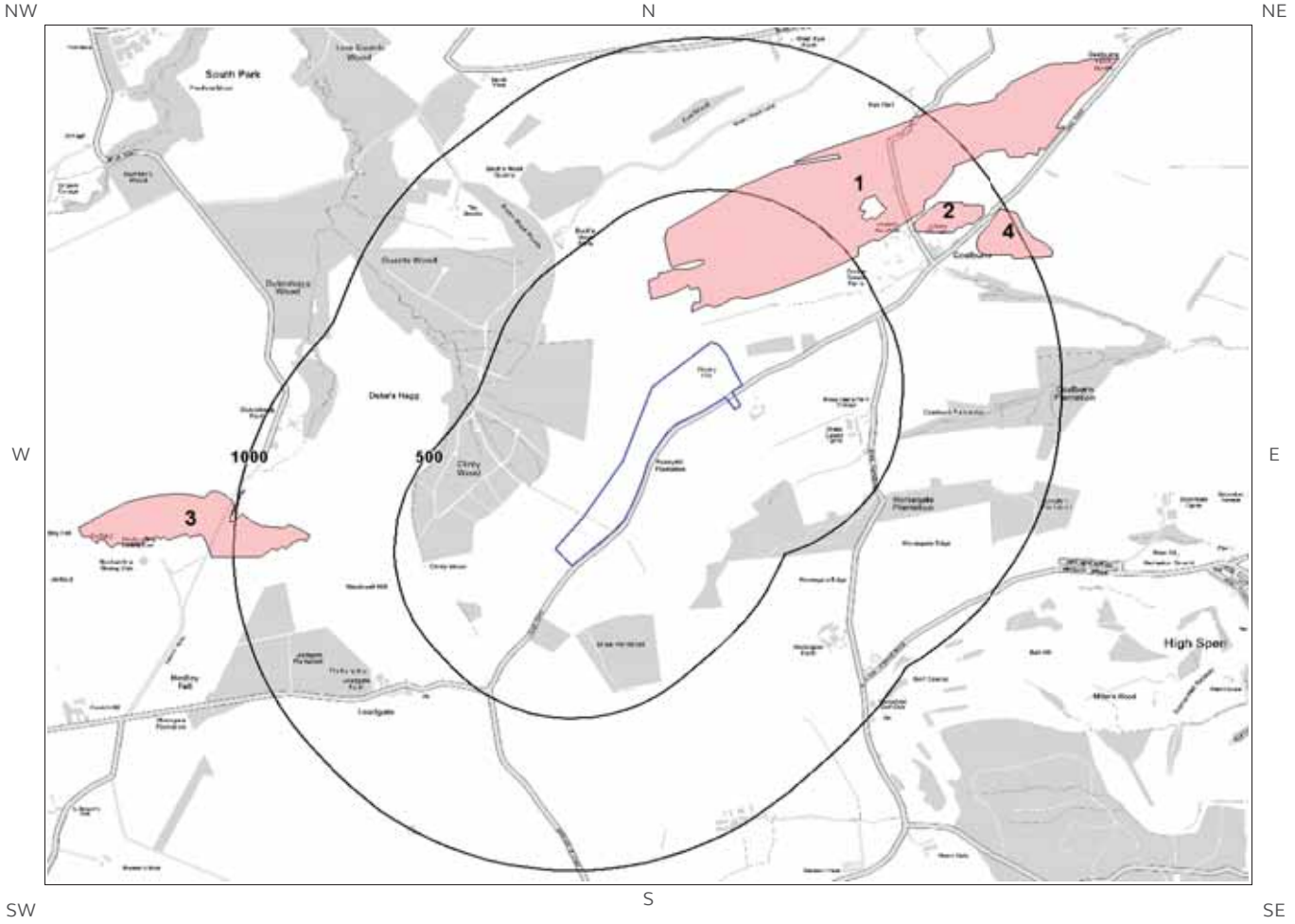
Guidance: The 1:10,000 scale geological interpretation is the most detailed generally available from BGS and is the scale at which most geological surveying is carried out in the field. The database is presented as four types of geology (artificial, mass movement, superficial and bedrock), although not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

The definitions of coverage are as follows:

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

1 Geology (1:10,000 scale).

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



Artificial Ground Legend

© Crown copyright and database rights 2018.
Ordnance Survey license 100035207.

Site Outline

500
1000
Search Buffers (m)

Made Ground (undivided)

Disturbed Ground (undivided)

Worked Ground (undivided)

Landscaped Ground (undivided)

Infilled Ground

Reclaimed Ground

1. Geology 1:10,000 scale

1.1 Artificial Ground

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

Are there any records of Artificial/ Made Ground within 500m of the study site boundary at 1:10,000 scale? Yes

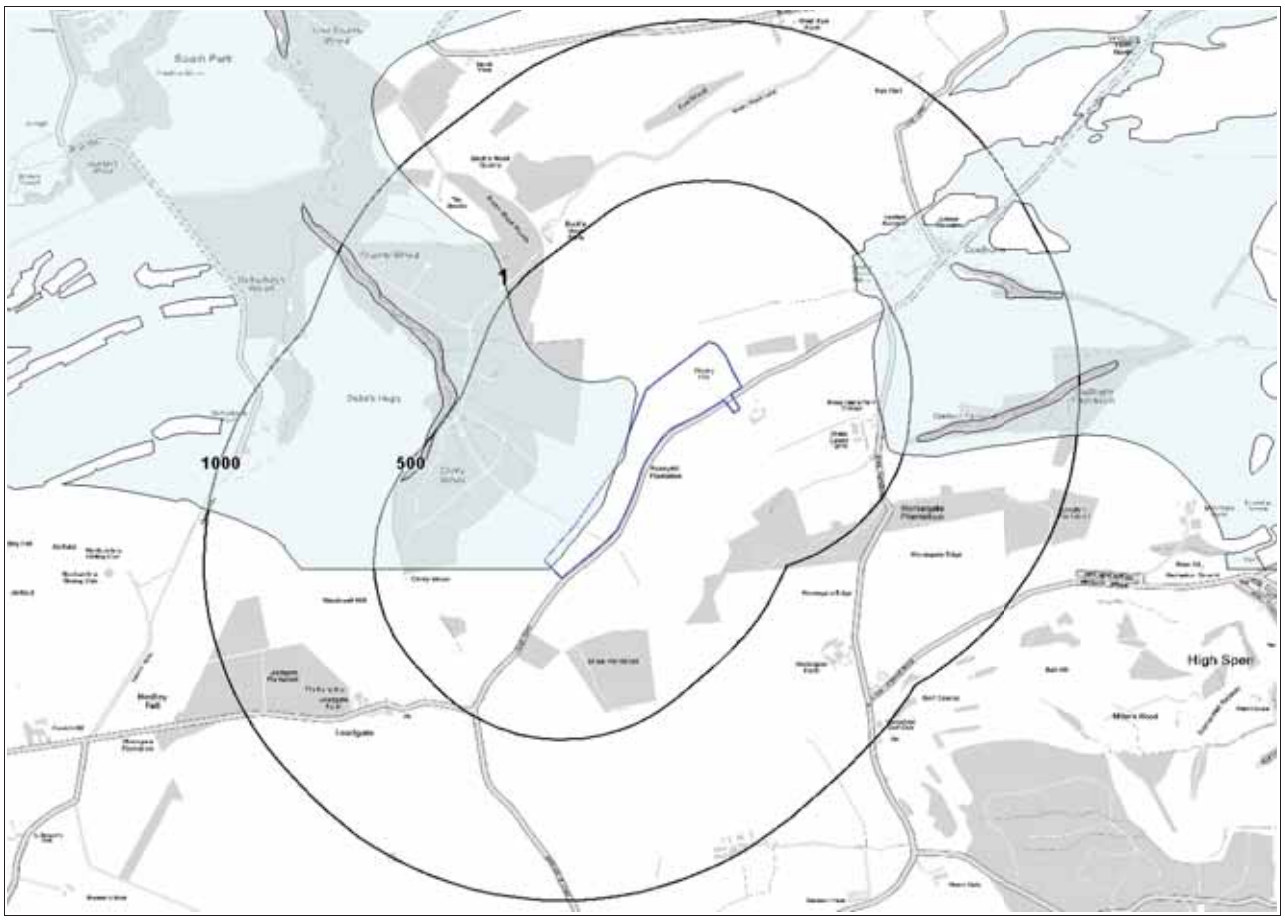
ID	Distance	Direction	LEX Code	Description	Rock Description
1	116.0	N	WMGR-ARTDP	Infilled Ground	Artificial Deposit

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

NW N NE

W E

SW S SE



Artificial Ground Legend

© Crown copyright and database rights 2018.
Ordnance Survey license 100035207.

Site Outline

500
1000
Search Buffers (m)

1.2 Superficial Deposits and Landslips

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

1.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary at 1:10,000 scale? Yes

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	TILL-DMTN	Till - Diamicton	Diamicton

1.2.2 Landslip

Are there any records of Landslip within 500m of the study site boundary at 1:10,000 scale?

No

Database searched and no data found.

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

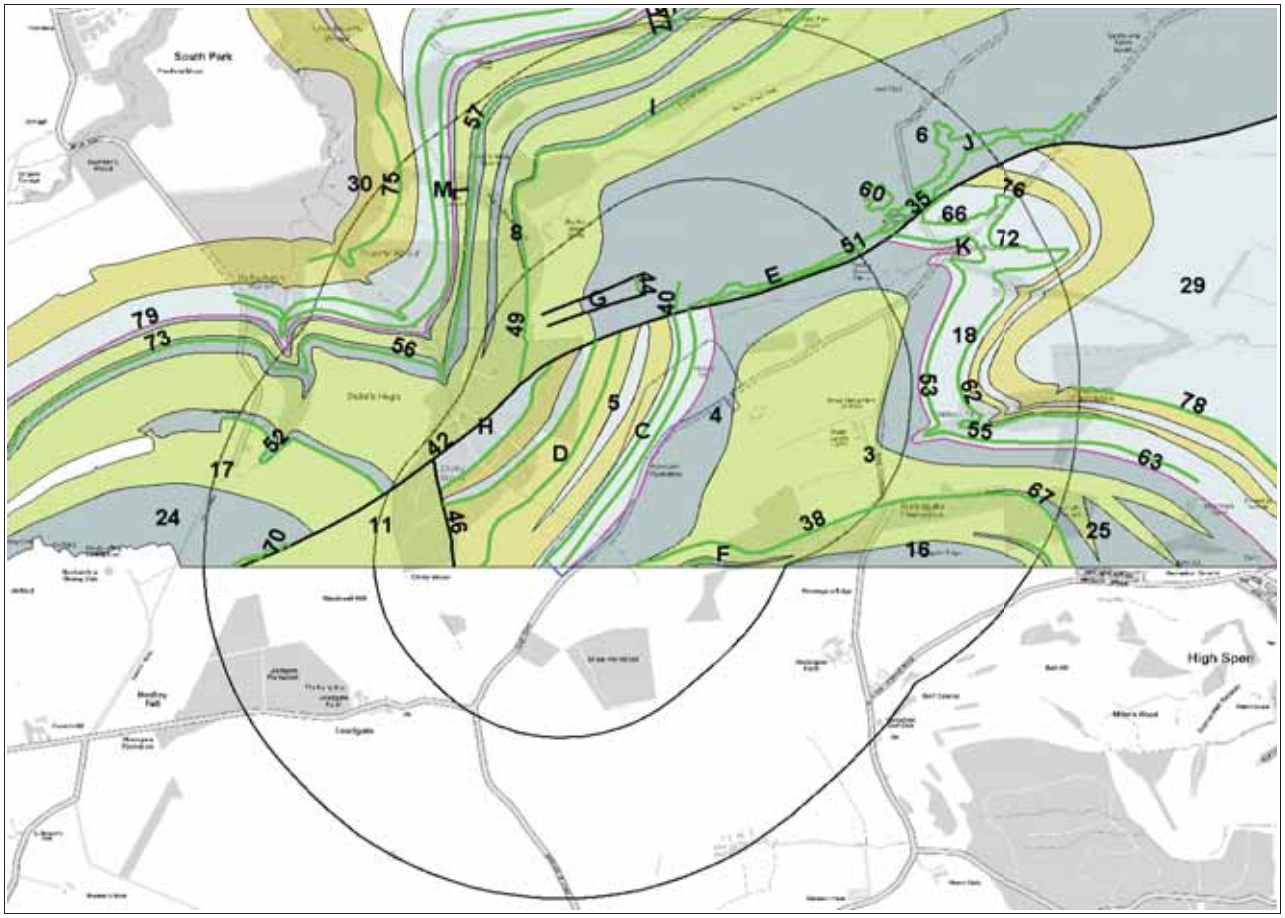
This Geology shows the main components as discrete layers, these are: Artificial / Made Ground, Superficial / Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

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

NW N NE

W E

SW S SE



Bedrock and linear features Legend

© Crown copyright and database rights 2018.
Ordnance Survey license 100035207.

Site Outline

500
1000
Search Buffers (m)

1.3 Bedrock and linear features

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

1.3.1 Bedrock/ Solid Geology

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

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
1D	0.0	On Site	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
2C	0.0	On Site	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
3	0.0	On Site	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
4	0.0	On Site	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
5	22.0	W	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
6	105.0	N	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
7A	184.0	W	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
8	208.0	NW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
9F	216.0	SE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
10A	225.0	NW	PLCM-SDST	Pennine Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
11	268.0	W	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
12H	287.0	W	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
13I	478.0	NW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
14	482.0	W	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
15	489.0	NW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
16	492.0	SE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age

1.3.2 Linear features

Are there any records of linear features within 500m of the study site boundary at 1:10,000 scale? Yes

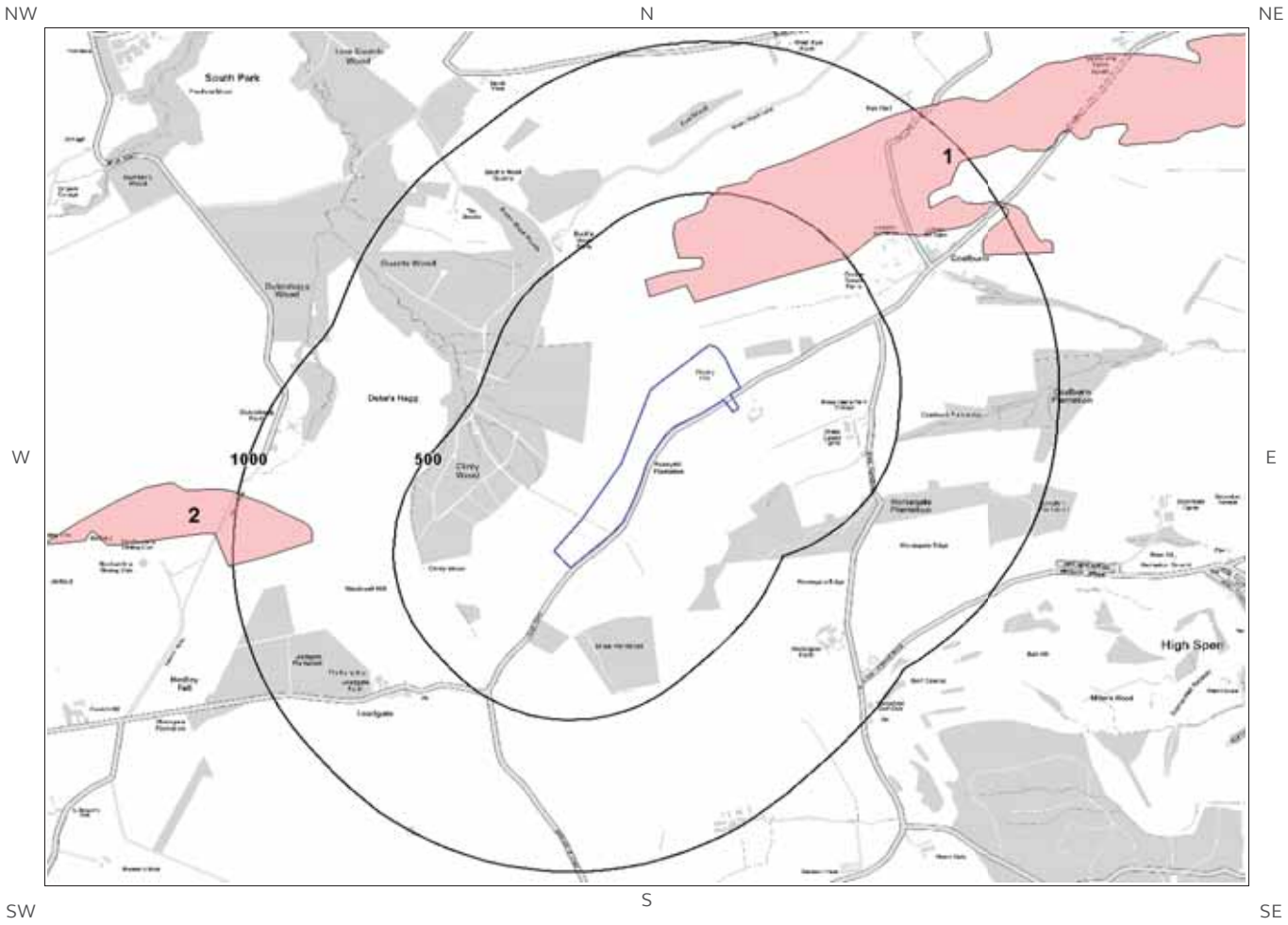
ID	Distance (m)	Direction	Category Description	Feature Description
32C	0.0	On Site	FOSSIL_HORIZON	Fossil horizon, marine band coincident with bedrock geology boundary
33C	0.0	On Site	ROCK	Coal seam, inferred
34C	0.0	On Site	ROCK	Coal seam, inferred
35	105.0	N	FAULT	Normal fault, inferred
36D	114.0	W	ROCK	Coal seam, inferred
37E	116.0	N	ROCK	Coal seam, observed coincident with both Superficial geology boundary and Artificial geology boundar
38	118.0	SE	ROCK	Coal seam, inferred
39E	125.0	N	ROCK	Coal seam, observed
40	136.0	NW	ROCK	Coal seam, inferred
41A	184.0	W	ROCK	Coal seam, inferred coincident with bedrock geology boundary
42	206.0	NW	FAULT	Normal fault, inferred
43G	228.0	NW	FAULT	Normal fault, inferred
44	233.0	NW	ROCK	Coal seam, inferred
45F	235.0	SE	ROCK	Coal seam, inferred
46	268.0	W	FAULT	Normal fault, inferred
47G	282.0	NW	FAULT	Normal fault, inferred
48H	287.0	W	ROCK	Coal seam, inferred coincident with bedrock geology boundary
49	350.0	W	ROCK	Coal seam, inferred
50I	478.0	NW	ROCK	Coal seam, inferred coincident with bedrock geology boundary
51	482.0	NE	ROCK	Coal seam, observed coincident with both Superficial geology boundary and Artificial geology boundar

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

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

2 Geology 1:50,000 Scale

2.1 Artificial Ground map



© Crown copyright and database rights 2018.
Ordnance Survey license 100035207.

Site Outline

500
1000
Search Buffers (m)

Made Ground (undivided)

Worked Ground (undivided)

Infilled Ground

Disturbed Ground (undivided)

Landscaped Ground (undivided)

Reclaimed Ground

2. Geology 1:50,000 scale

2.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 020

2.1.1 Artificial/ Made Ground

Are there any records of Artificial/ Made Ground within 500m of the study site boundary? Yes

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	150.0	N	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT

2.1.2 Permeability of Artificial Ground

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

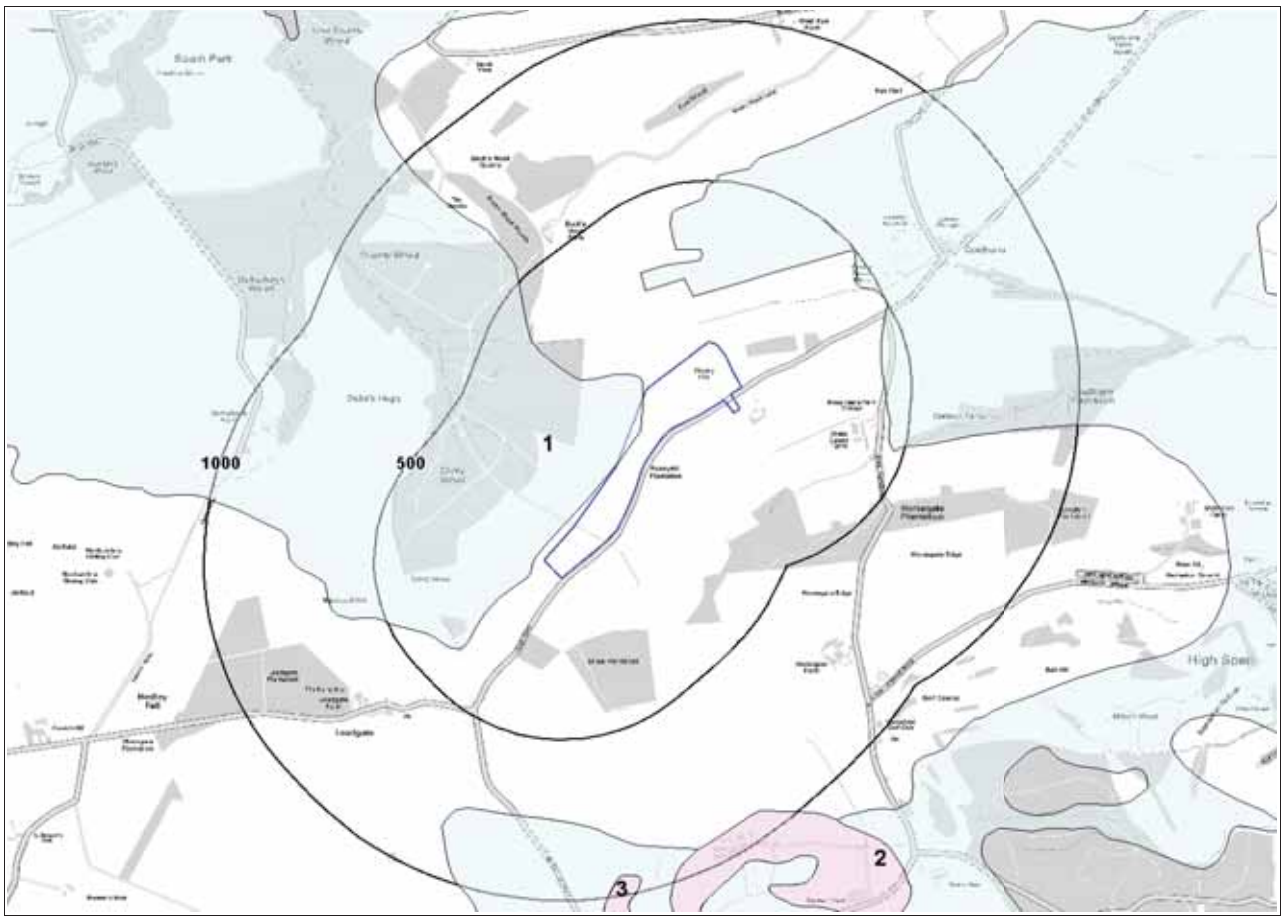
Database searched and no data found.

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

NW N NE

W E

SW S SE



© Crown copyright and database rights 2018.
Ordnance Survey license 100035207.

Site Outline

500
1000
Search Buffers (m)

2.2 Superficial Deposits and Landslips

2.2.1 Superficial Deposits/ Drift Geology

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

ID	Distance	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON

2.2.2 Permeability of Superficial Ground

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

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

2.2.3 Landslip

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

Database searched and no data found.

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

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

2.2.4 Landslip Permeability

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

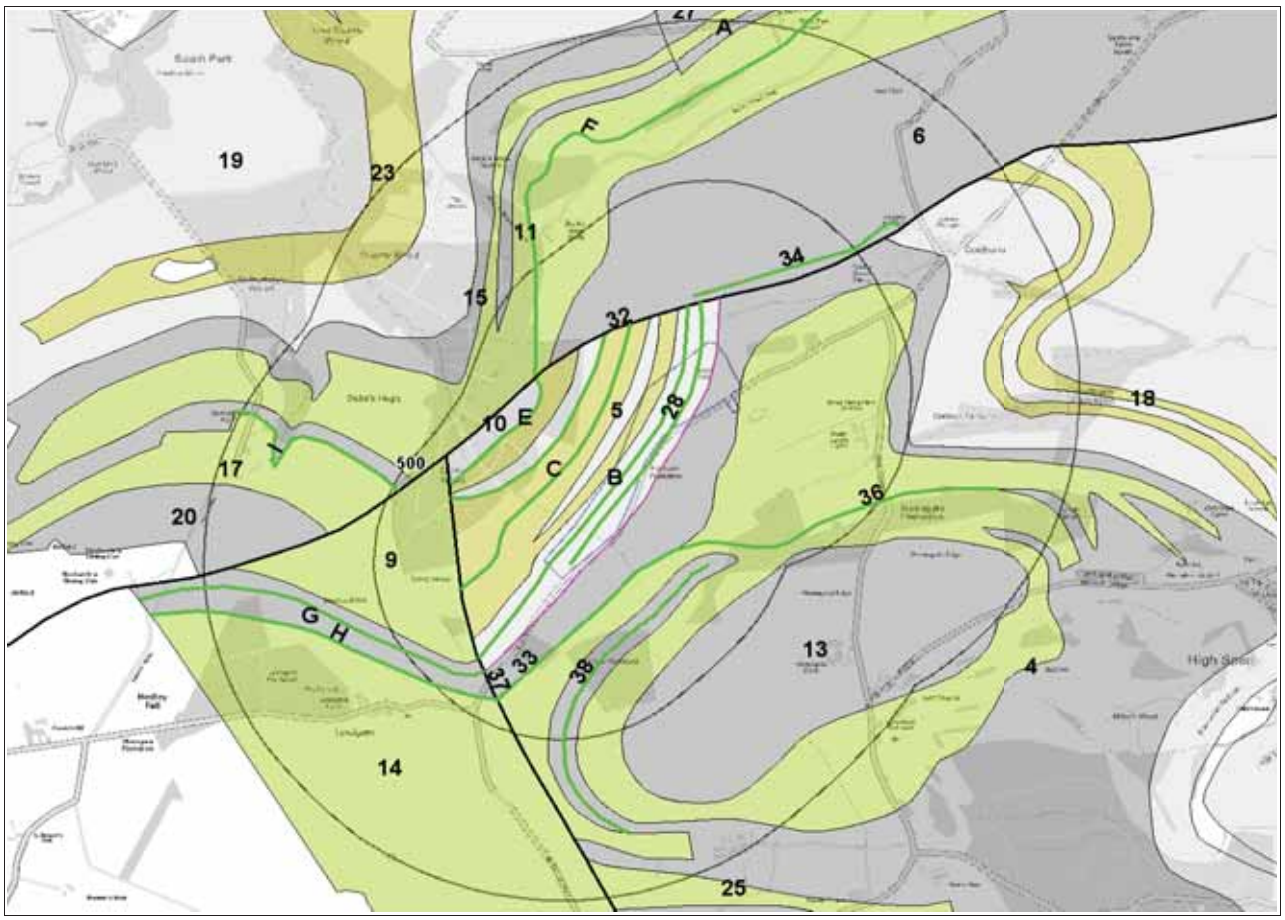
Database searched and no data found.

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

NW N NE

W E

SW S SE



© Crown copyright and database rights 2018.
Ordnance Survey license 100035207.

Site Outline

500
1000
Search Buffers (m)

2.3 Bedrock, Solid Geology & linear features

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 020

2.3.1 Bedrock/Solid Geology

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

ID	Distance	Direction	LEX Code	Rock Description	Rock Age
1C	0.0	On Site	PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
2B	0.0	On Site	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
3	0.0	On Site	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
4	0.0	On Site	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
5	3.0	W	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
6	124.0	N	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
7D	163.0	NW	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
8E	213.0	W	PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
9	254.0	W	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
10	279.0	W	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
11	294.0	W	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
12G	350.0	SW	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
13	387.0	SE	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
14	421.0	SW	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
15	460.0	NW	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
16	473.0	W	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
17	479.0	NW	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN

2.3.2 Permeability of Bedrock Ground

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

Distance	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Fracture	Moderate	Low
0.0	On Site	Fracture	High	Moderate
0.0	On Site	Fracture	High	Low
0.0	On Site	Fracture	High	Low
0.0	On Site	Fracture	High	Low
3.0	W	Fracture	High	Low
17.0	SE	Fracture	Moderate	Low
48.0	SW	Fracture	High	Low

2.3.3 Linear features

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

ID	Distance	Direction	Category Description	Feature Description
28	0.0	On Site	ROCK	Coal seam, inferred
29B	0.0	On Site	ROCK	Coal seam, inferred
30B	0.0	On Site	FOSSIL_HORIZON	Marine band
31C	94.0	W	ROCK	Coal seam, inferred
32	124.0	N	FAULT	Fault, inferred, displacement unknown
33	132.0	SE	ROCK	Coal seam, inferred
34	150.0	N	ROCK	Coal seam, observed
35D	163.0	NW	ROCK	Coal seam, inferred
36	182.0	SE	ROCK	Coal seam, inferred
37	254.0	W	FAULT	Fault, inferred, displacement unknown
38	259.0	SE	ROCK	Coal seam, inferred
39E	279.0	W	ROCK	Coal seam, inferred
40F	317.0	W	ROCK	Coal seam, inferred
41F	317.0	W	ROCK	Coal seam, inferred
42G	368.0	SW	ROCK	Coal seam, inferred
43H	421.0	SW	ROCK	Coal seam, inferred
44H	421.0	SW	ROCK	Coal seam, inferred
45I	479.0	NW	ROCK	Coal seam, inferred
46I	479.0	NW	ROCK	Coal seam, inferred

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

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

3 Radon Data

3.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

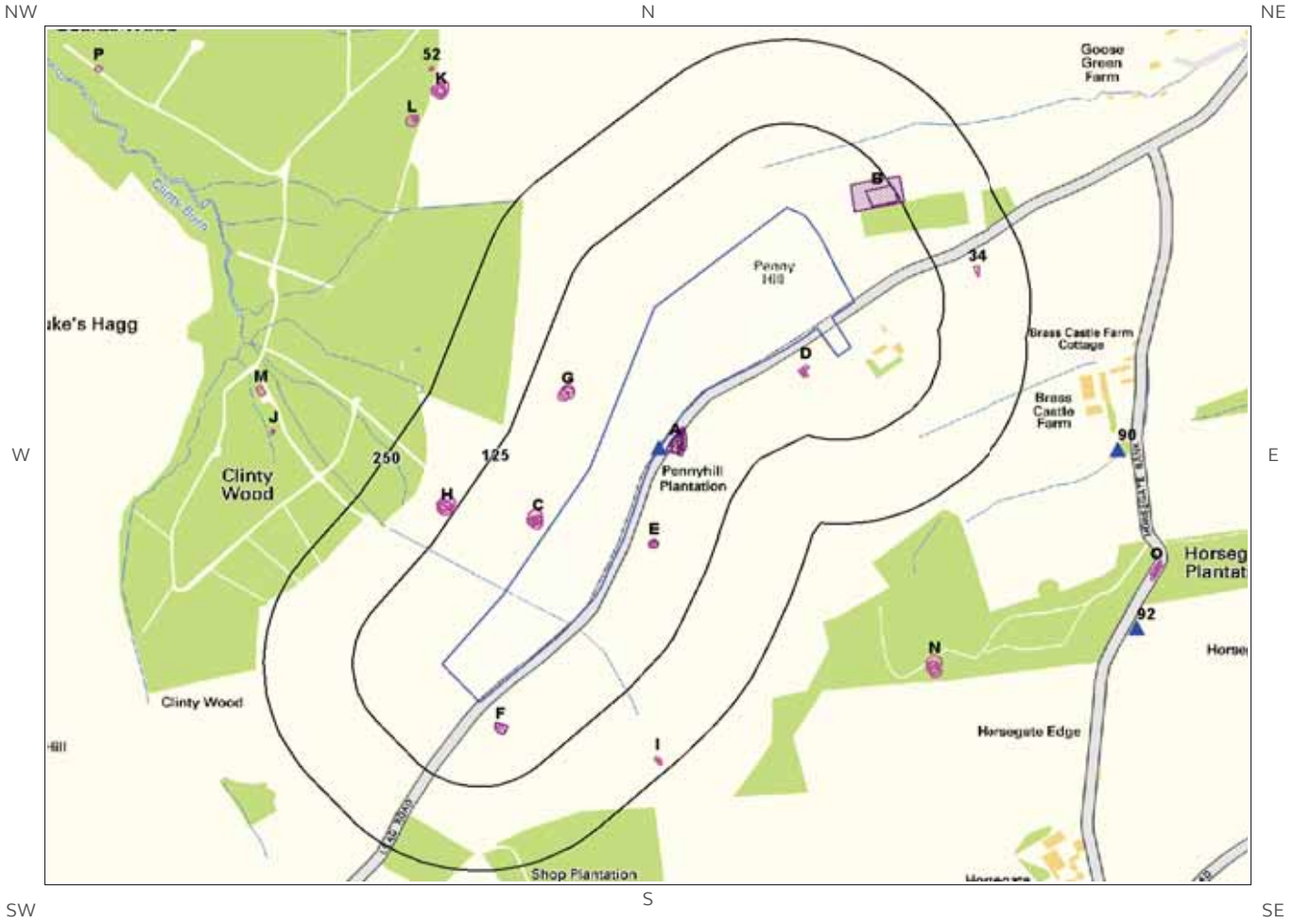
The radon data in this report is supplied by the BGS/Public Health England and is the definitive map of Radon Affected Areas in Great Britain and Northern Ireland. The dataset was created using long-term radon measurements in over 479,000 homes across Great Britain and 23,000 homes across Northern Ireland,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

3.2 Radon Protection

Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.

---

4 Ground Workings map



Ground Workings Legend

© Crown copyright and database rights 2018.
Ordnance Survey license 100035207.

Site Outline

125
250
Search Buffers (m)

Historic Surface Ground Workings

Historic Underground Workings

Current Ground Workings

4 Ground Workings

4.1 Historical Surface Ground Working Features derived from Historical Mapping

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

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

ID	Distance (m)	Direction	NGR	Use	Date
1A	8.0	SE	411948 560358	Unspecified Old Quarry	1895
2A	9.0	SE	411952 560357	Unspecified Old Quarry	1921
3A	10.0	SE	411952 560363	Unspecified Old Quarry	1895
4A	13.0	SE	411962 560362	Unspecified Old Quarry	1856
5C	13.0	NW	411758 560242	Unspecified Heap	1856
6A	14.0	SE	411958 560354	Unspecified Old Quarry	1921
7E	37.0	E	411920 560206	Unspecified Heap	1856
8F	38.0	SE	411706 559932	Unspecified Heap	1856
9G	60.0	W	411799 560430	Unspecified Pit	1856
10B	61.0	NE	412234 560727	Unspecified Heap	1940
11B	86.0	NE	412240 560724	Unspecified Heap	1979
12B	86.0	NE	412240 560724	Unspecified Heap	1995
13B	86.0	NE	412240 560724	Unspecified Heap	1967

4.2 Historical Underground Working Features derived from Historical Mapping

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

Are there any Historical Underground Working Features within 1000m of the study site boundary? Yes

The following Historical Underground Working Features are provided by Groundsure:

ID	Distance (m)	Direction	NGR	Use	Date
14C	10.0	NW	411754 560234	Old Coal Shafts	1921
15C	14.0	NW	411752 560239	Old Coal Shafts	1921
16C	15.0	NW	411754 560246	Unspecified Old Shafts	1895
17C	16.0	NW	411758 560242	Unspecified Old Shaft	1856
18C	17.0	NW	411750 560239	Old Coal Shafts	1895
19C	18.0	NW	411750 560240	Unspecified Old Shafts	1940
20D	35.0	SE	412134 560468	Unspecified Old Shaft	1895
21D	36.0	SE	412128 560463	Old Coal Shaft	1895
22D	39.0	SE	412130 560461	Old Coal Shaft	1921
23E	39.0	E	411919 560206	Unspecified Old Shaft	1856
24F	44.0	SE	411704 559933	Unspecified Old Shaft	1856
25D	44.0	SE	412133 560457	Old Coal Shaft	1921
26G	61.0	W	411799 560432	Unspecified Old Shaft	1895
27G	65.0	W	411800 560429	Unspecified Old Shaft	1856
28G	66.0	W	411793 560426	Old Coal Shaft	1895
29H	125.0	NW	411631 560257	Old Coal Shafts	1921
30H	128.0	NW	411627 560259	Old Coal Shafts	1895
31H	129.0	NW	411630 560267	Unspecified Old Shafts	1895
32H	130.0	NW	411623 560261	Old Coal Shafts	1921
33H	133.0	NW	411625 560263	Unspecified Old Shafts	1940
34	175.0	E	412374 560612	Air Shaft	1921
35I	225.0	SE	411924 559886	Air Shaft	1921

ID	Distance (m)	Direction	NGR	Use	Date
36I	231.0	SE	411927 559881	Air Shaft	1921
37J	400.0	NW	411386 560372	Air Shaft	1921
38J	401.0	NW	411385 560374	Air Shaft	1921
39K	429.0	NW	411622 560876	Old Coal Shafts	1921
40L	431.0	NW	411580 560834	Unspecified Old Shaft	1940
41K	431.0	NW	411624 560885	Unspecified Old Shafts	1895
42K	432.0	NW	411620 560880	Old Coal Shafts	1921
43L	433.0	NW	411586 560839	Unspecified Old Shaft	1856
44K	434.0	NW	411617 560880	Unspecified Old Shaft	1940
45K	435.0	NW	411619 560883	Old Coal Shafts	1895
46M	443.0	NW	411368 560433	Disused Air Shaft	1995
47M	443.0	NW	411368 560433	Disused Air Shaft	1967
48M	443.0	NW	411368 560433	Disused Air Shaft	1979
49N	463.0	E	412314 560030	Unspecified Old Shaft	1895
50N	464.0	SE	412311 560023	Old Coal Shaft	1921
51N	467.0	SE	412313 560021	Old Coal Shaft	1895
52	470.0	NW	411608 560912	Unspecified Old Shaft	1856
53N	470.0	SE	412316 560017	Old Coal Shaft	1921
54N	477.0	SE	412318 560022	Unspecified Old Shaft	1856
55O	537.0	SE	412627 560169	Unspecified Drift	1895
56O	541.0	SE	412627 560164	Drift	1895
Not shown	616.0	NW	411748 561216	Old Coal Pit	1921
Not shown	618.0	NW	411747 561219	Old Coal Pit	1921
Not shown	618.0	NW	411745 561218	Old Coal Pit	1895
Not shown	619.0	NW	411743 561217	Old Coal Pit	1895
Not shown	624.0	NW	411571 561081	Old Coal Pit	1856
Not shown	624.0	NW	411750 561222	Old Coal Pit	1856
Not shown	638.0	N	411865 561299	Old Coal Pit	1856
Not shown	689.0	NW	411636 561218	Unspecified Old Shaft	1940

ID	Distance (m)	Direction	NGR	Use	Date
Not shown	699.0	N	412003 561400	Old Coal Shaft	1921
Not shown	702.0	N	412003 561401	Old Coal Shaft	1921
Not shown	703.0	N	411996 561403	Unspecified Old Shaft	1895
Not shown	833.0	SE	412277 559386	Unspecified Old Shaft	1856
Not shown	839.0	W	410758 560065	Old Coal Pits	1895
Not shown	845.0	SE	412450 559533	Unspecified Old Shaft	1940
71P	851.0	NW	411141 560912	Unspecified Disused Drift	1995
72P	851.0	NW	411141 560912	Unspecified Disused Drift	1967
73P	851.0	NW	411141 560912	Unspecified Disused Drift	1979
Not shown	852.0	W	410752 560065	Old Coal Pits	1895
Not shown	852.0	W	410752 560065	Old Coal Pits	1921
Not shown	852.0	W	410752 560065	Old Coal Pits	1921
Not shown	908.0	W	410713 560144	Old Coal Pits	1895
Not shown	910.0	SE	413056 560125	Unspecified Disused Mine	1979
Not shown	913.0	W	410711 560153	Old Coal Pit	1859
Not shown	917.0	W	410742 560293	Old Coal Pit	1859
Not shown	919.0	NE	413032 560969	Unspecified Old Shaft	1856
Not shown	929.0	W	410687 560067	Old Coal Pits	1895
Not shown	931.0	W	410686 560071	Old Coal Pits	1895
Not shown	931.0	W	410686 560071	Old Coal Pits	1921
Not shown	949.0	E	413085 560152	Air Shaft	1921
Not shown	956.0	E	413089 560145	Air Shaft	1921
Not shown	960.0	SE	413140 560092	Unspecified Disused Mine	1967
Not shown	988.0	SE	413084 560054	Coal Drifts	1921

4.3 Current Ground Workings

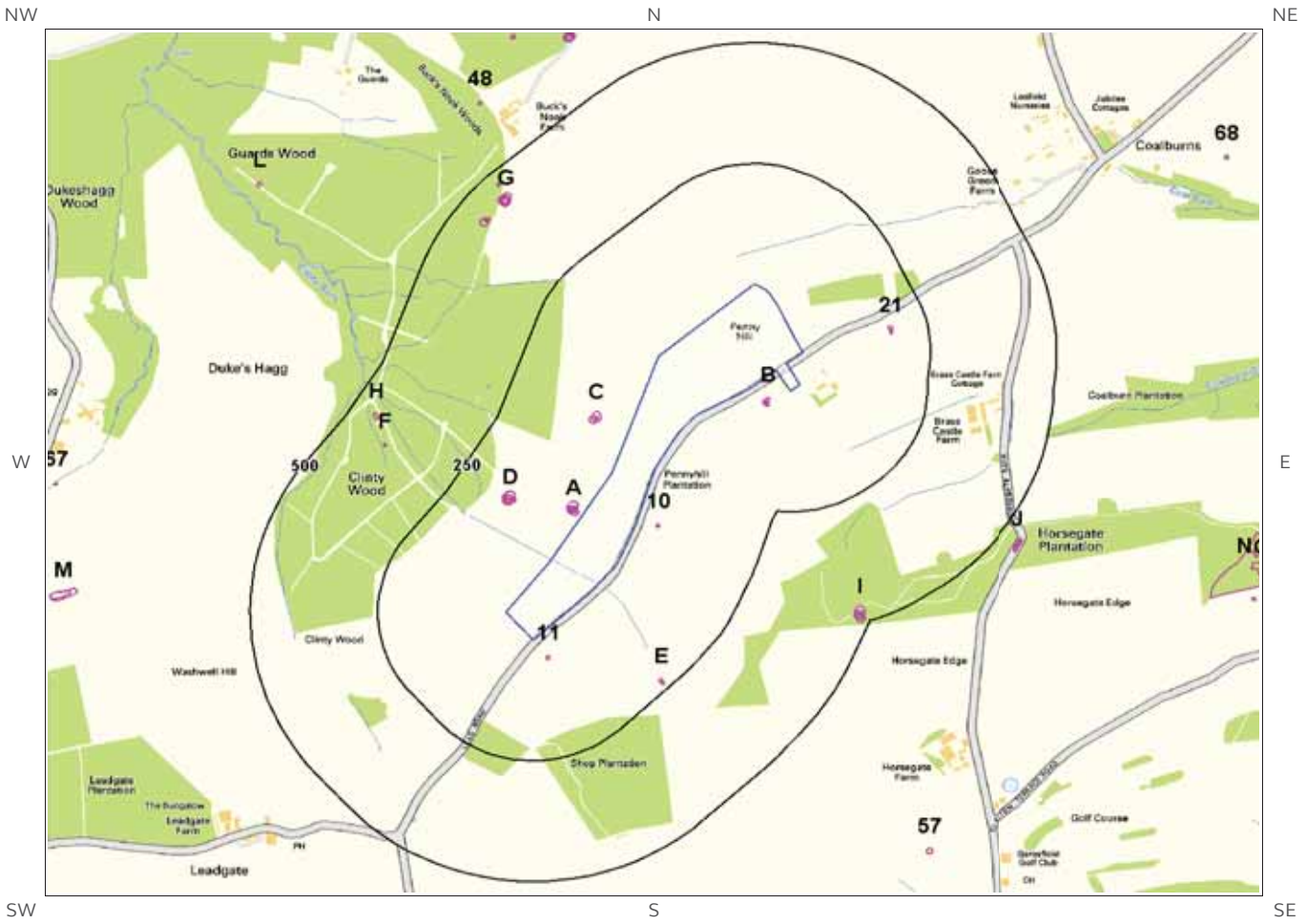
This dataset is derived from the BGS BRITPITS database covering active; inactive mines; quarries; oil wells; gas wells and mineral wharves; and rail deposits throughout the British Isles.

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

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

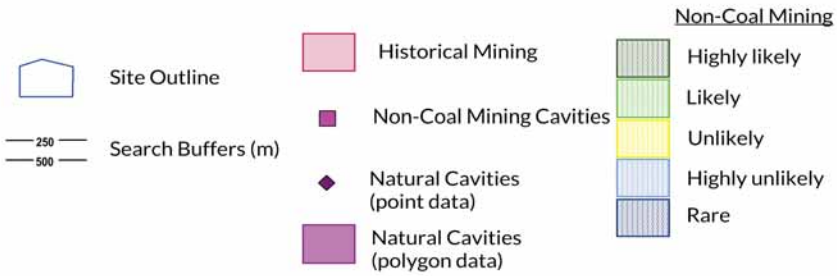
ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
89A	0.0	On Site	411927 560348	Sandstone	Pennyhill Plant	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
90	405.0	E	412573 560346	Sandstone	Coalburns Farm	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	463.0	SW	411482 559549	Sandstone	Shop Plantation	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
92	580.0	SE	412600 560080	Sandstone	Horsegate Bank	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	644.0	S	411470 559359	Sandstone	Shop Plantation	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	731.0	NW	411567 561211	Sandstone	Buck's Nook Quarry	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	767.0	NE	412600 561300	Coal, Surface Mined	Goose Green OCCS	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

5 Mining, Extraction & Natural Cavities map



Mining, Extraction and Natural Cavities Legend

© Crown copyright and database rights 2018. Ordnance Survey license 100035207.



5 Mining, Extraction & Natural Cavities

5.1 Historical Mining

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

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

The following Historical Mining information is provided by Groundsure:

ID	Distance (m)	Direction	NGR	Details	Date
1A	10.0	NW	411754 560234	Old Coal Shafts	1921
2A	14.0	NW	411752 560239	Old Coal Shafts	1921
3A	15.0	NW	411754 560246	Unspecified Old Shafts	1895
4A	16.0	NW	411758 560242	Unspecified Old Shaft	1856
5A	17.0	NW	411750 560239	Old Coal Shafts	1895
6A	18.0	NW	411750 560240	Unspecified Old Shafts	1940
7B	35.0	SE	412134 560468	Unspecified Old Shaft	1895
8B	36.0	SE	412128 560463	Old Coal Shaft	1895
9B	39.0	SE	412130 560461	Old Coal Shaft	1921
10	39.0	E	411919 560206	Unspecified Old Shaft	1856
11	44.0	SE	411704 559933	Unspecified Old Shaft	1856
12B	44.0	SE	412133 560457	Old Coal Shaft	1921
13C	61.0	W	411799 560432	Unspecified Old Shaft	1895
14C	65.0	W	411800 560429	Unspecified Old Shaft	1856
15C	66.0	W	411793 560426	Old Coal Shaft	1895
16D	125.0	NW	411631 560257	Old Coal Shafts	1921
17D	128.0	NW	411627 560259	Old Coal Shafts	1895
18D	129.0	NW	411630 560267	Unspecified Old Shafts	1895
19D	130.0	NW	411623 560261	Old Coal Shafts	1921
20D	133.0	NW	411625 560263	Unspecified Old Shafts	1940

ID	Distance (m)	Direction	NGR	Details	Date
21	175.0	E	412374 560612	Air Shaft	1921
22E	225.0	SE	411924 559886	Air Shaft	1921
23E	231.0	SE	411927 559881	Air Shaft	1921
24F	400.0	NW	411386 560372	Air Shaft	1921
25F	401.0	NW	411385 560374	Air Shaft	1921
26G	429.0	NW	411622 560876	Old Coal Shafts	1921
27G	431.0	NW	411580 560834	Unspecified Old Shaft	1940
28G	431.0	NW	411624 560885	Unspecified Old Shafts	1895
29G	432.0	NW	411620 560880	Old Coal Shafts	1921
30G	433.0	NW	411586 560839	Unspecified Old Shaft	1856
31G	434.0	NW	411617 560880	Unspecified Old Shaft	1940
32G	435.0	NW	411619 560883	Old Coal Shafts	1895
33H	443.0	NW	411368 560433	Disused Air Shaft	1967
34H	443.0	NW	411368 560433	Disused Air Shaft	1979
35H	443.0	NW	411368 560433	Disused Air Shaft	1995
36I	463.0	E	412314 560030	Unspecified Old Shaft	1895
37I	464.0	SE	412311 560023	Old Coal Shaft	1921
38I	467.0	SE	412313 560021	Old Coal Shaft	1895
39G	470.0	NW	411608 560912	Unspecified Old Shaft	1856
40I	470.0	SE	412316 560017	Old Coal Shaft	1921
41I	477.0	SE	412318 560022	Unspecified Old Shaft	1856
42J	537.0	SE	412627 560169	Unspecified Drift	1895
43J	541.0	SE	412627 560164	Drift	1895
44K	616.0	NW	411748 561216	Old Coal Pit	1921
45K	618.0	NW	411747 561219	Old Coal Pit	1921
46K	618.0	NW	411745 561218	Old Coal Pit	1895
47K	619.0	NW	411743 561217	Old Coal Pit	1895
48	624.0	NW	411571 561081	Old Coal Pit	1856
49K	624.0	NW	411750 561222	Old Coal Pit	1856

ID	Distance (m)	Direction	NGR	Details	Date
Not shown	638.0	N	411865 561299	Old Coal Pit	1856
51	689.0	NW	411636 561218	Unspecified Old Shaft	1940
Not shown	699.0	N	412003 561400	Old Coal Shaft	1921
Not shown	702.0	N	412003 561401	Old Coal Shaft	1921
Not shown	703.0	N	411996 561403	Unspecified Old Shaft	1895
Not shown	833.0	SE	412277 559386	Unspecified Old Shaft	1856
56M	839.0	W	410758 560065	Old Coal Pits	1895
57	845.0	SE	412450 559533	Unspecified Old Shaft	1940
58L	851.0	NW	411141 560912	Unspecified Disused Drift	1967
59L	851.0	NW	411141 560912	Unspecified Disused Drift	1979
60L	851.0	NW	411141 560912	Unspecified Disused Drift	1995
61M	852.0	W	410752 560065	Old Coal Pits	1921
62M	852.0	W	410752 560065	Old Coal Pits	1895
63M	852.0	W	410752 560065	Old Coal Pits	1921
Not shown	908.0	W	410713 560144	Old Coal Pits	1895
65N	910.0	SE	413056 560125	Unspecified Disused Mine	1979
Not shown	913.0	W	410711 560153	Old Coal Pit	1859
67	917.0	W	410742 560293	Old Coal Pit	1859
68	919.0	NE	413032 560969	Unspecified Old Shaft	1856
Not shown	929.0	W	410687 560067	Old Coal Pits	1895
Not shown	931.0	W	410686 560071	Old Coal Pits	1895
Not shown	931.0	W	410686 560071	Old Coal Pits	1921
72N	949.0	E	413085 560152	Air Shaft	1921
73N	956.0	E	413089 560145	Air Shaft	1921
74O	960.0	SE	413140 560092	Unspecified Disused Mine	1967
75O	988.0	SE	413084 560054	Coal Drifts	1921

5.2 Coal Mining

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

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

The following Coal Mining information provided by the Coal Authority is not represented on Mapping:

Distance (m)	Direction	Details
0.0	On Site	The study site is located within the specified search distance of an identified mining area. Further details concerning this can be obtained from the Coal Authority Helpline on 0845 762 6848.

5.3 Johnson Poole and Bloomer

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

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

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

5.4 Non-Coal Mining

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

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

Database searched and no data found.

5.5 Non-Coal Mining Cavities

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

Are there any Non-Coal Mining cavities within 1000m of the study site boundary? No

Database searched and no data found.

5.6 Natural Cavities

This dataset provides information based on the Peter Brett Associates natural cavities database. The dataset is made up of points and polygons. Where polygons are used these represent an area in which it is expected the cavities could be found. It does not indicate that cavities are present everywhere within the polygon, and caution should be used in the interpretation of this data.

Are there any Natural Cavities within 1000m of the study site boundary? No

Database searched and no data found.

5.7 Brine Extraction

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

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

Database searched and no data found.

5.8 Gypsum Extraction

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

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

Database searched and no data found.

5.9 Tin Mining

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

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

Database searched and no data found.

5.10 Clay Mining

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

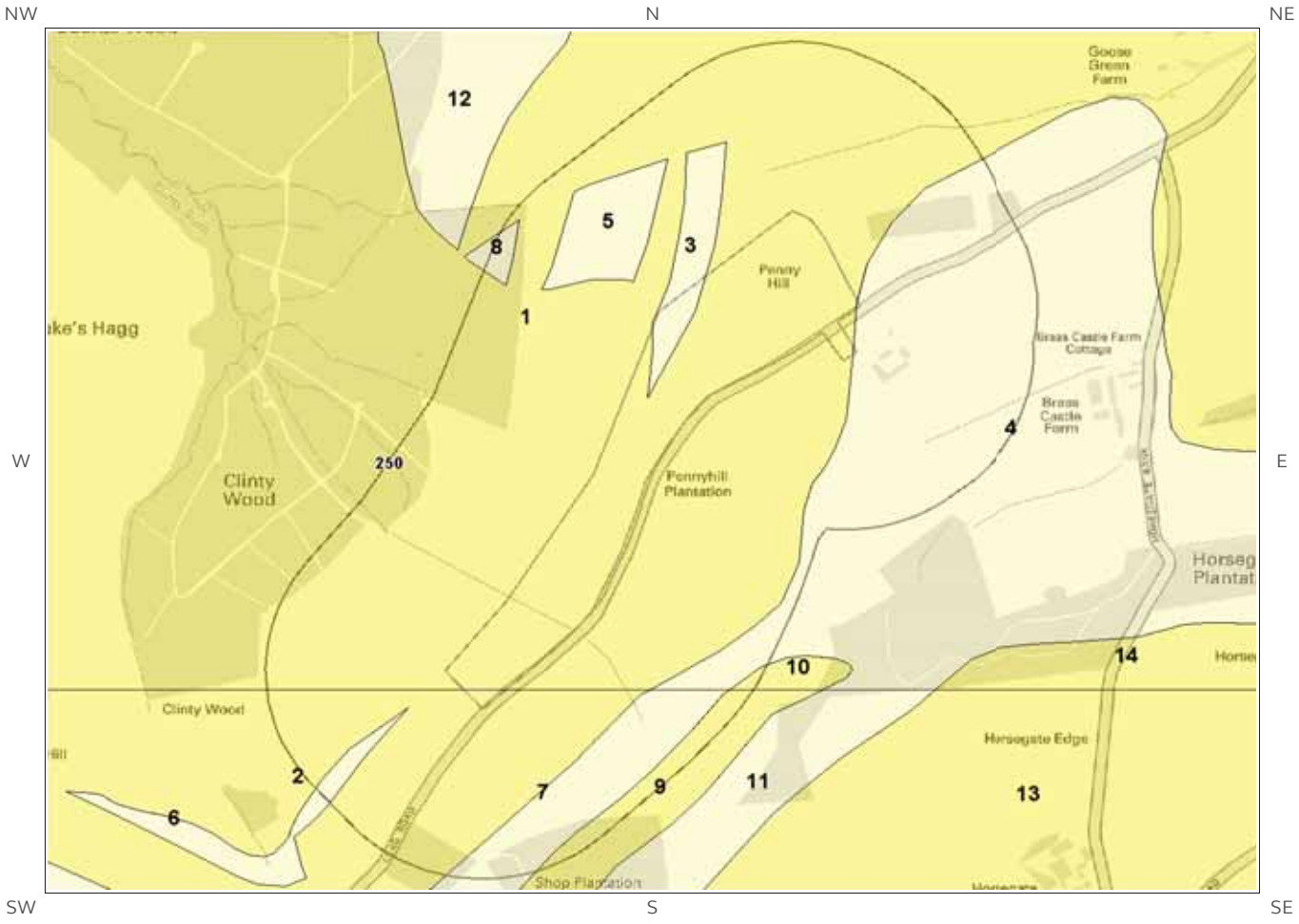
Are there any Clay Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

---

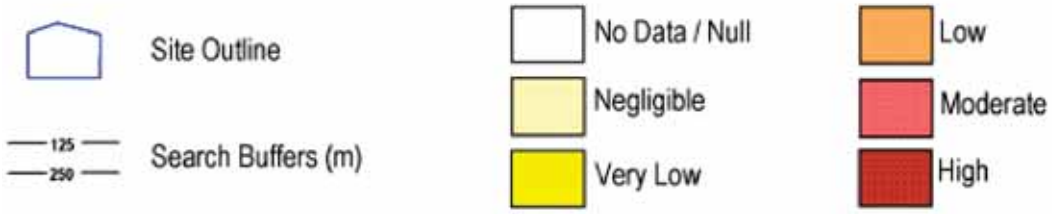
6 Natural Ground Subsidence

6.1 Shrink-Swell Clay map

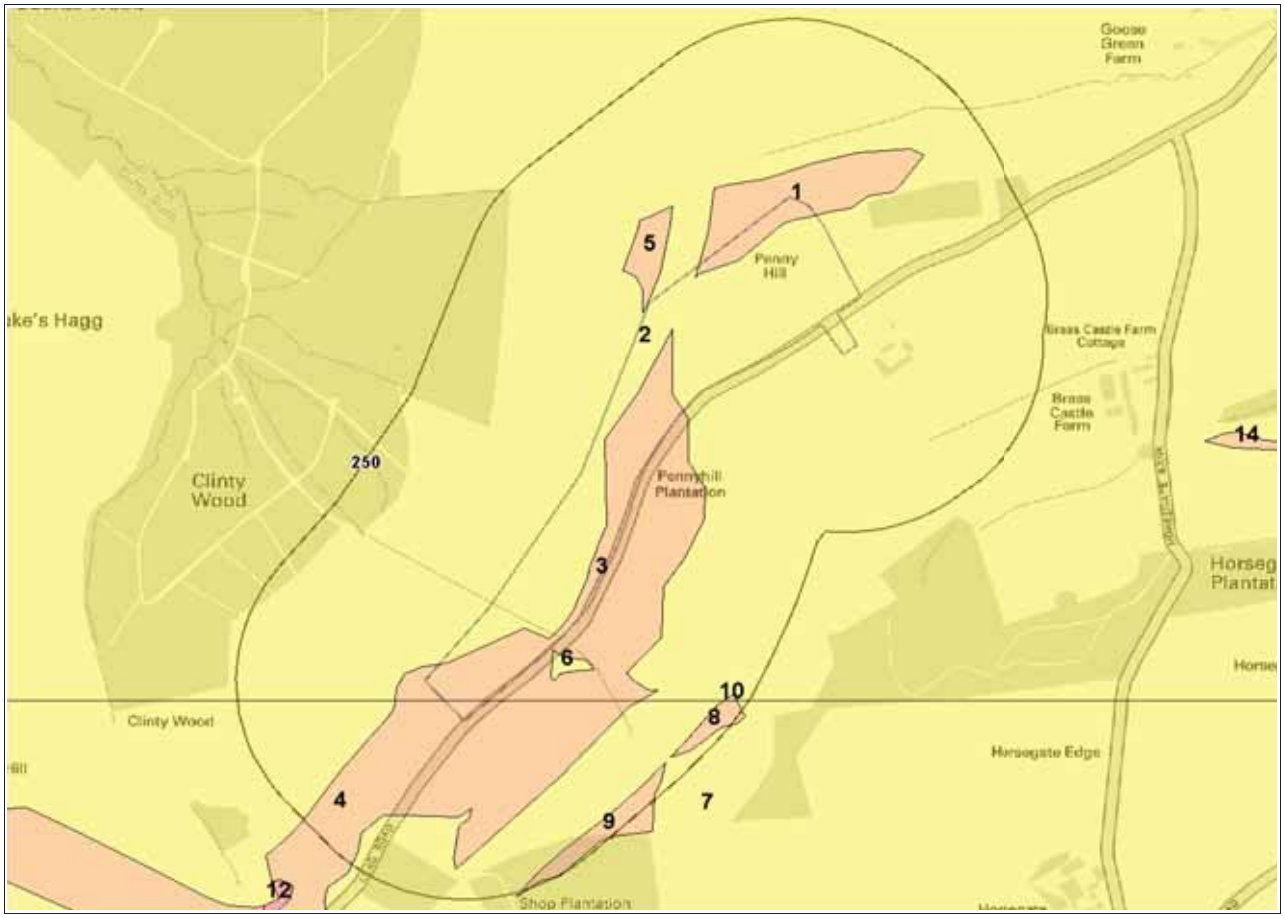


Shrink Swell Clay Legend

© Crown copyright and database rights 2018.
Ordnance Survey license 100035207.



6.2 Landslides map



Landslides Legend

© Crown copyright and database rights 2018.
Ordnance Survey license 100035207.

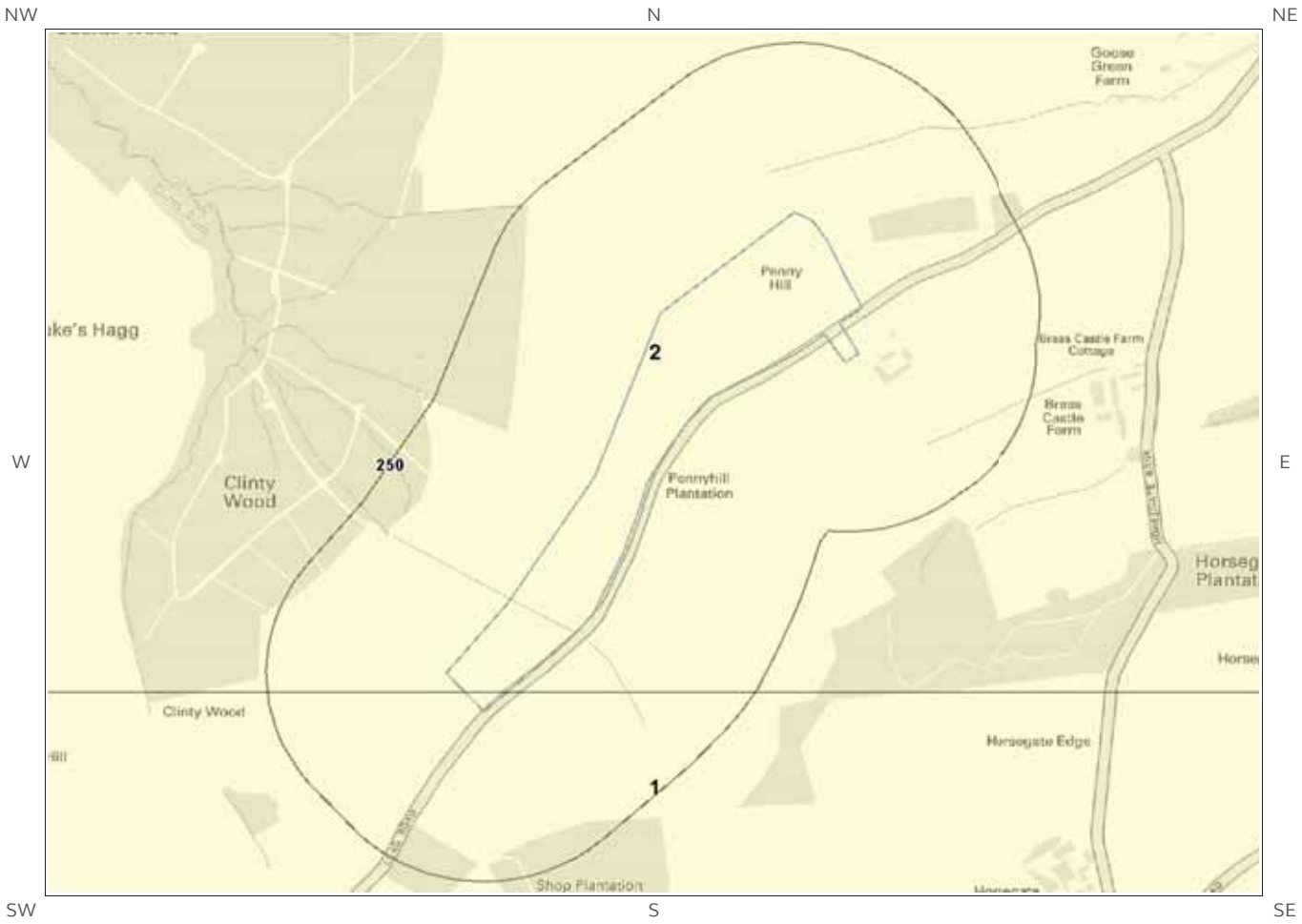
Site Outline

125
250
Search Buffers (m)

No Data / Null
Negligible
Very Low

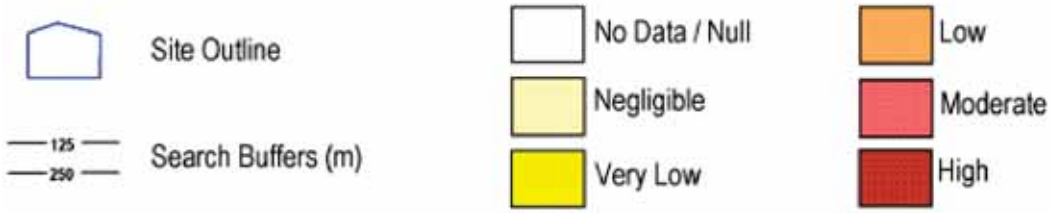
Low
Moderate
High

6.3 Ground Dissolution of Soluble Rocks map

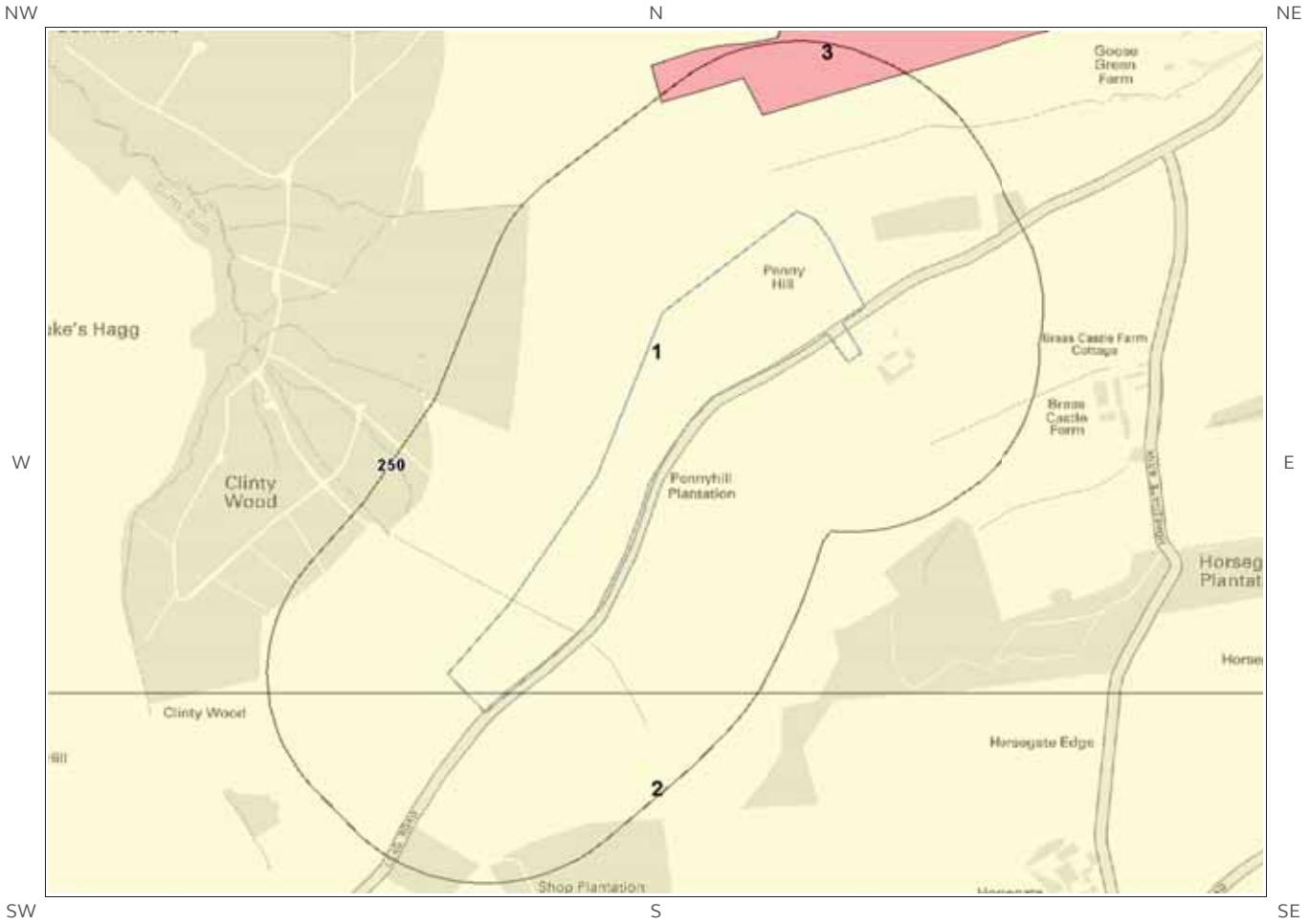


Ground Dissolution Soluble Rocks Legend

© Crown copyright and database rights 2018. Ordnance Survey license 100035207.



6.4 Compressible Deposits map



Compressible Deposits Legend

© Crown copyright and database rights 2018.
Ordnance Survey license 100035207.

Site Outline

125
250
Search Buffers (m)

No Data / Null

Negligible

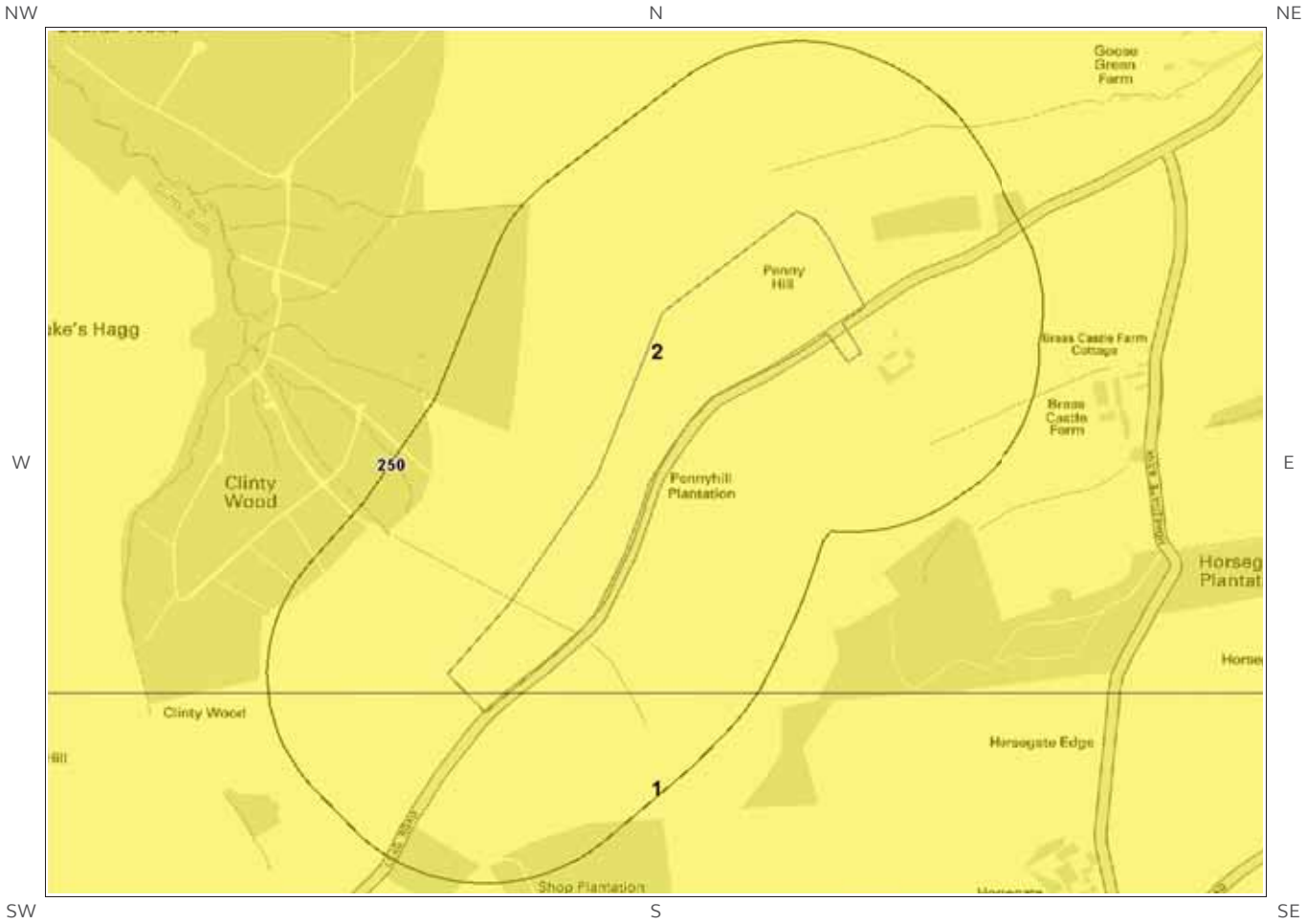
Very Low

Low

Moderate

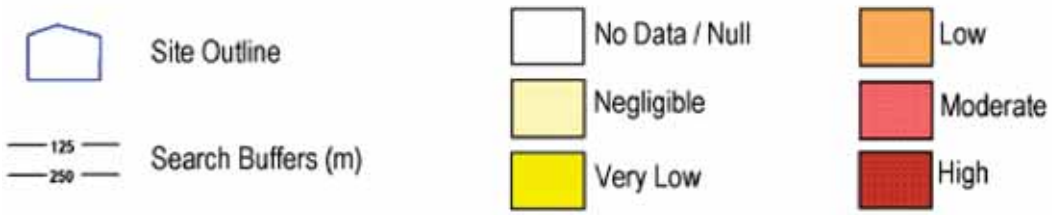
High

6.5 Collapsible Deposits map

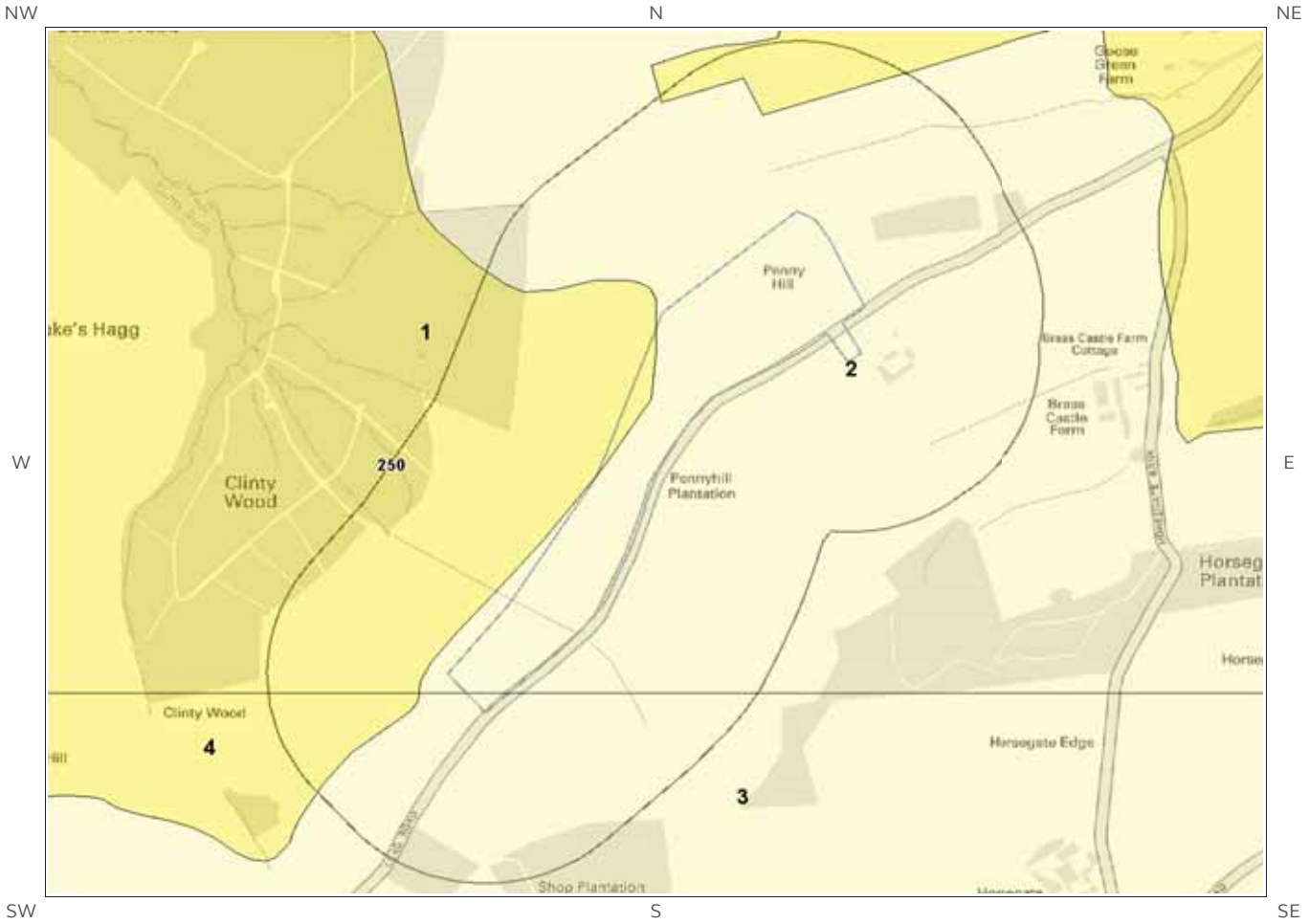


Collapsible Deposits Legend

© Crown copyright and database rights 2018.
Ordnance Survey license 100035207.



6.6 Running Sand map



Running Sand Legend

© Crown copyright and database rights 2018.
Ordnance Survey license 100035207.

Site Outline

125
250
Search Buffers (m)

No Data / Null
Negligible
Very Low

Low
Moderate
High

6 Natural Ground Subsidence

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

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

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

6.1 Shrink-Swell Clays

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

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.
2	0.0	On Site	Very Low	Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.
3	0.0	On Site	Negligible	Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.
4	0.0	On Site	Negligible	Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.

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

6.2 Landslides

The following Landslides information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Low	Possibility of slope instability problems after major changes in ground conditions. Consideration should be given to stability if changes to drainage or excavations take place. Possible increase in construction cost to reduce potential slope stability problems. Existing property - no significant increase in insurance risk due to natural slope instability problems.
2	0.0	On Site	Very Low	Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.
3	0.0	On Site	Low	Possibility of slope instability problems after major changes in ground conditions. Consideration should be given to stability if changes to drainage or excavations take place. Possible increase in construction cost to reduce potential slope stability problems. Existing property - no significant increase in insurance risk due to natural slope instability problems.
4	0.0	On Site	Low	Possibility of slope instability problems after major changes in ground conditions. Consideration should be given to stability if changes to drainage or excavations take place. Possible increase in construction cost to reduce potential slope stability problems. Existing property - no significant increase in insurance risk due to natural slope instability problems.
5	3.0	W	Low	Possibility of slope instability problems after major changes in ground conditions. Consideration should be given to stability if changes to drainage or excavations take place. Possible increase in construction cost to reduce potential slope stability problems. Existing property - no significant increase in insurance risk due to natural slope instability problems.
6	3.0	SE	Very Low	Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.
7	48.0	SW	Very Low	Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

6.3 Ground Dissolution of Soluble Rocks

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

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.
2	0.0	On Site	Negligible	Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

6.4 Compressible Deposits

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

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.
2	0.0	On Site	Negligible	No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

6.5 Collapsible Deposits

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

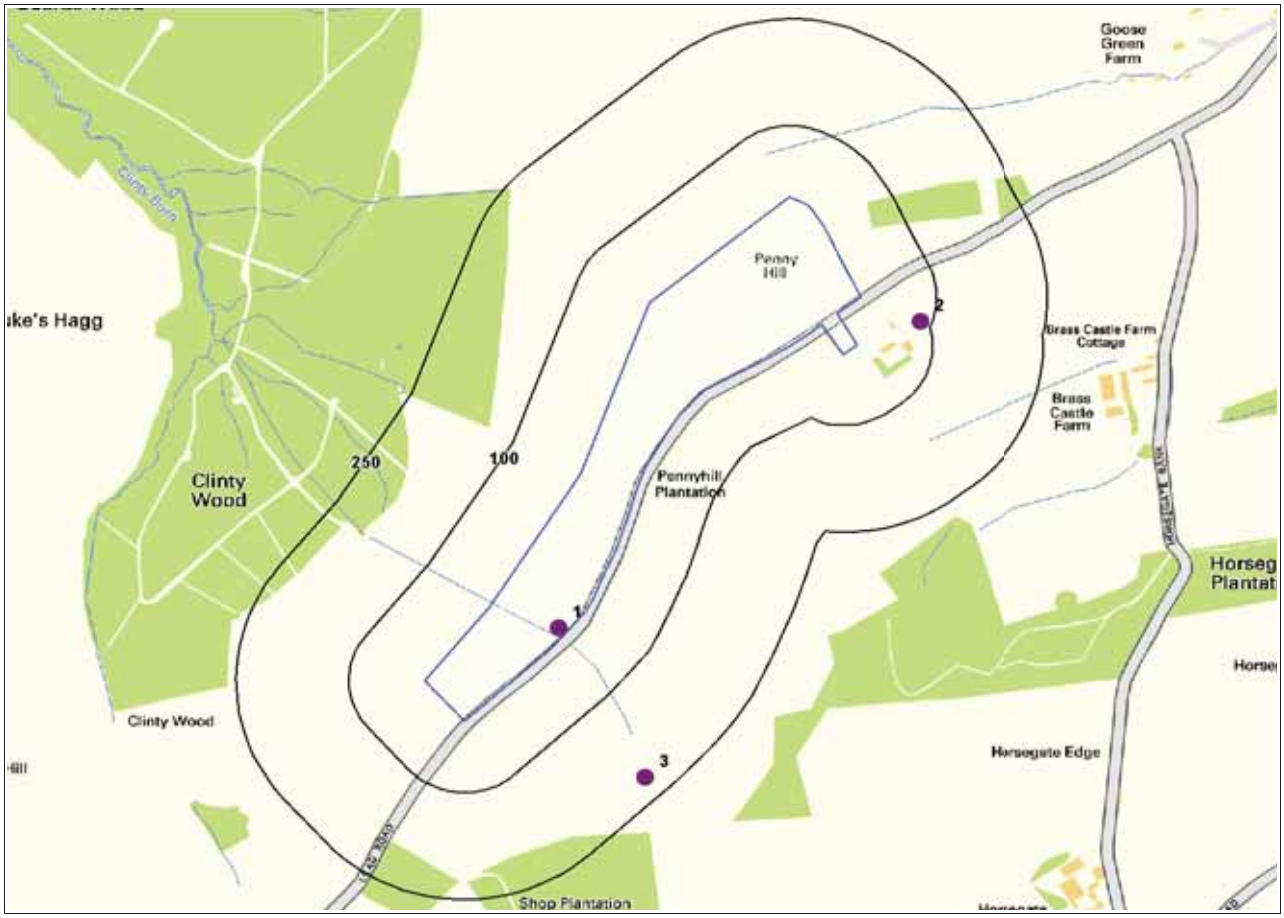
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.
2	0.0	On Site	Very Low	Deposits with potential to collapse when loaded and saturated are unlikely to be present. No special ground investigation required or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

6.6 Running Sands

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

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.
2	0.0	On Site	Negligible	No indicators for running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.
3	0.0	On Site	Negligible	No indicators for running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.
4	48.0	SW	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

7 Borehole Records map



Borehole Records Legend

© Crown copyright and database rights 2018.
Ordnance Survey license 100035207.

Site Outline

Borehole Locations

125
250
Search Buffers (m)

7 Borehole Records

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

Records of boreholes within 250m of the study site boundary: 3

ID	Distance (m)	Direction	NGR	BGS Reference	Drilled Length	Borehole Name
1	0.0	On Site	411800 560100	NZ16SW154	32.61	GREENSIDE COLL BUCKS NOOK FARM 250
2	85.0	SE	412280 560530	NZ16SW168	86.08	CHOPWELL NORTH PIT
3	220.0	SE	411915 559890	NZ15NW9	92.36	CHOPWELL SHAFT SECTION AT THE PENNYHILL PIT

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

#1: scans.bgs.ac.uk/sobi_scans/boreholes/829073
#2: scans.bgs.ac.uk/sobi_scans/boreholes/829102
#3: scans.bgs.ac.uk/sobi_scans/boreholes/721307

8 Estimated Background Soil Chemistry

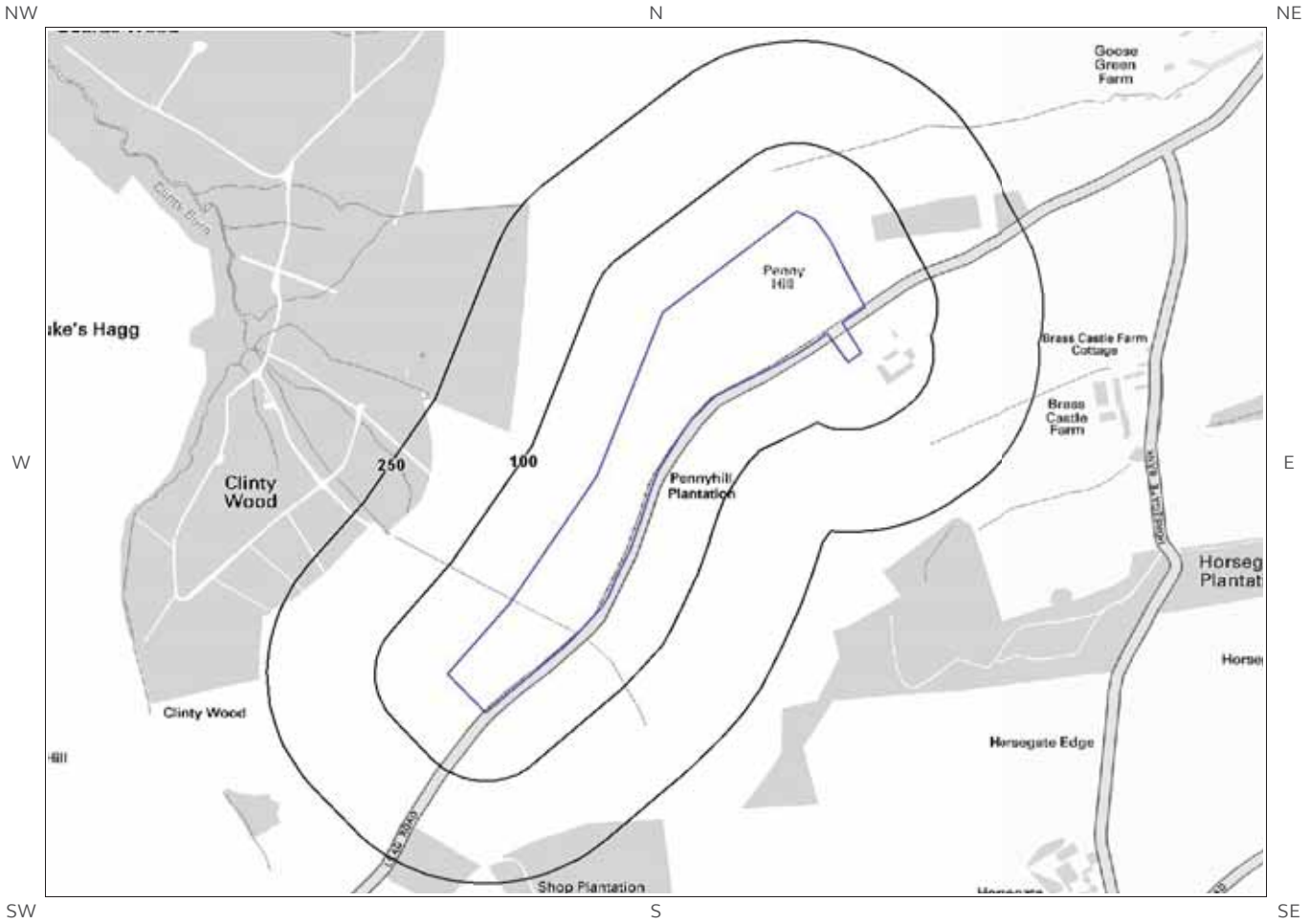
Records of background estimated soil chemistry within 250m of the study site boundary: 24

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

Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	Sediment	<15 mg/kg	3.0 - 6.0 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	3.0 - 6.0 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	3.0 - 6.0 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	3.0 - 6.0 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	3.0 - 6.0 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	3.0 - 6.0 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	3.0 - 6.0 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	3.0 - 6.0 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	3.0 - 6.0 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	2.2 - 3.0 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	2.2 - 3.0 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	3.0 - 6.0 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	3.0 - 6.0 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	3.0 - 6.0 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	<15 mg/kg	2.2 - 3.0 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
3.0	W	Sediment	<15 mg/kg	3.0 - 6.0 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	<100 mg/kg
3.0	W	Sediment	<15 mg/kg	3.0 - 6.0 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
8.0	W	Sediment	<15 mg/kg	3.0 - 6.0 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	<100 mg/kg
10.0	SE	Sediment	<15 mg/kg	3.0 - 6.0 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	<100 mg/kg
17.0	SE	Sediment	<15 mg/kg	3.0 - 6.0 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	<100 mg/kg
33.0	NW	Sediment	<15 mg/kg	3.0 - 6.0 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
33.0	NW	Sediment	<15 mg/kg	3.0 - 6.0 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
46.0	W	Sediment	<15 mg/kg	3.0 - 6.0 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	<100 mg/kg
48.0	SW	Sediment	<15 mg/kg	3.0 - 6.0 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg	<100 mg/kg

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

9 Railways and Tunnels map



Railways and Tunnels Legend

© Crown copyright and database rights 2018.
Ordnance Survey license 100035207.
© OpenStreetMapContributors

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

9 Railways and Tunnels

9.1 Tunnels

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

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

Database searched and no data found.

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

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

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

Database searched and no data found.

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

9.2 Historical Railway and Tunnel Features

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

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

Database searched and no data found.

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

9.3 Historical Railways

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

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

Database searched and no data found.

Multiple sections of the same track may be listed in the detail above
Any records that have been identified are represented on the Railways and Tunnels map.

9.4 Active Railways

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

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

Database searched and no data found.

Multiple sections of the same track may be listed in the detail above
Any records that have been identified are represented on the Railways and Tunnels map.

9.5 Railway Projects

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

Is the study site within 5km of the route of the High Speed 2 rail project?	No
Is the study site within 500m of the route of the Crossrail 1 rail project?	No

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

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

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

Contact Details

emapsite

Telephone: 0118 9736883
sales@emapsite.com

British Geological Survey Enquiries

Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email:**enquiries@bgs.ac.uk**
Web:**www.bgs.ac.uk**
BGS Geological Hazards Reports and general geological enquiries

British Gypsum

British Gypsum Ltd
East Leake
Loughborough
Leicestershire
LE12 6HX

The Coal Authority

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

Public Health England

Public information access office
Public Health England, Wellington House
133-155 Waterloo Road, London, SE1 8UG
https://www.gov.uk/government/organisations/public-health-england
Email: **enquiries@phe.gov.uk**
Main switchboard: 020 7654 8000

Johnson Poole & Bloomer Limited

Harris and Pearson Building, Brettel Lane
Brierley Hill, West Midlands
DY5 3LH
Tel: +44 (0) 1384 262 000
Email:**enquiries.gs@jpb.co.uk**
Website: **www.jpb.co.uk**

Ordnance Survey

Adanac Drive, Southampton
SO16 0AS

Tel: 08456 050505
Website: http://www.ordnancesurvey.co.uk/

Getmapping PLC

Virginia Villas, High Street, Hartley Witney,
Hampshire RG27 8NW
Tel: 01252 845444
Website:**http://www1.getmapping.com/**

Peter Brett Associates

Caversham Bridge House
Waterman Place
Reading
Berkshire RG1 8DN
Tel: +44 (0)118 950 0761 E-mail:**reading@pba.co.uk**
Website:**http://www.peterbrett.com/home**

Acknowledgements: Ordnance Survey © Crown Copyright and/or Database Right. All Rights Reserved. Licence Number [03421028]. This report has been prepared in accordance with the Groundsure Ltd standard Terms and Conditions of business for work of this nature.

Standard Terms and Conditions

Groundsure's Terms and Conditions can be viewed online at this link:
https://www.groundsure.com/terms-and-conditions-march-2018/

EmapSite

Masdar House, 1 Reading Road,
Eversley, RG27 0RP

Groundsure Reference:	EMS-470471_631891
Your Reference:	EMS_470471_631891
Report Date	4 Apr 2018
Report Delivery Method:	Email - pdf

Enviro Insight

Address: Lead Road, NE40 4JN,

Dear Sir/ Madam,

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

If you would like further assistance regarding this report then please contact the emapsite customer services team on 0118 9736883 quoting the above report reference number.

Yours faithfully,

emapsite customer services team

Enc.
Groundsure Enviroinsight

Enviro Insight

Address:	**Lead Road, NE40 4JN,**
Date:	**4 Apr 2018**
Reference:	**EMS-470471_631891**
Client:	**EmapSite**

NW N NE

W E

SW S SE

Aerial Photograph Capture date:	02-Oct-2014
Grid Reference:	411926,560379
Site Size:	9.71ha

Report Reference: EMS-470471_631891
Client Reference: EMS_470471_631891

Contents Page

Contents Page 3
Overview of Findings 6
Using this report 10
1. Historical Land Use 11
1. Historical Industrial Sites 12
1.1 Potentially Contaminative Uses identified from 1:10,000 scale Mapping 12
1.2 Additional Information – Historical Tank Database 13
1.3 Additional Information – Historical Energy Features Database 14
1.4 Additional Information – Historical Petrol and Fuel Site Database 14
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database 14
1.6 Potentially Infilled Land 14
2. Environmental Permits, Incidents and Registers Map 17
2. Environmental Permits, Incidents and Registers 18
2.1 Industrial Sites Holding Licences and/or Authorisations 18
2.1.1 Records of historic IPC Authorisations within 500m of the study site: 18
2.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site: 18
2.1.3 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site: 18
2.1.4 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site: 18
2.1.5 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site: 18
2.1.6 Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site: 19
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations: 19
2.1.8 Records of Licensed Discharge Consents within 500m of the study site: 19
2.1.9 Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site: 19
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site: 20
2.2 Dangerous or Hazardous Sites 20
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents 20
2.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site: 20
2.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site: 20
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990 20
3. Landfill and Other Waste Sites Map 21
3. Landfill and Other Waste Sites 22
3.1 Landfill Sites 22
3.1.1 Records from Environment Agency/Natural Resources Wales landfill data within 1000m of the study site: 22
3.1.2 Records of Environment Agency/Natural Resources Wales historic landfill sites within 1500m of the study site: 22
3.1.3 Records of BGS/DoE non-operational landfill sites within 1500m of the study site: 22
3.1.4 Records of Landfills from Local Authority and Historical Mapping Records within 1500m of the study site: 23
3.2 Other Waste Sites 23
3.2.1 Records of waste treatment, transfer or disposal sites within 500m of the study site: 23
3.2.2 Records of Environment Agency/Natural Resources Wales licensed waste sites within 1500m of the study site: 23
4. Current Land Use Map 24
4. Current Land Uses 25
4.1 Current Industrial Data 25
4.2 Petrol and Fuel Sites 25
4.3 National Grid High Voltage Underground Electricity Transmission Cables 26
4.4 National Grid High Pressure Gas Transmission Pipelines 26

5. Geology 27
5.1 Artificial Ground and Made Ground 27
5.2 Superficial Ground and Drift Geology 27
5.3 Bedrock and Solid Geology 27
6 Hydrogeology and Hydrology 28
6a. Aquifer Within Superficial Geology 28
6b. Aquifer Within Bedrock Geology and Abstraction Licenses 29
6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licenses 30
6d. Hydrogeology – Source Protection Zones within confined aquifer 31
6e. Hydrology – Watercourse Network and River Quality 32
6.Hydrogeology and Hydrology 33
6.1 Aquifer within Superficial Deposits 33
6.2 Aquifer within Bedrock Deposits 33
6.3 Groundwater Abstraction Licences 33
6.4 Surface Water Abstraction Licences 34
6.5 Potable Water Abstraction Licences 34
6.6 Source Protection Zones 34
6.7 Source Protection Zones within Confined Aquifer 34
6.8 Groundwater Vulnerability and Soil Leaching Potential 35
6.9 River Quality 35
6.9.1 Biological Quality: 35
6.9.2 Chemical Quality: 36
6.10 Ordnance Survey MasterMap Water Network 36
6.11 Surface Water Features 43
7a. Environment Agency/Natural Resources Wales Flood Map for Planning (from rivers and the sea) 44
7b. Environment Agency/Natural Resources Wales Risk of Flooding from Rivers and the Sea (RoFRaS) Map 45
7 Flooding 46
7.1 River and Coastal Zone 2 Flooding 46
7.2 River and Coastal Zone 3 Flooding 46
7.3 Risk of Flooding from Rivers and the Sea (RoFRaS) Flood Rating 46
7.4 Flood Defences 46
7.5 Areas benefiting from Flood Defences 46
7.6 Areas benefiting from Flood Storage 47
7.7 Groundwater Flooding Susceptibility Areas 47
7.7.1 Are there any British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site? Identified 47
7.7.2 What is the highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions? 47
7.8 Groundwater Flooding Confidence Areas 47
8. Designated Environmentally Sensitive Sites Map 48
8. Designated Environmentally Sensitive Sites 49
8.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site: 49
8.2 Records of National Nature Reserves (NNR) within 2000m of the study site: 49
8.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site: 49
8.4 Records of Special Protection Areas (SPA) within 2000m of the study site: 49
8.5 Records of Ramsar sites within 2000m of the study site: 49
8.6 Records of Ancient Woodland within 2000m of the study site: 50
8.7 Records of Local Nature Reserves (LNR) within 2000m of the study site: 50
8.8 Records of World Heritage Sites within 2000m of the study site: 50
8.9 Records of Environmentally Sensitive Areas within 2000m of the study site: 50

8.10 Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site: 51
8.11 Records of National Parks (NP) within 2000m of the study site: 51
8.12 Records of Nitrate Sensitive Areas within 2000m of the study site:....51
8.13 Records of Nitrate Vulnerable Zones within 2000m of the study site:....51
8.14 Records of Green Belt land within 2000m of the study site:....51
9. Natural Hazards Findings 53
9.1 Detailed BGS GeoSure Data....53
9.1.1 Shrink Swell....53
9.1.2 Landslides....53
9.1.3 Soluble Rocks....53
9.1.4 Compressible Ground....54
9.1.5 Collapsible Rocks....54
9.1.6 Running Sand....54
9.2 Radon....55
9.2.1 Radon Affected Areas....55
9.2.2 Radon Protection....55
10. Mining 56
10.1 Coal Mining....56
10.2 Non-Coal Mining....56
10.3 Brine Affected Areas 56
Contact Details 57
Standard Terms and Conditions 59

Overview of Findings

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

Section 1: Historical Industrial Sites	On-site	0-50	51-250	251-500
1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	0	20	13	36
1.2 Additional Information – Historical Tank Database	0	0	0	0
1.3 Additional Information – Historical Energy Features Database	0	0	0	0
1.4 Additional Information – Historical Petrol and Fuel Site Database	0	0	0	0
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	0	0	0	0
1.6 Potentially Infilled Land	0	20	19	41

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

Section 3: Landfill and Other Waste Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-1500
3.1 Landfill Sites						
3.1.1 Environment Agency/Natural Resources Wales Registered Landfill Sites	0	0	0	0	0	Not searched
3.1.2 Environment Agency/Natural Resources Wales Historic Landfill Sites	0	0	0	0	0	1
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	0
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	0	0	0	0	4
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	0	Not searched	Not searched
3.2.2 Environment Agency/Natural Resources Wales Licensed Waste Sites	0	0	0	0	1	0

Section 4: Current Land Use

	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	1	8	6	Not searched
4.2 Records of Petrol and Fuel Sites	0	0	0	0
4.3 National Grid Underground Electricity Cables	0	0	0	0
4.4 National Grid Gas Transmission Pipelines	0	0	0	0

Section 5: Geology

5.1 Are there any records of Artificial Ground and Made Ground present beneath the study site?	None identified
5.2 Are there any records of Superficial Ground and Drift Geology present beneath the study site?	Identified
5.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.	

Section 6: Hydrogeology and Hydrology

	0-500m
6.1 Are there any records of Strata Classification in the Superficial Geology within 500m of the study site?	Identified
6.2 Are there any records of Strata Classification in the Bedrock Geology within 500m of the study site?	Identified

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
6.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.6 Source Protection Zones (within 500m of the study site)	0	0	0	0	Not searched	Not searched
6.7 Source Protection Zones within Confined Aquifer	0	0	0	0	Not searched	Not searched
6.8 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site)	2	0	2	0	Not searched	Not searched

Section 6: Hydrogeology and Hydrology

	0-500m					
	On-site	0-50m	51-250	251-500	501-1000	1000-1500
6.9 Is there any Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site?	No	No	No	No	No	Yes
6.10 Ordnance Survey MasterMap Water Network entries within 500m of the site	8	0	16	52	Not searched	Not searched
6.11 Surface water features within 250m of the study site	Yes	Yes	Yes	Not searched	Not searched	Not searched

Section 7: Flooding

7.1 Are there any Enviroment Agency Zone 2 floodplains within 250m of the study site?	None identified
7.2 Are there any Environment Agency/Natural Resources Wales Zone 3 floodplains within 250m of the study site	None identified
7.3 What is the Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site?	Very Low
7.4 Are there any Flood Defences within 250m of the study site?	None identified
7.5 Are there any areas benefiting from Flood Defences within 250m of the study site?	None identified
7.6 Are there any areas used for Flood Storage within 250m of the study site?	None identified
7.7 What is the maximum BGS Groundwater Flooding susceptibility within 50m of the study site?	Limited potential
7.8 What is the BGS confidence rating for the Groundwater Flooding susceptibility areas?	Low

Section 8: Designated Environmentally Sensitive Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	0	0
8.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
8.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	0
8.4 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
8.5 Records of Ramsar sites	0	0	0	0	0	0
8.6 Records of Ancient Woodlands	0	0	1	0	2	8
8.7 Records of Local Nature Reserves (LNR)	0	0	0	0	0	0
8.8 Records of World Heritage Sites	0	0	0	0	0	0
8.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0

Section 8: Designated Environmentally Sensitive Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	0	0
8.11 Records of National Parks	0	0	0	0	0	0
8.12 Records of Nitrate Sensitive Areas	0	0	0	0	0	0
8.13 Records of Nitrate Vulnerable Zones	0	0	0	0	0	0
8.14 Records of Green Belt land	2	0	0	2	0	19

Section 9: Natural Hazards

9.1 What is the maximum risk of natural ground subsidence?	Very Low
9.1.1 What is the maximum Shrink-Swell hazard rating identified on the study site?	Very Low
9.1.2 What is the maximum Landslides hazard rating identified on the study site?	Low
9.1.3 What is the maximum Soluble Rocks hazard rating identified on the study site?	Negligible
9.1.4 What is the maximum Compressible Ground hazard rating identified on the study site?	Negligible
9.1.5 What is the maximum Collapsible Rocks hazard rating identified on the study site?	Very Low
9.1.6 What is the maximum Running Sand hazard rating identified on the study site?	Very Low
9.2 Radon	
9.2.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The site is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.
9.2.2 Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	No radon protective measures are necessary.

Section 10: Mining

10.1 Are there any coal mining areas within 75m of the study site?	Identified
10.2 Are there any Non-Coal Mining areas within 50m of the study site boundary?	None identified
10.3 Are there any brine affected areas within 75m of the study site?	None identified

Using this report

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

1. Historical Industrial Sites

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

2. Environmental Permits, Incidents and Registers

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

3. Landfills and Other Waste Sites

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

4. Current Land Uses

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

5. Geology

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

6. Hydrogeology and Hydrology

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

7. Flooding

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

8. Designated Environmentally Sensitive Sites

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

9. Natural Hazards

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

10. Mining

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

11. Contacts

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

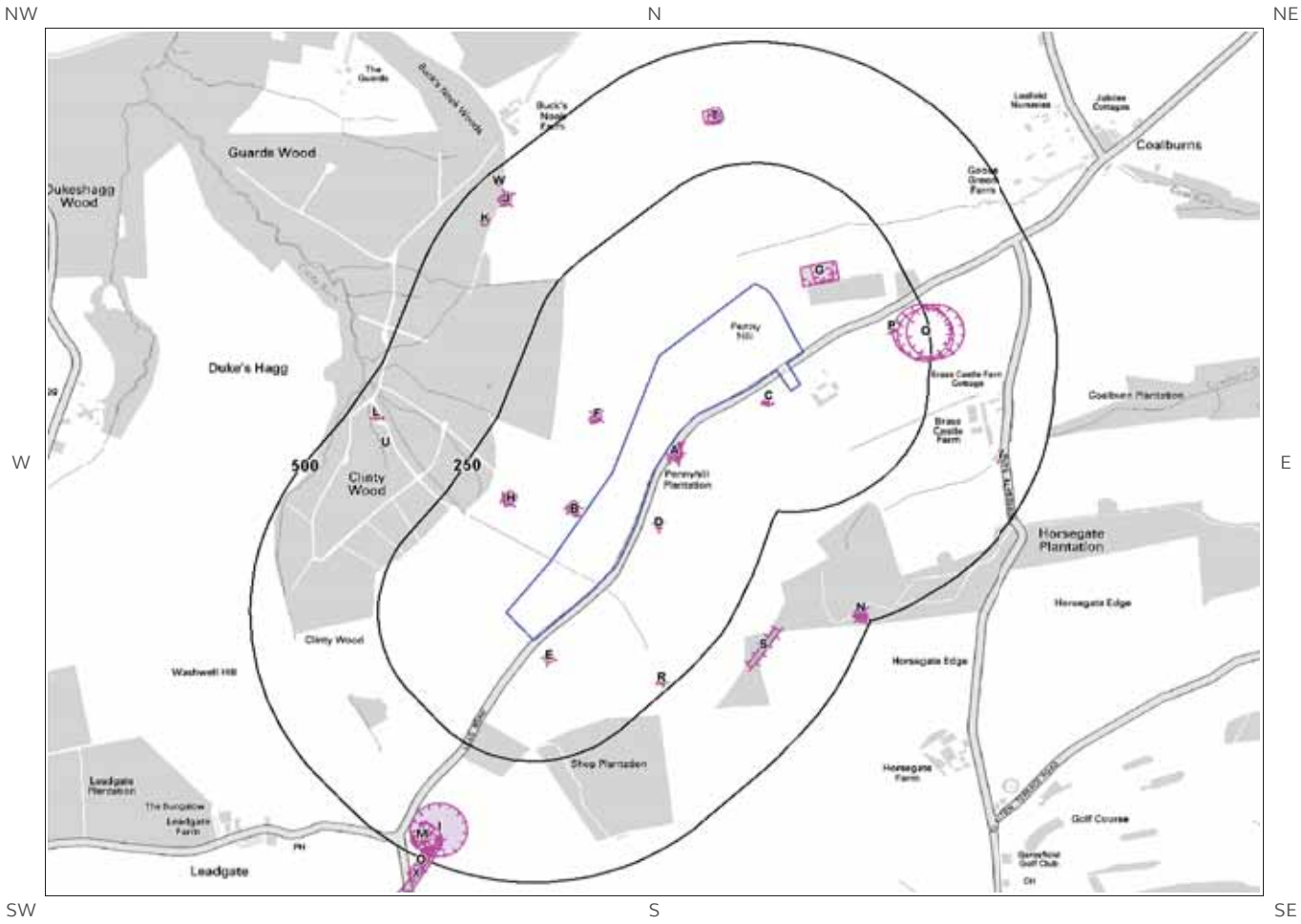
Note: Maps

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

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

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

1. Historical Land Use



© Crown copyright and database rights 2018.
Ordnance Survey license 100035207.

Site Outline

250
500
Search Buffers (m)

Historical 1:10,000 and 1:10,560 scale mapping

Industrial Land Use

Potentially Infilled Land

Historical 1:2,500, 1:1,250 and 1:500 scale mapping

Energy Features

Petrol Stations

Tanks

Garages

1. Historical Industrial Sites

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

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

Records of sites with a potentially contaminative past land use within 500m of the search boundary: 69

ID	Distance [m]	Direction	Use	Date
1A	8	SE	Unspecified Old Quarry	1895
2A	9	SE	Unspecified Old Quarry	1921
3A	10	SE	Unspecified Old Quarry	1895
4B	10	NW	Old Coal Shafts	1921
5A	13	SE	Unspecified Old Quarry	1856
6B	13	NW	Unspecified Heap	1856
7A	14	SE	Unspecified Old Quarry	1921
8B	14	NW	Old Coal Shafts	1921
9B	15	NW	Unspecified Old Shafts	1895
10B	16	NW	Unspecified Old Shaft	1856
11B	17	NW	Old Coal Shafts	1895
12B	18	NW	Unspecified Old Shafts	1940
13C	35	SE	Unspecified Old Shaft	1895
14C	36	SE	Old Coal Shaft	1895
15D	37	E	Unspecified Heap	1856
16E	38	SE	Unspecified Heap	1856
17C	39	SE	Old Coal Shaft	1921
18D	39	E	Unspecified Old Shaft	1856
19E	44	SE	Unspecified Old Shaft	1856
20C	44	SE	Old Coal Shaft	1921
21F	60	W	Unspecified Pit	1856
22F	61	W	Unspecified Old Shaft	1895
23G	61	NE	Unspecified Heap	1940
24F	65	W	Unspecified Old Shaft	1856
25F	66	W	Old Coal Shaft	1895
26G	86	NE	Unspecified Heap	1967
27G	86	NE	Unspecified Heap	1995
28G	86	NE	Unspecified Heap	1979
29H	125	NW	Old Coal Shafts	1921
30H	128	NW	Old Coal Shafts	1895
31H	129	NW	Unspecified Old Shafts	1895
32H	130	NW	Old Coal Shafts	1921
33H	133	NW	Unspecified Old Shafts	1940
34S	327	SE	Cuttings	1856

35I	378	SW	Unspecified Old Quarry	1895
36V	417	E	Unspecified Quarry	1856
37I	429	SW	Unspecified Pit	1940
38J	429	NW	Old Coal Shafts	1921
39I	430	SW	Unspecified Pit	1988
40I	430	SW	Unspecified Pit	1967
41I	430	SW	Unspecified Pit	1986
42K	431	NW	Unspecified Old Shaft	1940
43J	431	NW	Unspecified Old Shafts	1895
44J	432	NW	Old Coal Shafts	1921
45K	433	NW	Unspecified Old Shaft	1856
46J	434	NW	Unspecified Old Shaft	1940
47J	435	NW	Old Coal Shafts	1895
48L	443	NW	Disused Air Shaft	1979
49L	443	NW	Disused Air Shaft	1967
50L	443	NW	Disused Air Shaft	1995
51I	444	SW	Unspecified Quarry	1921
52M	445	SW	Unspecified Heap	1921
53M	447	SW	Unspecified Quarry	1921
54M	452	SW	Unspecified Ground Workings	1940
55M	452	SW	Unspecified Heap	1921
56N	463	E	Unspecified Old Shaft	1895
57N	464	SE	Unspecified Pit	1940
58N	464	SE	Old Coal Shaft	1921
59N	467	SE	Old Coal Shaft	1895
60W	470	NW	Unspecified Old Shaft	1856
61N	470	SE	Old Coal Shaft	1921
62N	471	E	Unspecified Heap	1856
63O	472	SW	Unspecified Heap	1967
64O	472	SW	Unspecified Heap	1986
65O	472	SW	Unspecified Heap	1988
66O	475	SW	Unspecified Heap	1940
67N	477	SE	Unspecified Old Shaft	1856
68O	481	SW	Unspecified Heap	1921
69X	482	SW	Unspecified Heap	1921

1.2 Additional Information – Historical Tank Database

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

Records of historical tanks within 500m of the search boundary: 0

Database searched and no data found.

1.3 Additional Information – Historical Energy Features Database

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

Records of historical energy features within 500m of the search boundary: 0

Database searched and no data found.

1.4 Additional Information – Historical Petrol and Fuel Site Database

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

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

Database searched and no data found.

1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database

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

Records of historical garage and motor vehicle repair sites within 500m of the search boundary: 0

Database searched and no data found.

1.6 Potentially Infilled Land

Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 80

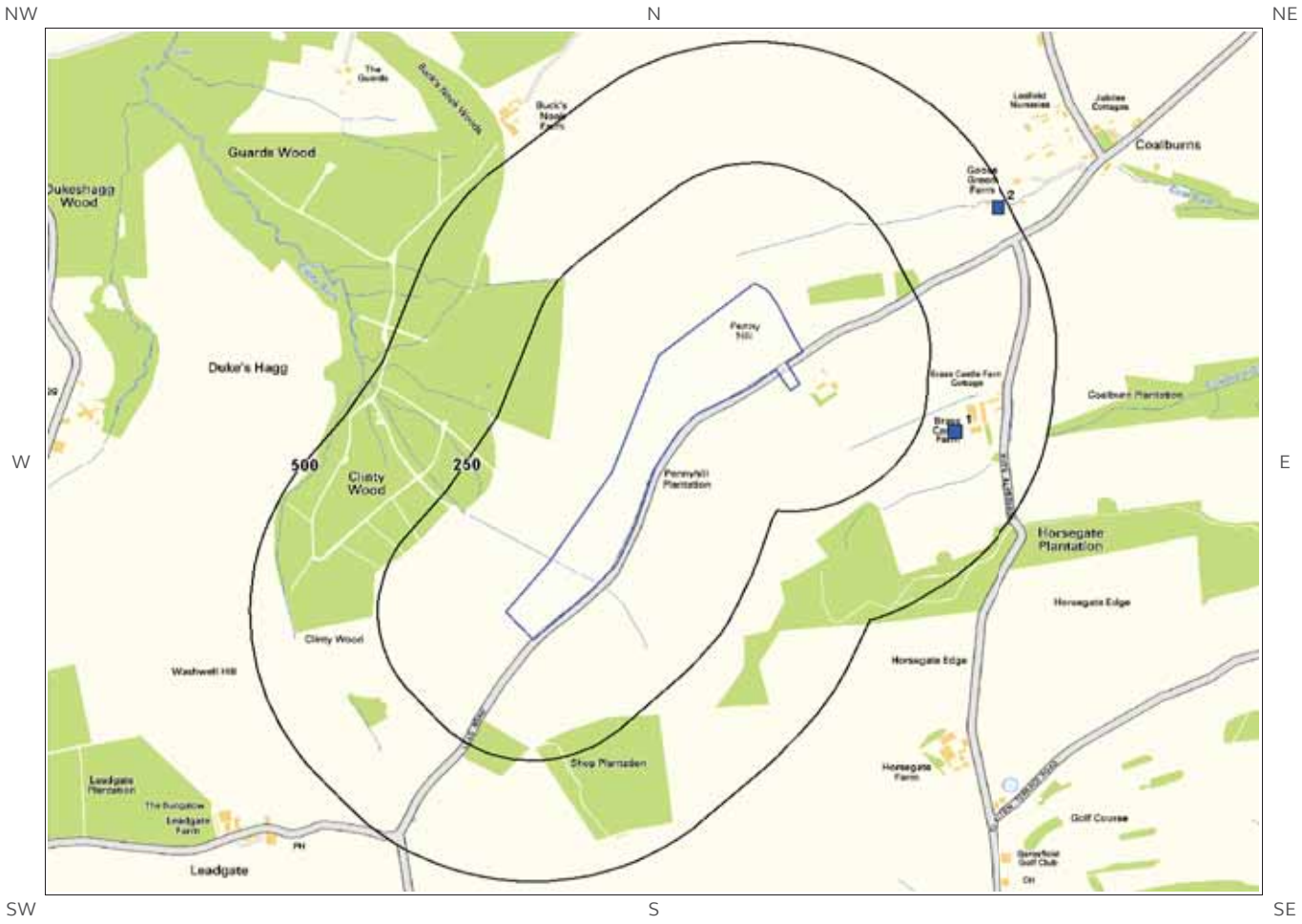
The following Historical Potentially Infilled Features derived from the Historical Mapping information is provided by Groundsure:

ID	Distance(m)	Direction	Use	Date
70A	8	SE	Unspecified Old Quarry	1895
71A	9	SE	Unspecified Old Quarry	1921
72A	10	SE	Unspecified Old Quarry	1895
73B	10	NW	Old Coal Shafts	1921
74A	13	SE	Unspecified Old Quarry	1856

75B	13	NW	Unspecified Heap	1856
76A	14	SE	Unspecified Old Quarry	1921
77B	14	NW	Old Coal Shafts	1921
78B	15	NW	Unspecified Old Shafts	1895
79B	16	NW	Unspecified Old Shaft	1856
80B	17	NW	Old Coal Shafts	1895
81B	18	NW	Unspecified Old Shafts	1940
82C	35	SE	Unspecified Old Shaft	1895
83C	36	SE	Old Coal Shaft	1895
84D	37	E	Unspecified Heap	1856
85E	38	SE	Unspecified Heap	1856
86C	39	SE	Old Coal Shaft	1921
87D	39	E	Unspecified Old Shaft	1856
88E	44	SE	Unspecified Old Shaft	1856
89C	44	SE	Old Coal Shaft	1921
90F	60	W	Unspecified Pit	1856
91F	61	W	Unspecified Old Shaft	1895
92G	61	NE	Unspecified Heap	1940
93F	65	W	Unspecified Old Shaft	1856
94F	66	W	Old Coal Shaft	1895
95G	86	NE	Unspecified Heap	1979
96G	86	NE	Unspecified Heap	1995
97G	86	NE	Unspecified Heap	1967
98H	125	NW	Old Coal Shafts	1921
99H	128	NW	Old Coal Shafts	1895
100H	129	NW	Unspecified Old Shafts	1895
101H	130	NW	Old Coal Shafts	1921
102H	133	NW	Unspecified Old Shafts	1940
103P	175	E	Air Shaft	1921
104P	180	E	Air Shaft	1895
105Q	187	E	Air Shaft	1921
106Q	206	E	Air Shaft	1895
107R	225	SE	Air Shaft	1921
108R	231	SE	Air Shaft	1921
109S	327	SE	Cuttings	1856
110T	339	N	Reservoir	1921
111T	342	N	Reservoir	1940
112T	345	N	Reservoir	1921
113I	378	SW	Unspecified Old Quarry	1895
114U	400	NW	Air Shaft	1921
115U	401	NW	Air Shaft	1921
116V	417	E	Unspecified Quarry	1856
117I	429	SW	Unspecified Pit	1940
118J	429	NW	Old Coal Shafts	1921
119I	430	SW	Unspecified Pit	1967
120I	430	SW	Unspecified Pit	1988

121I	430	SW	Unspecified Pit	1986
122K	431	NW	Unspecified Old Shaft	1940
123J	431	NW	Unspecified Old Shafts	1895
124J	432	NW	Old Coal Shafts	1921
125K	433	NW	Unspecified Old Shaft	1856
126J	434	NW	Unspecified Old Shaft	1940
127J	435	NW	Old Coal Shafts	1895
128L	443	NW	Disused Air Shaft	1995
129L	443	NW	Disused Air Shaft	1967
130L	443	NW	Disused Air Shaft	1979
131I	444	SW	Unspecified Quarry	1921
132I	445	SW	Unspecified Heap	1921
133M	447	SW	Unspecified Quarry	1921
134M	452	SW	Unspecified Ground Workings	1940
135I	452	SW	Unspecified Heap	1921
136N	463	E	Unspecified Old Shaft	1895
137N	464	SE	Unspecified Pit	1940
138N	464	SE	Old Coal Shaft	1921
139N	467	SE	Old Coal Shaft	1895
140W	470	NW	Unspecified Old Shaft	1856
141N	470	SE	Old Coal Shaft	1921
142N	471	E	Unspecified Heap	1856
143O	472	SW	Unspecified Heap	1986
144O	472	SW	Unspecified Heap	1988
145O	472	SW	Unspecified Heap	1967
146O	475	SW	Unspecified Heap	1940
147N	477	SE	Unspecified Old Shaft	1856
148O	481	SW	Unspecified Heap	1921
149X	482	SW	Unspecified Heap	1921

2. Environmental Permits, Incidents and Registers Map



© Crown copyright and database rights 2018.
Ordnance Survey license 100035207.

- Site Outline
- Search Buffers (m) 250 / 500
- Recorded Pollution Incident
- Dangerous Substances (List 1)
- Dangerous Substances (List 2)
- Water Industry Referrals
- Licenced Discharge Consents
- Red List Discharge Consents
- RAS 3 & 4 Authorisations
- Part A(1) Authorised Processes and Historic IPC Authorisations
- Part A(2) and Part B Authorised Processes
- COMAH / NIHHS Sites
- Sites Determined as Contaminated Land
- Hazardous Substance Consents and Enforcements

2. Environmental Permits, Incidents and Registers

2.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency/Natural Resources Wales and Local Authorities reveal the following information:

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

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

2

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

ID	Distance (m)	Direction	NGR	Details	
1	318	E	412500 560400	Address: COALBURNS FARM, GREENSIDE, COUNTY DURHAM Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 233/G/0093 Permit Version: 1	Receiving Water: COALBURN GILL Status: TRANSFERRED FROM R(PP)A 1951-1961 Issue date: 09/11/1955 Effective Date: 09-Nov-1955 Revocation Date: -
2	476	NE	412586 560864	Address: BUCKSNOOK, BUCKSNOOK COALBURNS, COALBURNS, RYTON, TYNE AND WEAR, NE40 4JN Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: NPSWQD001891 Permit Version: 1	Receiving Water: GROUNDWATER VIA SOAKAWAY Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 23/06/2008 Effective Date: 23-Jun-2008 Revocation Date: -

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

0

Database searched and no data found.

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

0

Database searched and no data found.

2.2 Dangerous or Hazardous Sites

Records of COMAH & NIHHS sites within 500m of the study site: 0

Database searched and no data found.

2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents

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

0

Database searched and no data found.

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

0

Database searched and no data found.

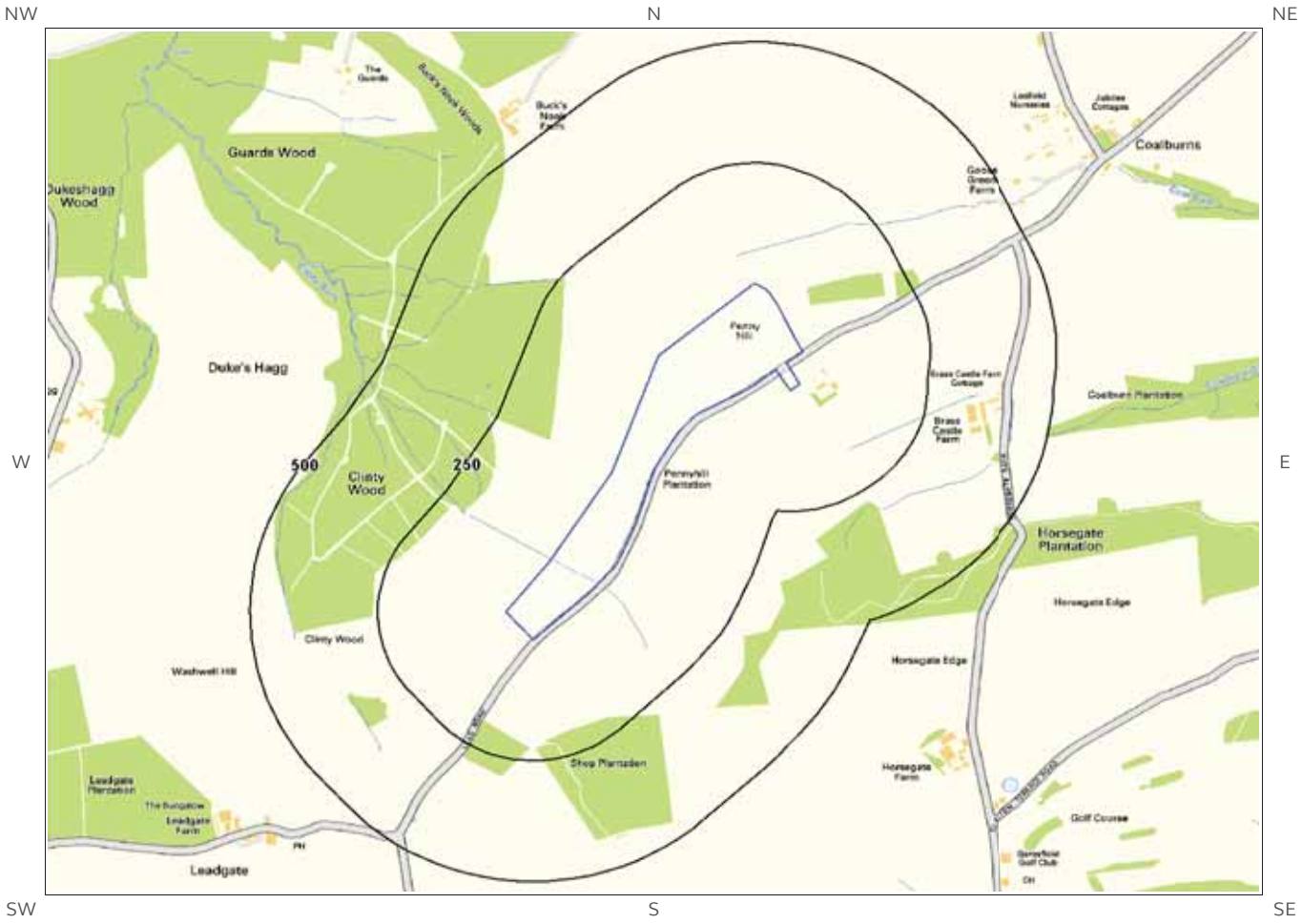
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

How many records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site? 0

Database searched and no data found.

---

3. Landfill and Other Waste Sites Map



© Crown copyright and database rights 2018.
Ordnance Survey license 100035207.

Site Outline

250
500
Search Buffers (m)

EA/NRW Active Landfill

EA/NRW Historic Landfill

BGS / DoE Survey Landfill

Historic and Planned Waste Sites

EA/NRW Licensed Waste Site

Local Authority/Historical Mapping Landfill Records

3. Landfill and Other Waste Sites

3.1 Landfill Sites

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

0

Database searched and no data found.

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

1

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

ID	Distance (m)	Direction	NGR	Details	
Not shown	1367	SW	410500 559200	Site Address: Moorgate Plantation, Leadgate, Northumberland Waste Licence: - Site Reference: PE 014 Waste Type: - Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: Hedley Parish Council Licence Holder: - First Recorded: - Last Recorded: -

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

0

Database searched and no data found.

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

4

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

ID	Distance (m)	Direction	NGR	Site Address	Source	Data Type
Not shown	1450	S	411352 558525	Refuse Tip	1961 mapping	Polygon
Not shown	1469	S	411106 558551	Refuse Tip	1961 mapping	Polygon
Not shown	1493	S	411586 558387	Refuse Tip	1961 mapping	Polygon
Not shown	1497	S	411088 558442	Refuse Tip	1961 mapping	Polygon

3.2 Other Waste Sites

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

0

Database searched and no data found.

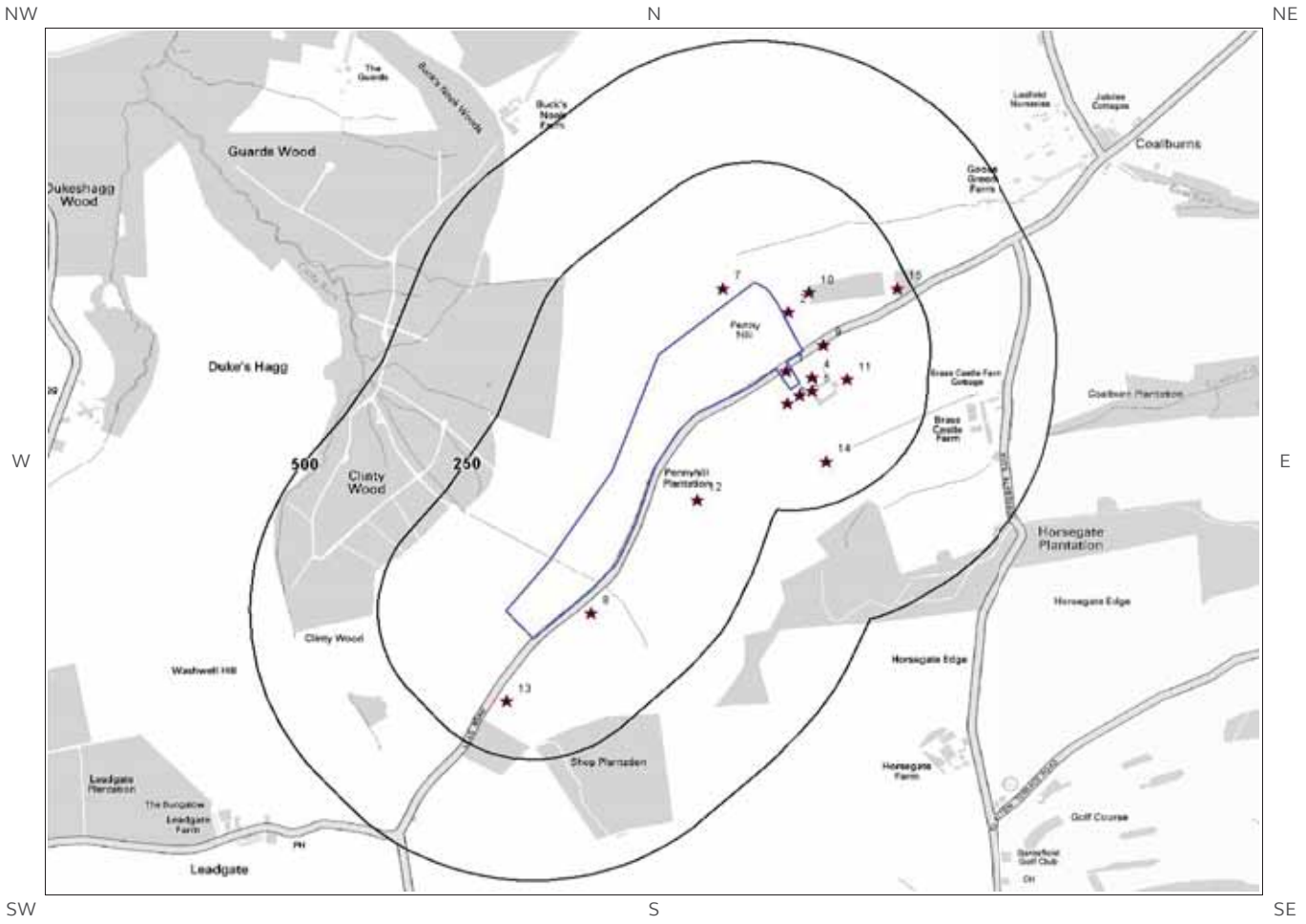
3.2.2 Records of Environment Agency/Natural Resources Wales licensed waste sites within 1500m of the study site:

1

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

ID	Distance (m)	Direction	NGR	Details	
Not shown	992	SE	412300 559200	Site Address: Broomfield Farm, Chopwell, Newcastle Upon Tyne, Tyne & Wear, NE17 7AS Type: Composting in open windrows Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: WIL362 EPR reference: EA/EPR/GP3394LY/V002 Operator: Mr Alan Willey And Mrs Marilyn Willey Waste Management licence No: 101500 Annual Tonnage: 74999.0	Issue Date: 11/06/2010 Effective Date: - Modified: 21/08/2014 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Greentech Recycling Correspondence Address: -

4. Current Land Use Map



© Crown copyright and database rights 2018.
Ordnance Survey license 100035207.

4. Current Land Uses

4.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site: 15

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

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	0	On Site	Pylon	412169 560525	NE40	Electrical Features	Infrastructure and Facilities
2	11	NE	Pylon	412174 560647	NE40	Electrical Features	Infrastructure and Facilities
3	19	SE	Pylon	412196 560474	NE40	Electrical Features	Infrastructure and Facilities
4	26	NE	Electricity Sub Station	412219 560512	NE40	Electrical Features	Infrastructure and Facilities
5	26	SE	Mast	412219 560483	NE40	Telecommunications Features	Infrastructure and Facilities
6	29	S	Pylon	412172 560457	NE40	Electrical Features	Infrastructure and Facilities
7	29	NW	Electricity Poles	412045 560695	NE40	Electrical Features	Infrastructure and Facilities
8	35	SE	Pylon	411788 560024	NE17	Electrical Features	Infrastructure and Facilities
9	42	E	Pylon	412242 560578	NE40	Electrical Features	Infrastructure and Facilities
10	64	NE	Electricity Poles	412214 560687	NE40	Electrical Features	Infrastructure and Facilities
11	91	E	Pylon	412288 560507	NE40	Electrical Features	Infrastructure and Facilities
12	98	E	Pylon	411995 560258	NE17	Electrical Features	Infrastructure and Facilities
13	138	S	Pylon	411623 559842	NE17	Electrical Features	Infrastructure and Facilities
14	163	SE	Pylon	412247 560337	NE17	Electrical Features	Infrastructure and Facilities
15	223	NE	Electricity Poles	412386 560695	NE40	Electrical Features	Infrastructure and Facilities

4.2 Petrol and Fuel Sites

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

Database searched and no data found.

4.3 National Grid High Voltage Underground Electricity Transmission Cables

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

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

Database searched and no data found.

4.4 National Grid High Pressure Gas Transmission Pipelines

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

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

Database searched and no data found.

---

5. Geology

5.1 Artificial Ground and Made Ground

Database searched and no data found.

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

5.2 Superficial Ground and Drift Geology

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

Lex Code	Description	Rock Type
TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON

5.3 Bedrock and Solid Geology

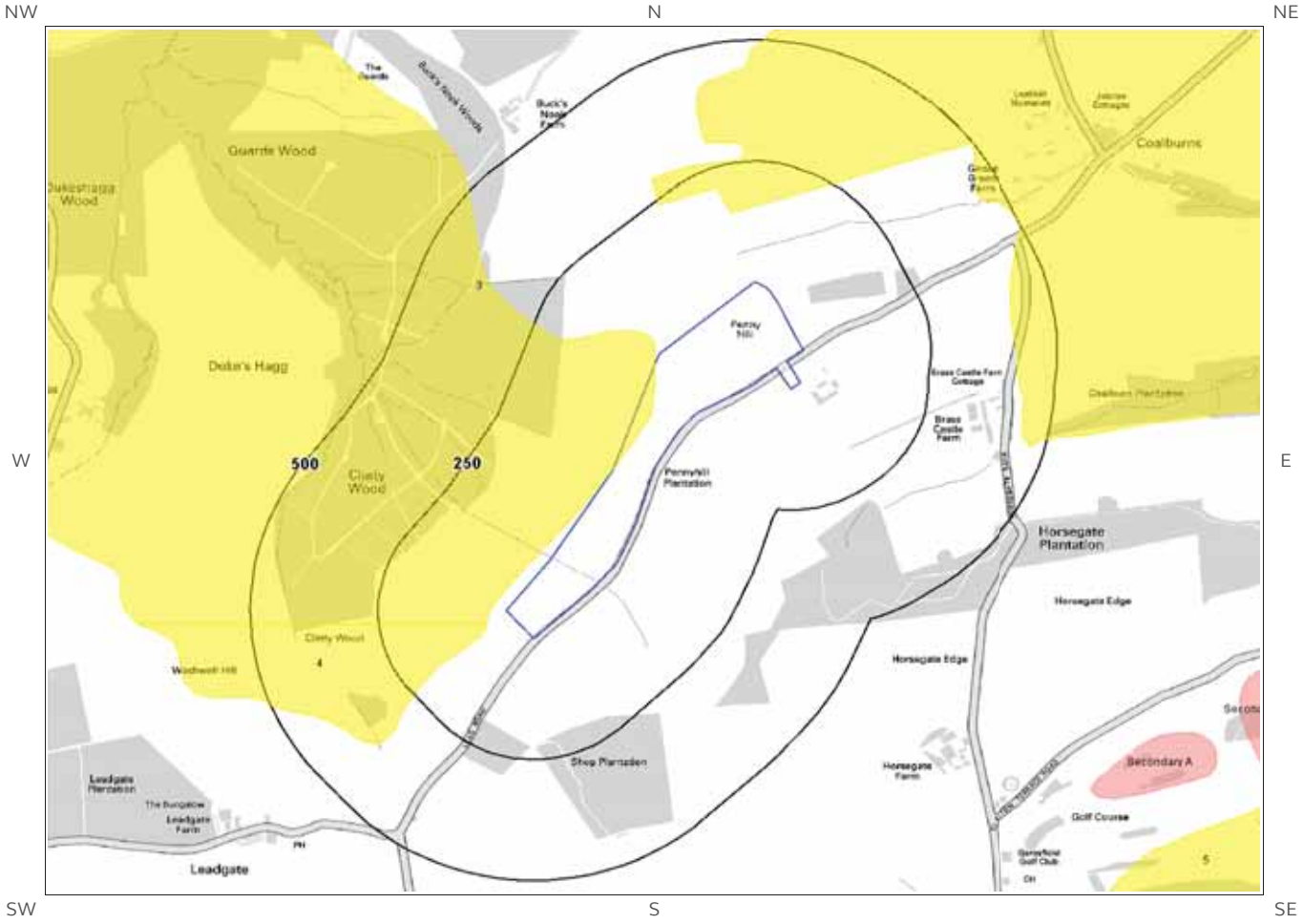
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION	MUDSTONE, SILTSTONE AND SANDSTONE
PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION	SANDSTONE
PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION	MUDSTONE, SILTSTONE AND SANDSTONE
PLCM-SDST	PENNINE LOWER COAL MEASURES FORMATION	SANDSTONE
PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION	MUDSTONE, SILTSTONE AND SANDSTONE

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

6 Hydrogeology and Hydrology

6a. Aquifer Within Superficial Geology



© Crown copyright and database rights 2018
Ordnance Survey license 100035207.

Site Outline

250
500
Search Buffers (m)

Principal Aquifer

Secondary (A) Aquifer - Permeable Layers

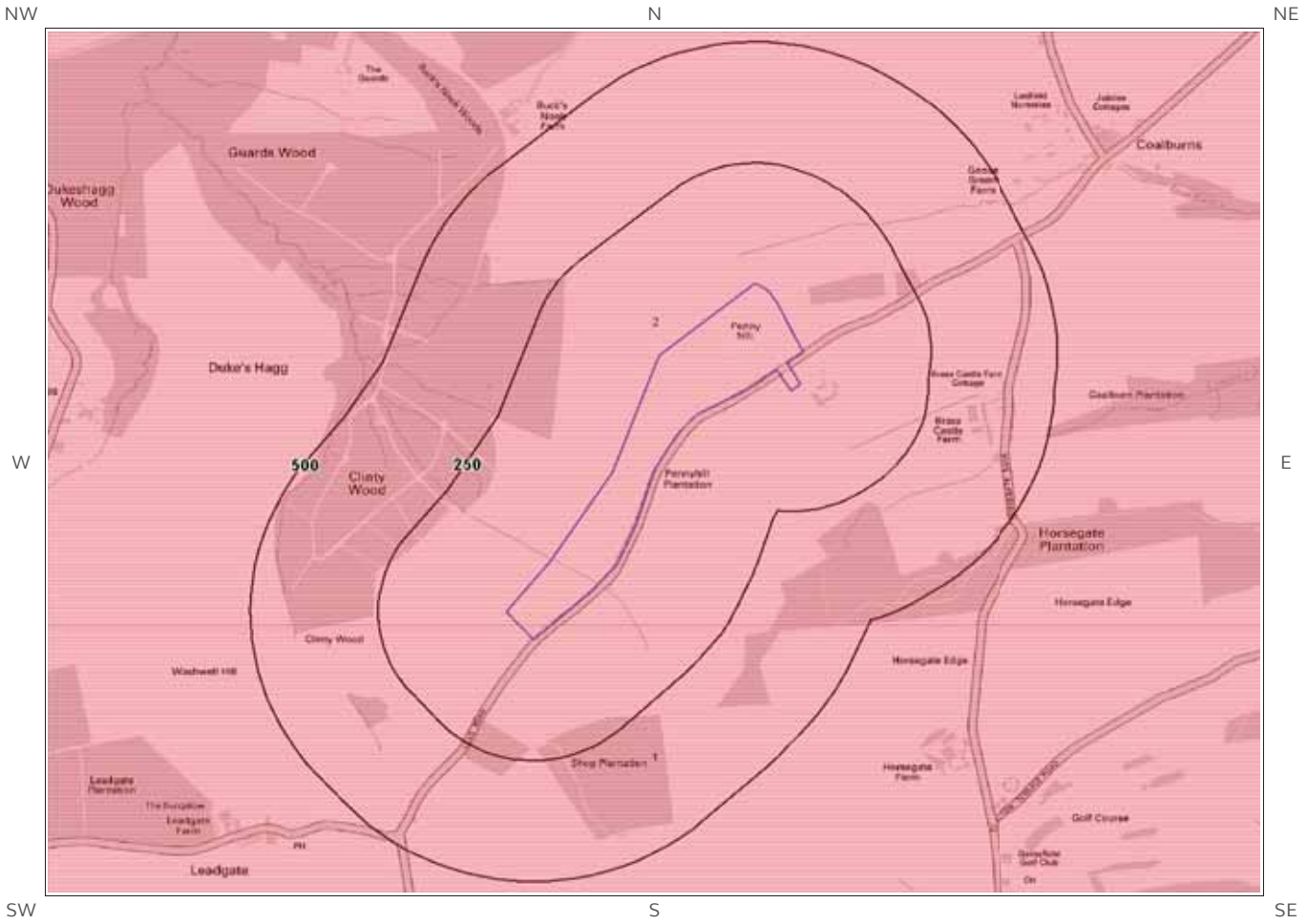
Secondary (B) Aquifer - Lower Permeability Layers

Secondary Aquifer - Undifferentiated Layers

Unproductive

Unknown (lakes and landslip)

6b. Aquifer Within Bedrock Geology and Abstraction Licenses



© Crown copyright and database rights 2018
Ordnance Survey license 100035207.

Site Outline

250
500
Search Buffers (m)

Principal Aquifer

Secondary (A) Aquifer - Permeable Layers

Secondary (B) Aquifer - Lower Permeability Layers

Groundwater Abstraction Licence

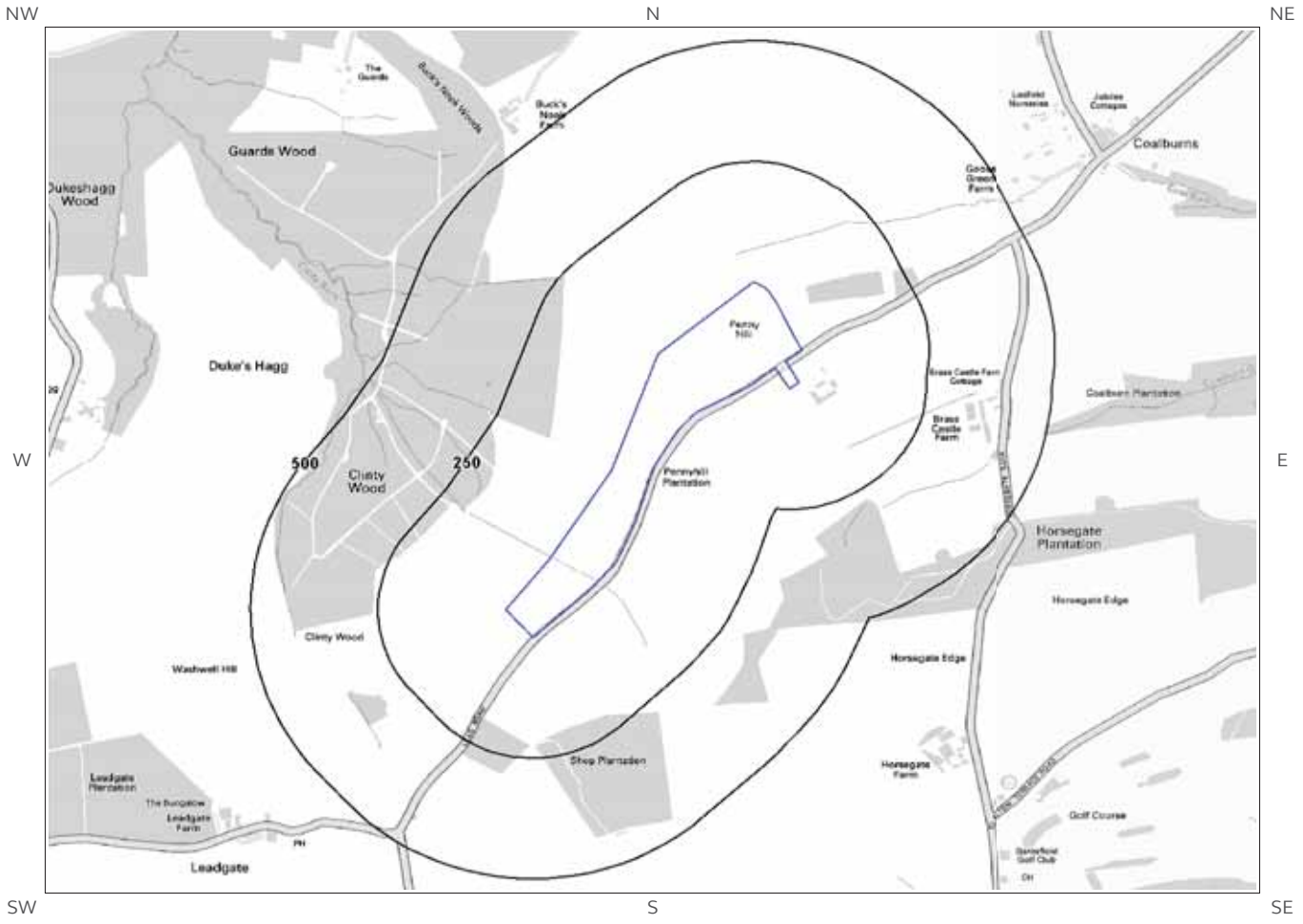
Secondary Aquifer - Undifferentiated Layers

Unproductive

Unknown (lakes and landslip)

Surface Water Abstraction Licence

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



© Crown copyright and database rights 2018
Ordnance Survey license 100035207.

Site Outline

250
500
Search Buffers (m)

Source Protection Zone 1 - Inner Catchment

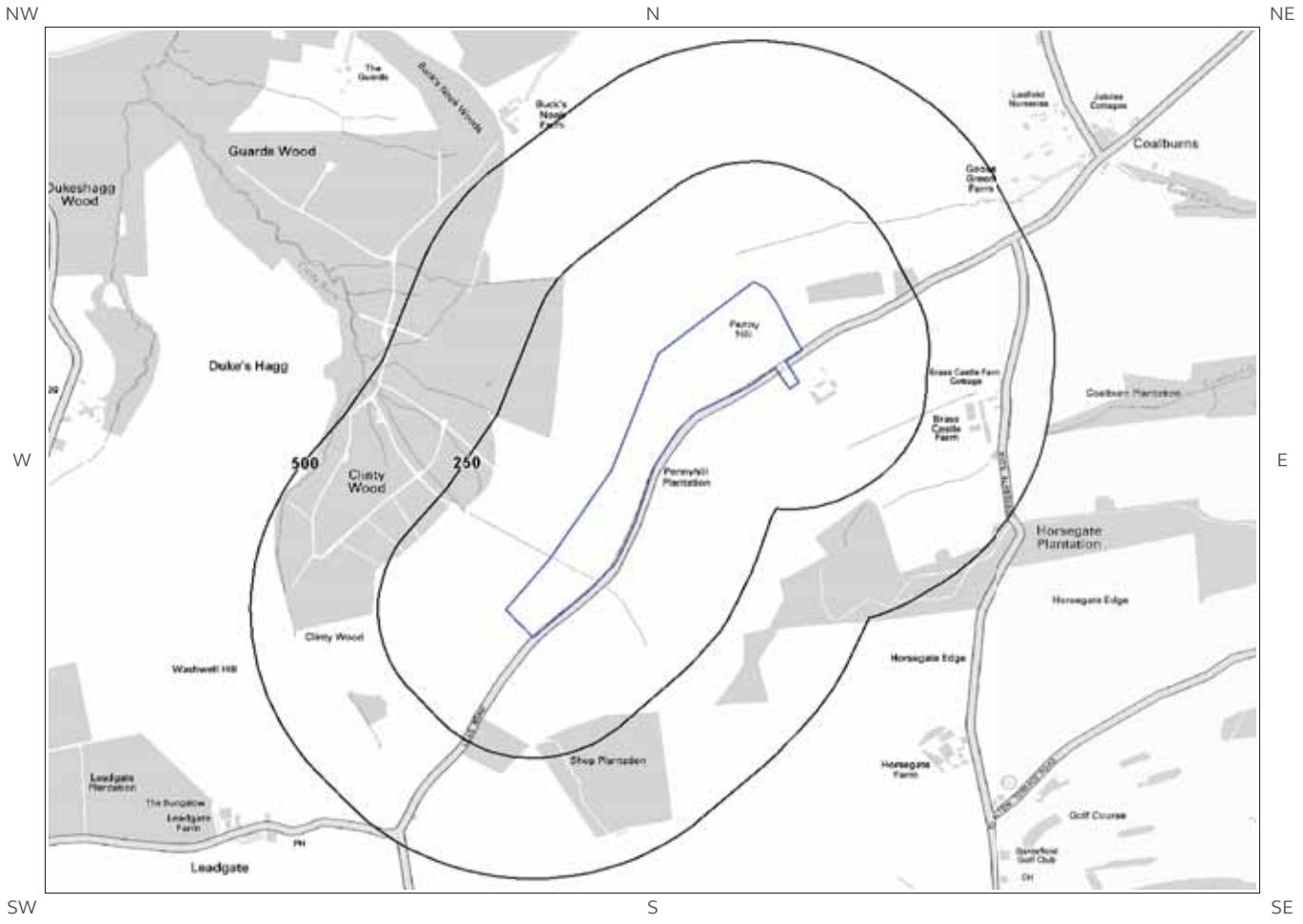
Source Protection Zone 2 - Outer Catchment

Source Protection Zone 3 - Total Catchment

Source Protection Zone 4 - Zone of Special Interest

Potable Water Abstraction Licence

6d. Hydrogeology – Source Protection Zones within confined aquifer



© Crown copyright and database rights 2018
Ordnance Survey license 100035207.

Source Protection Zone 1 - Inner Catchment

Source Protection Zone 2C - Outer Catchment within Confined Aquifer

Source Protection Zone 3C - Total Catchment within Confined Aquifer

Potable Water Abstraction Licence

Site Outline

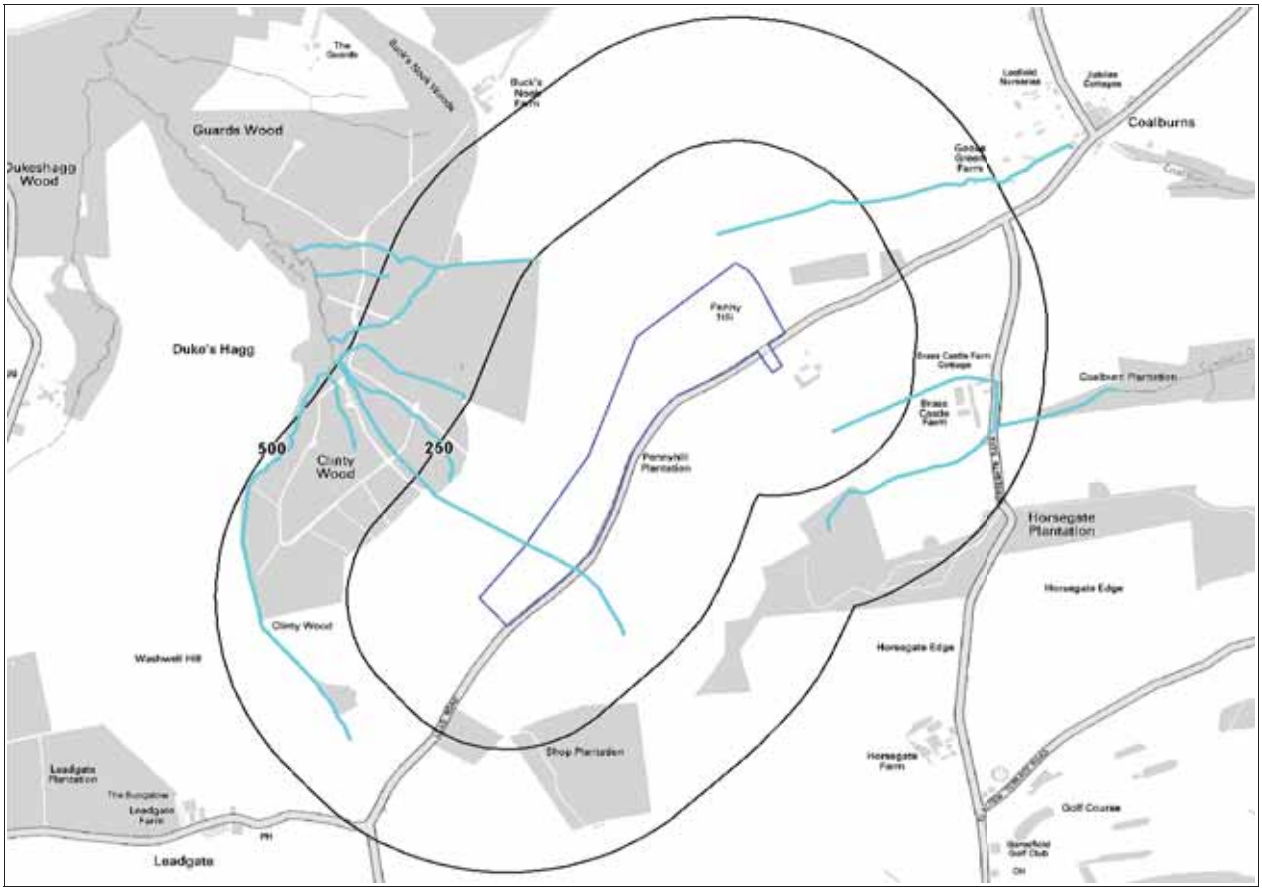
250
500
Search Buffers (m)

6e. Hydrology – Watercourse Network and River Quality

NW N NE

W E

SW S SE



© Crown copyright and database rights 2018.
Ordnance Survey license 100035207.

Site Outline

250
500
Search Buffers (m)

Tidal River
Inland River
Underground or Elevated Tidal River
Underground or Elevated Inland River
Foreshore
General Quality Assessment: Chemistry

Canal
Underground or Elevated Canal
Lock or Flight of Locks
Lake, Reservoir, or Marsh
Drain or Transfer
General Quality Assessment: Biology

6.Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

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

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

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

ID	Distance (m)	Direction	Designation	Description
3	0	On Site	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
4	48	SW	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

6.2 Aquifer within Bedrock Deposits

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

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

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

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Secondary 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	0	On Site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

6.3 Groundwater Abstraction Licences

Are there any Groundwater Abstraction Licences within 2000m of the study site? None identified

Database searched and no data found.

6.4 Surface Water Abstraction Licences

Are there any Surface Water Abstraction Licences within 2000m of the study site? None identified

Database searched and no data found.

6.5 Potable Water Abstraction Licences

Are there any Potable Water Abstraction Licences within 2000m of the study site? None identified

Database searched and no data found.

6.6 Source Protection Zones

Are there any Source Protection Zones within 500m of the study site? None identified

Database searched and no data found.

6.7 Source Protection Zones within Confined Aquifer

Are there any Source Protection Zones within the Confined Aquifer within 500m of the study site? None identified

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

Database searched and no data found.

6.8 Groundwater Vulnerability and Soil Leaching Potential

Is there any Environment Agency/Natural Resources Wales information on groundwater vulnerability and soil leaching potential within 500m of the study site? Identified

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Minor Aquifer/Low Leaching Potential	L	Soils in which pollutants are unlikely to penetrate the soil layer because either water movement is largely horizontal, or they have the ability to attenuate diffuse pollutants.
0	On Site	Minor Aquifer/High Leaching Potential	H3	Coarse textured or moderately shallow soils which readily transmit non-adsorbed pollutants and liquid discharges but have some ability to attenuate adsorbed pollutants because of their clay or organic matter content.
132	N	Minor Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.
153	SW	Minor Aquifer/Low Leaching Potential	L	Soils in which pollutants are unlikely to penetrate the soil layer because either water movement is largely horizontal, or they have the ability to attenuate diffuse pollutants.

6.9 River Quality

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

6.9.1 Biological Quality:

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

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

ID	Distance (m)	Direction	NGR	River Quality Grade	Biological Quality Grade				
					2005	2006	2007	2008	2009
Not shown	1334	E	413530 560690	River Name: Blaydon Burn Reach: Source Tyne End/Start of Stretch: End of Stretch NGR	C	C	C	C	B

6.9.2 Chemical Quality:

Database searched and no data found.

6.10 Ordnance Survey MasterMap Water Network

Are there any Ordnance Survey MasterMap Water Network entries within 500m of the study site? Yes

This watercourse information is provided by Ordnance Survey MasterMap Water Network. The data provides a detailed centre line following the curve of the waterway precisely, so all distances provided in the report should be understood as measurements to the centreline rather than a measurement to the nearest point of the watercourse. Underground watercourses are inferred from entry and exit points so caution is advised in using these to indicate precise locations of underground watercourses when planning site investigation and development.

The following Ordnance Survey MasterMap Water Network records are represented on the Hydrology Map (6e):

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
1	0.0 On Site	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
2	0.0 On Site	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
3	0.0 On Site	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
4	0.0 On Site	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
5	67.0 N	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
6	67.0 N	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
7	111.0 SE	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
8	111.0 SE	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
9	163.0 SE	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
10	191.0 NW	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
11	244.0 E	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
12	250.0 NW	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
13	263.0 NW	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
14	280.0 SE	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
15	291.0 NE	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
16	323.0 NW	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
17	348.0 E	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
18	351.0 SE	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
19	352.0 SW	Leadgate Gill	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
20	352.0 SW	Leadgate Gill	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
21	353.0 SW	Leadgate Gill	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
22	354.0 SW	Leadgate Gill	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
23	374.0 NW	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
24	403.0 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
25	406.0 SE	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
26	412.0 E	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
27	417.0 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
28	417.0 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
29	419.0 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
30	419.0 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
31	424.0 E	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
32	429.0 E	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
33	438.0 W	Clinty Burn	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
34	444.0 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
35	482.0 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
36	490.0 E	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
37	491.0 NW	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
38	499.0 NW	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
2	0.0 On Site	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
3	0.0 On Site	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
4	0.0 On Site	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
5	0.0 On Site	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
6	67.0 N	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
7	67.0 N	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
8	111.0 SE	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
9	111.0 SE	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
10	163.0 SE	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
11	191.0 NW	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
12	244.0 E	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
13	250.0 NW	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
14	263.0 NW	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
15	280.0 SE	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
16	291.0 NE	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
17	323.0 NW	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
18	348.0 E	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
19	351.0 SE	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
20	352.0 SW	Leadgate Gill	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
21	352.0 SW	Leadgate Gill	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
22	353.0 SW	Leadgate Gill	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
23	354.0 SW	Leadgate Gill	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
24	374.0 NW	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
25	403.0 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
26	406.0 SE	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: Not provided Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
27	412.0 E	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
28	417.0 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
29	417.0 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
30	419.0 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
31	419.0 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
32	424.0 E	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
33	429.0 E	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
34	438.0 W	Clinty Burn	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
35	444.0 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
36	482.0 W	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
37	490.0 E	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
38	491.0 NW	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided
39	499.0 NW	-	Inland river not influenced by normal tidal action.	Catchment Area: Tyne Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section: Not Provided

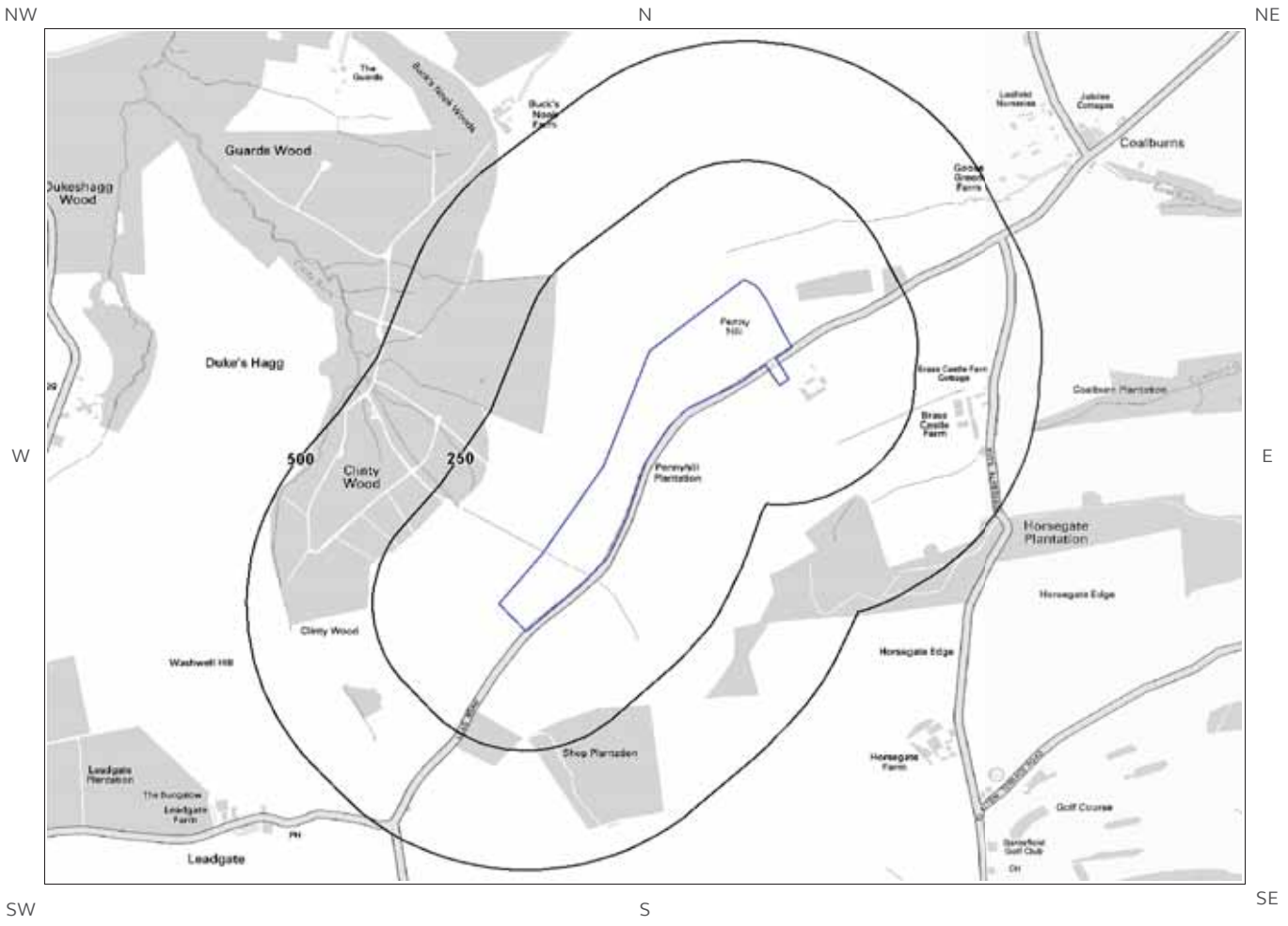
6.11 Surface Water Features

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

The following surface water records are not represented on mapping:

Distance (m)	Direction
0	On Site
15	SE
67	N
111	SE
163	SE
191	NW
193	NW
250	NW

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



© Crown copyright and database rights 2018.
Ordnance Survey license 100035207.

Site Outline

100
250
Search Buffers (m)

Zone 2 Floodplain

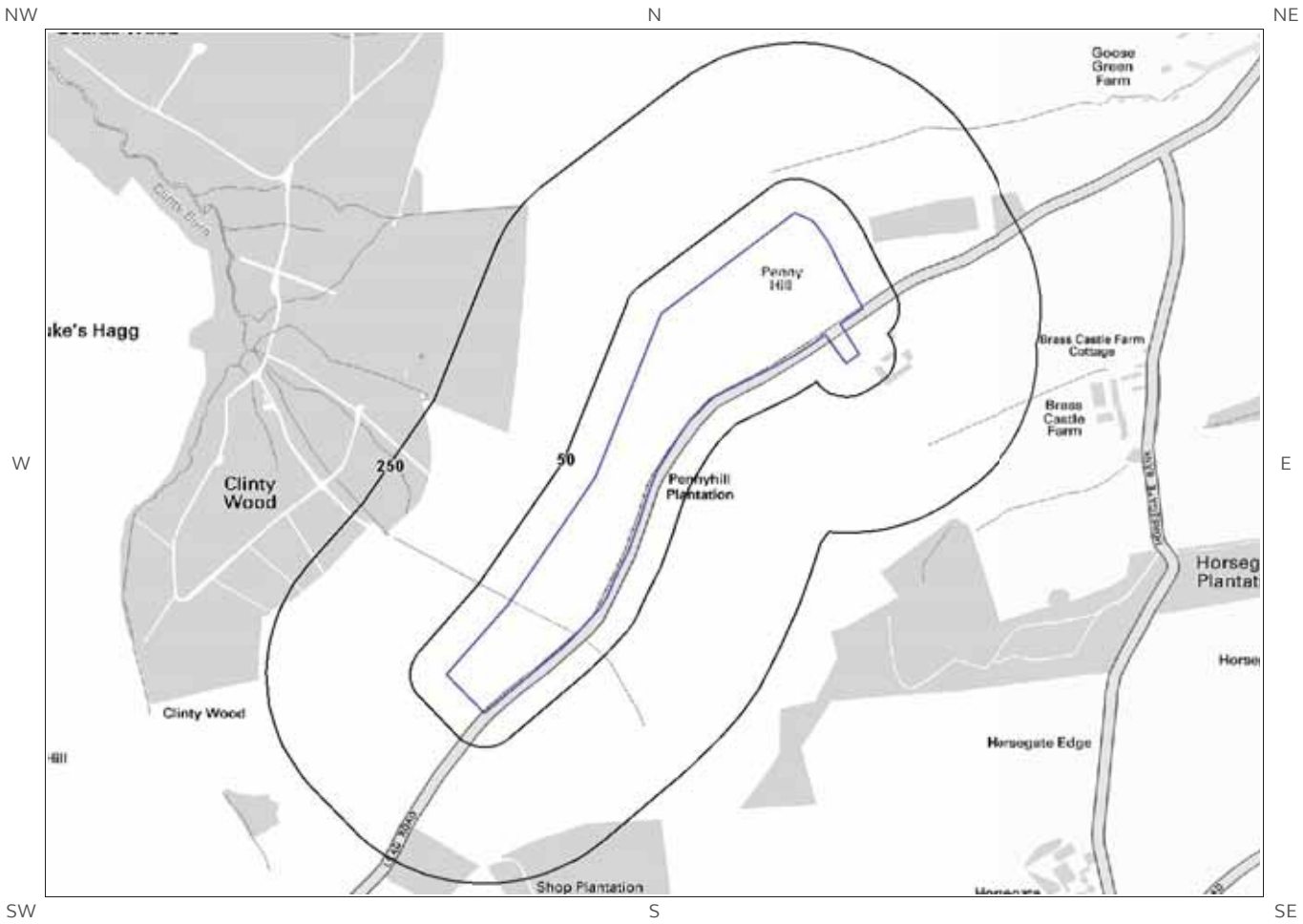
Zone 3 Floodplain

Flood Defences

Area used for Flood Storage

Area Benefiting from Flood Defences

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



© Crown copyright and database rights 2018.
Ordnance Survey license 100035207.

Site Outline

100 250 Search Buffers (m)

RoFRaS Rating

- Very Low
- Low
- Medium
- High

7 Flooding

7.1 River and Coastal Zone 2 Flooding

Is the site within 250m of an Environment Agency/Natural Resources Wales Zone 2 floodplain? None identified

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

Database searched and no data found.

7.2 River and Coastal Zone 3 Flooding

Is the site within 250m of an Environment Agency/Natural Resources Wales Zone 3 floodplain? None identified

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

Database searched and no data found.

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

What is the highest risk of flooding onsite? Very Low

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

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

7.4 Flood Defences

Are there any Flood Defences within 250m of the study site? None identified

Database searched and no data found.

7.5 Areas benefiting from Flood Defences

Are there any areas benefiting from Flood Defences within 250m of the study site? None identified

7.6 Areas benefiting from Flood Storage

Are there any areas used for Flood Storage within 250m of the study site? None identified

7.7 Groundwater Flooding Susceptibility Areas

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

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

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

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

Limited potential

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

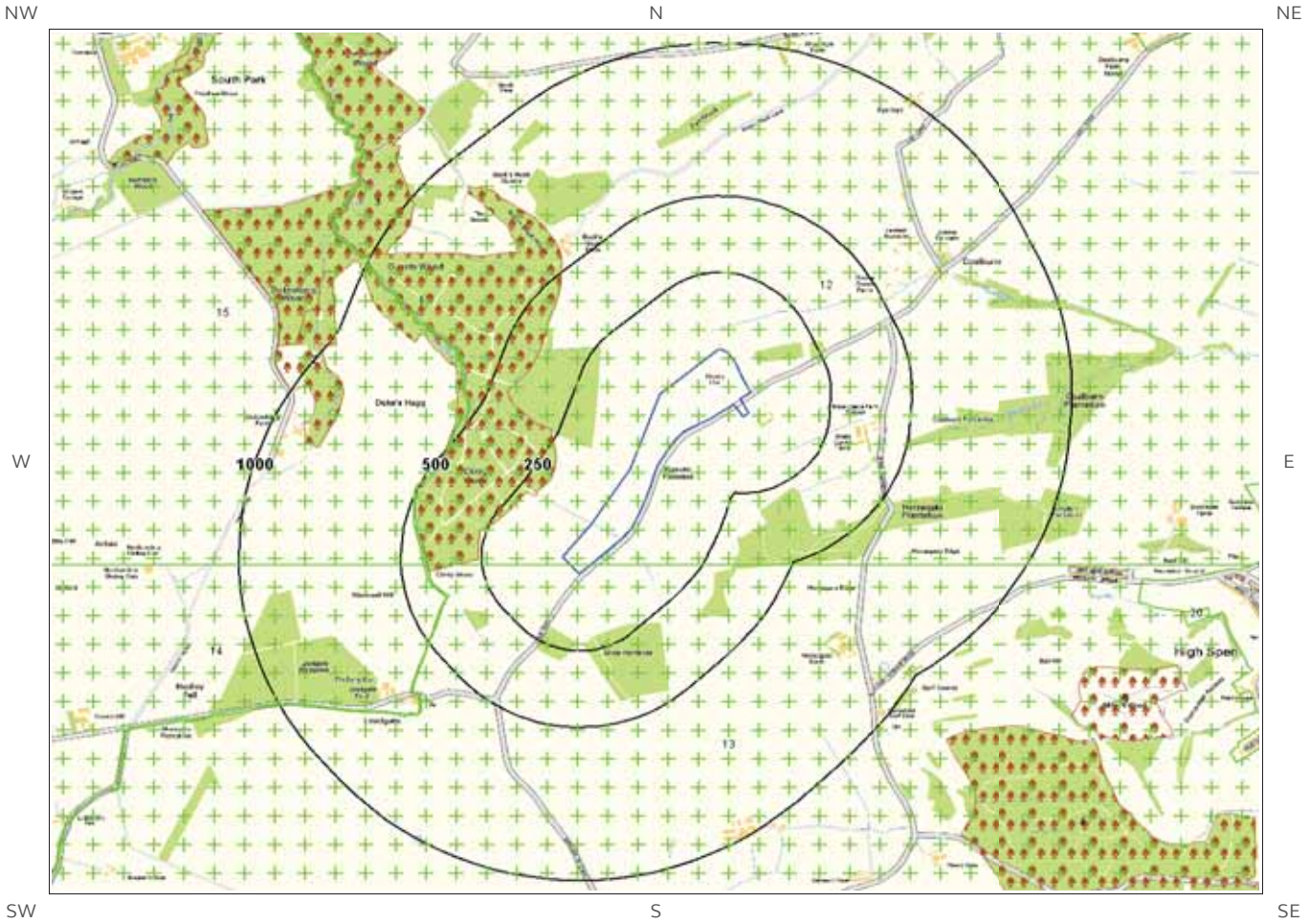
7.8 Groundwater Flooding Confidence Areas

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

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

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

8. Designated Environmentally Sensitive Sites Map



© Crown copyright and database rights 2018.
Ordnance Survey license 100035207.

Site Outline

100 / 250 Search Buffers (m)

AONB

National Park

SSSI

Special Protection Areas

Nitrate Vulnerable Zones

Green Belt

Environmentally Sensitive Areas

Special Areas of Conservation

World Heritage Sites

Nitrate Sensitive Areas

Ancient Woodland

National Nature Reserve

Local Nature Reserves

Ramsar Sites

8. Designated Environmentally Sensitive Sites

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

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

11

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

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
1	186	NW	UNKNOWN	Ancient Replanted Woodland
2	834	NW	UNKNOWN	Ancient and Semi-Natural Woodland
3	947	NW	UNKNOWN	Ancient and Semi-Natural Woodland
4	1194	SE	UNKNOWN	Ancient Replanted Woodland
Not shown	1213	NE	UNKNOWN	Ancient and Semi-Natural Woodland
6	1341	SE	UNKNOWN	Ancient Replanted Woodland
7	1620	NW	UNKNOWN	Ancient Replanted Woodland
Not shown	1757	NW	UNKNOWN	Ancient and Semi-Natural Woodland
9	1776	NW	UNKNOWN	Ancient and Semi-Natural Woodland
Not shown	1781	SW	UNKNOWN	Ancient Replanted Woodland
Not shown	1833	W	UNKNOWN	Ancient and Semi-Natural Woodland

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

23

Green Belt data contains Ordnance Survey data © Crown copyright and database right [2015].

ID	Distance	Direction	Green Belt Name	Local Authority Name
12	0	On Site	North East Greenbelt	Gateshead District (B)
13	0	On Site	North East Greenbelt	Gateshead District (B)
14	373	W	North East Greenbelt	Northumberland
15	423	W	North East Greenbelt	Northumberland
Not shown	1357	S	North East Greenbelt	Gateshead District (B)
Not shown	1362	S	North East Greenbelt	Gateshead District (B)
Not shown	1365	S	North East Greenbelt	Gateshead District (B)
Not shown	1372	S	North East Greenbelt	Gateshead District (B)
20	1494	SE	North East Greenbelt	Gateshead District (B)
Not shown	1517	S	North East Greenbelt	Gateshead District (B)

Not shown	1622	W	North East Greenbelt	Northumberland
Not shown	1623	W	North East Greenbelt	Northumberland
Not shown	1796	SE	North East Greenbelt	Gateshead District (B)
Not shown	1814	SE	North East Greenbelt	Gateshead District (B)
Not shown	1827	SE	North East Greenbelt	Gateshead District (B)
Not shown	1865	SE	North East Greenbelt	Gateshead District (B)
Not shown	1875	SE	North East Greenbelt	Gateshead District (B)
Not shown	1883	SE	North East Greenbelt	Gateshead District (B)
Not shown	1900	SE	North East Greenbelt	Gateshead District (B)
Not shown	1914	SE	North East Greenbelt	Gateshead District (B)
Not shown	1933	SE	North East Greenbelt	Gateshead District (B)
Not shown	1967	E	North East Greenbelt	Gateshead District (B)
Not shown	1984	SW	North East Greenbelt	Gateshead District (B)

9. Natural Hazards Findings

9.1 Detailed BGS GeoSure Data

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

9.1.1 Shrink Swell

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

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

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

9.1.2 Landslides

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

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

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

9.1.3 Soluble Rocks

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

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

Hazard
Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

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

9.1.4 Compressible Ground

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

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

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

9.1.5 Collapsible Rocks

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

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

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

9.1.6 Running Sand

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

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

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

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

9.2 Radon

9.2.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The site is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

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

9.2.2 Radon Protection

Is the property in an area where Radon Protection are required for new properties or extensions to existing
ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.

10. Mining

10.1 Coal Mining

Are there any coal mining areas within 75m of the study site? Identified

The following coal mining information provided by the Coal Authority is not represented on Mapping:

Distance (m)	Direction	Details
0	On Site	The study site is located within the specified search distance of an identified mining area. Further details concerning this can be obtained from the Coal Authority Helpline on 0845 762 6848.

10.2 Non-Coal Mining

Are there any Non-Coal Mining areas within 50m of the study site boundary? None identified

Database searched and no data found.

10.3 Brine Affected Areas

Are there any brine affected areas within 75m of the study site? None identified
Guidance: No Guidance Required.

Contact Details

emapsite
Telephone: 0118 9736883
sales@emapsite.com

British Geological Survey Enquiries
Kingsley Dunham Centre
Keyworth, Nottingham NG12 5GG
Tel: 0115 936 3143.
Fax: 0115 936 3276.
Email:
Web:**www.bgs.ac.uk**
BGS Geological Hazards Reports and general geological enquiries:
enquiries@bgs.ac.uk

Environment Agency
National Customer Contact Centre, PO Box 544
Rotherham, S60 1BY
Tel: 03708 506 506
Web: **www.environment-agency.gov.uk**
Email: enquiries@environment-agency.gov.uk

Public Health England
Public information access office
Public Health England, Wellington House
133-155 Waterloo Road, London, SE1 8UG
www.gov.uk/phe
Email:**enquiries@phe.gov.uk**
Main switchboard**: 020 7654 8000**

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

Ordnance Survey
Adanac Drive, Southampton
SO16 0AS
Tel: 08456 050505

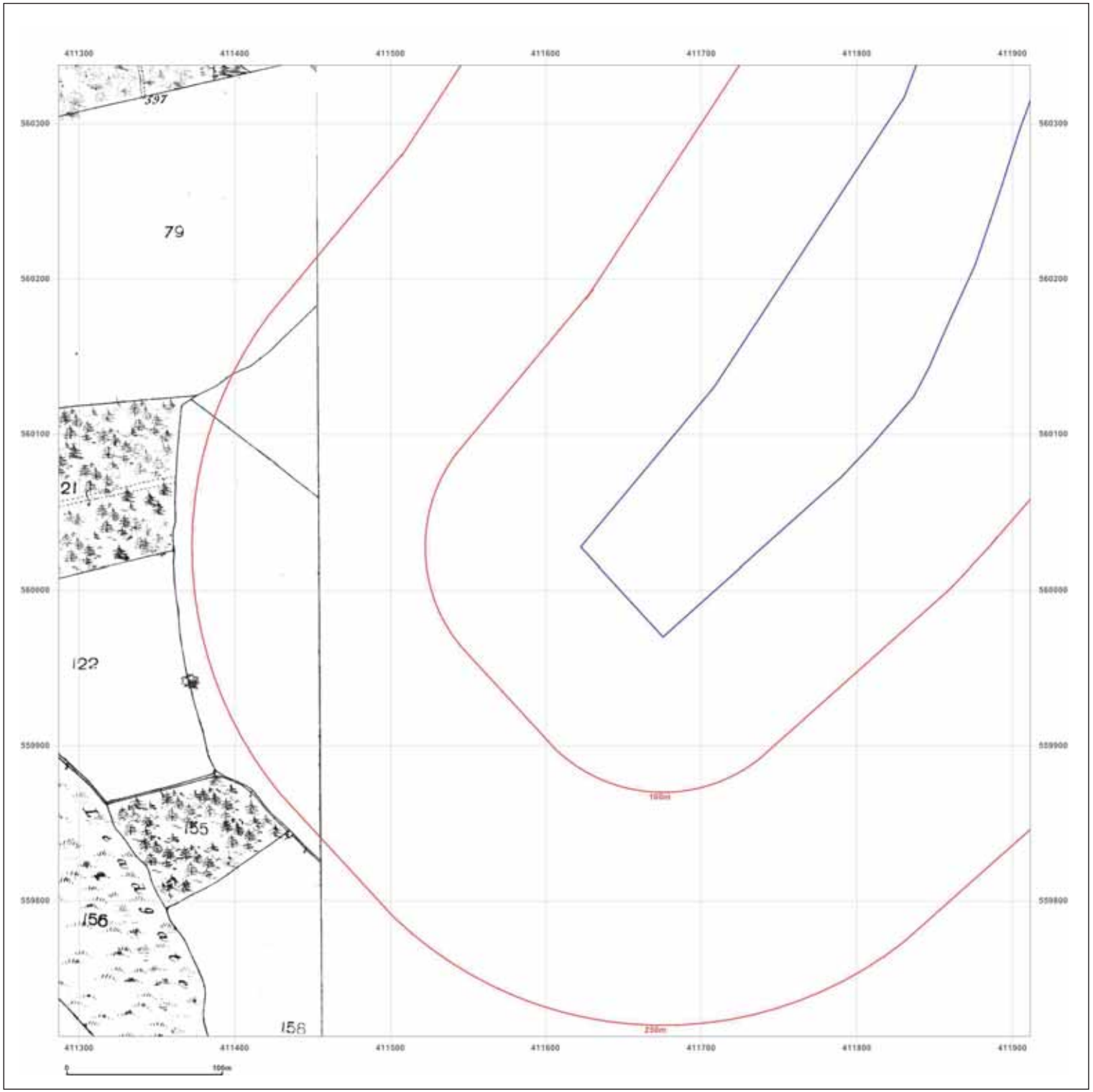
Local Authority
Authority: Gateshead Metropolitan Borough Council
Phone: 01914 333 000
Web: http://www.gateshead.gov.uk/
Address: Civic Centre, Regent Street, Gateshead, Tyne and Wear, NE8

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

Acknowledgements: Site of Special Scientific Interest, National Nature Reserve, Ramsar Site, Special Protection Area, Special Area of Conservation data is provided by, and used with the permission of, Natural England who retain the Copyright and Intellectual Property Rights for the data.
PointX © Database Right/Copyright, Thomson Directories Limited © Copyright Link Interchange Network Limited © Database Right/Copyright and Ordnance Survey © Crown Copyright and/or Database Right. All Rights Reserved. Licence Number [03421028].
This report has been prepared in accordance with the Groundsure Ltd standard Terms and Conditions of business for work of this nature.

Standard Terms and Conditions

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



emapsite™

Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_1_1
Grid Ref: 411599, 560025

Map Name: County Series
Map date: **1857**
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

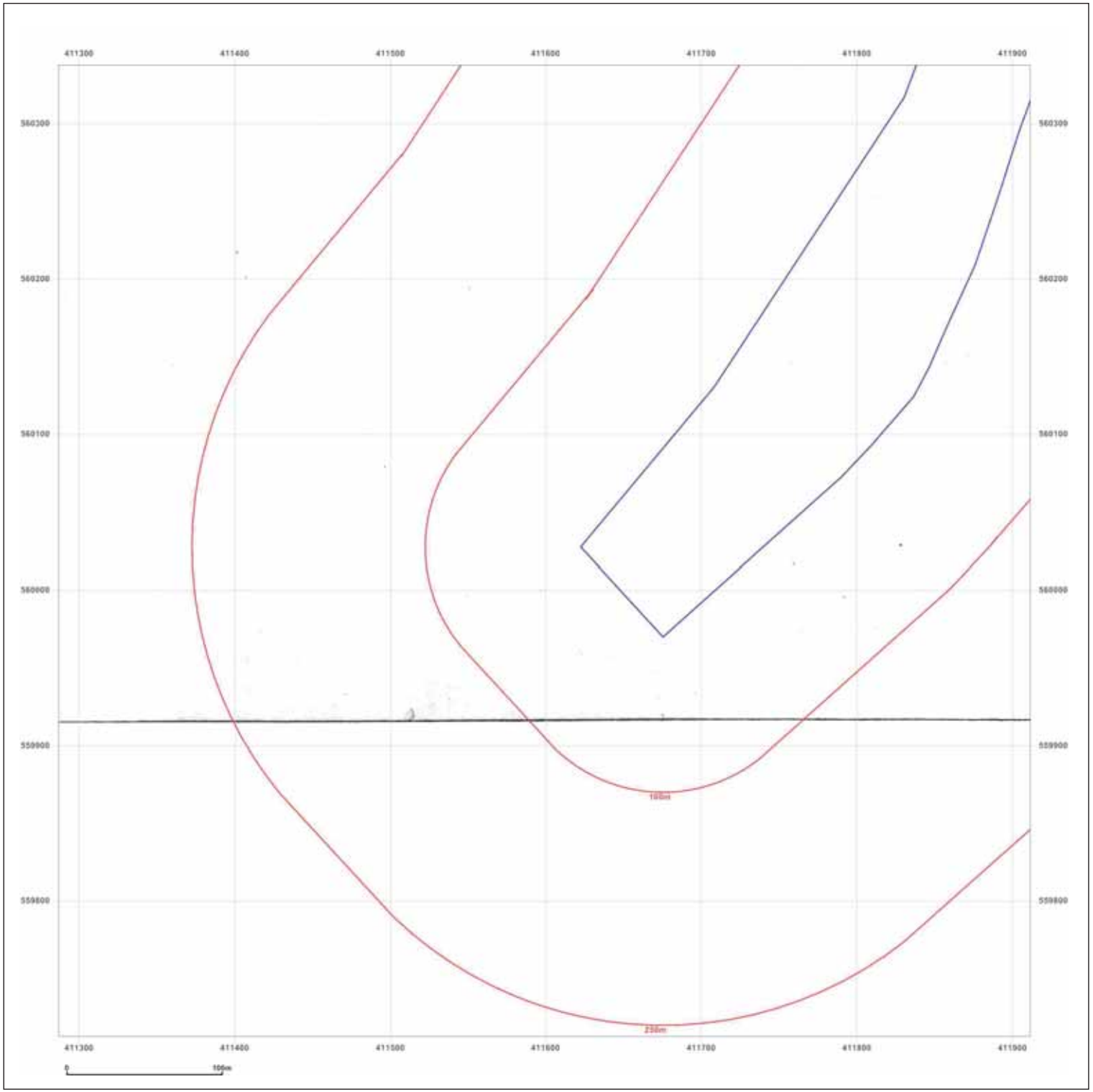
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

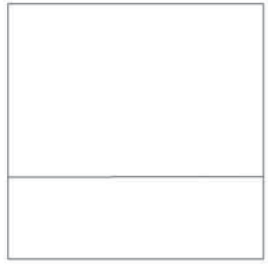
Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_1_1
Grid Ref: 411599, 560025

Map Name: County Series
Map date: **1858**
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S

Surveyed 1858
Revised 1858
Edition N/A
Copyright N/A
Levelled N/A



Groundsure

Produced by
Groundsure Insights
www.groundsure.com

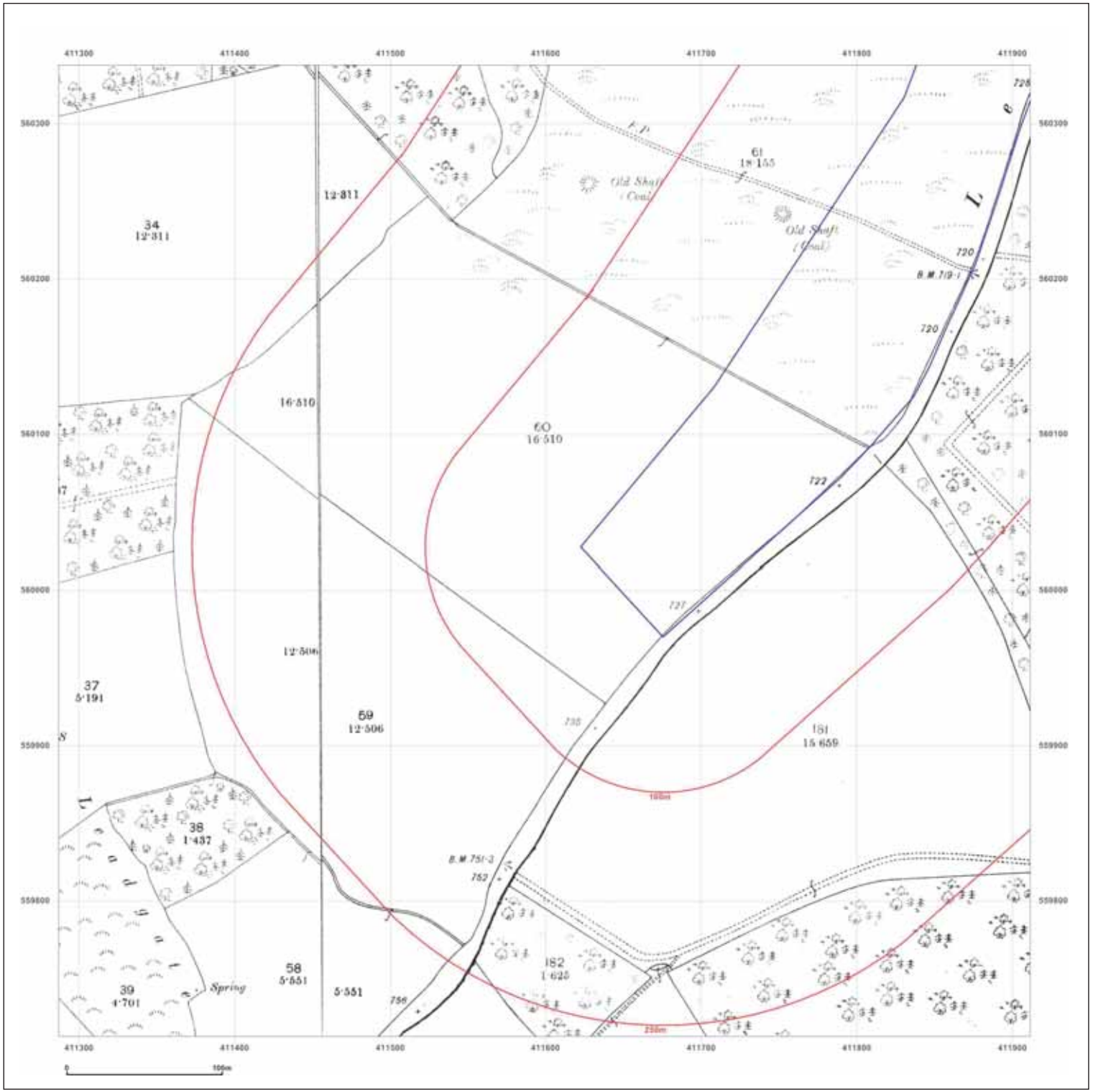
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

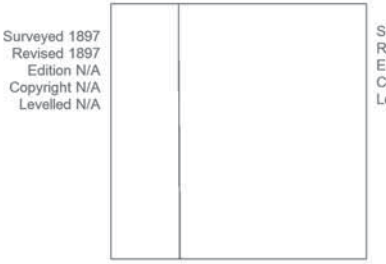
Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_1_1
Grid Ref: 411599, 560025

Map Name: County Series
Map date: 1896-1897
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S



Groundsure

Produced by
Groundsure Insights
www.groundsure.com

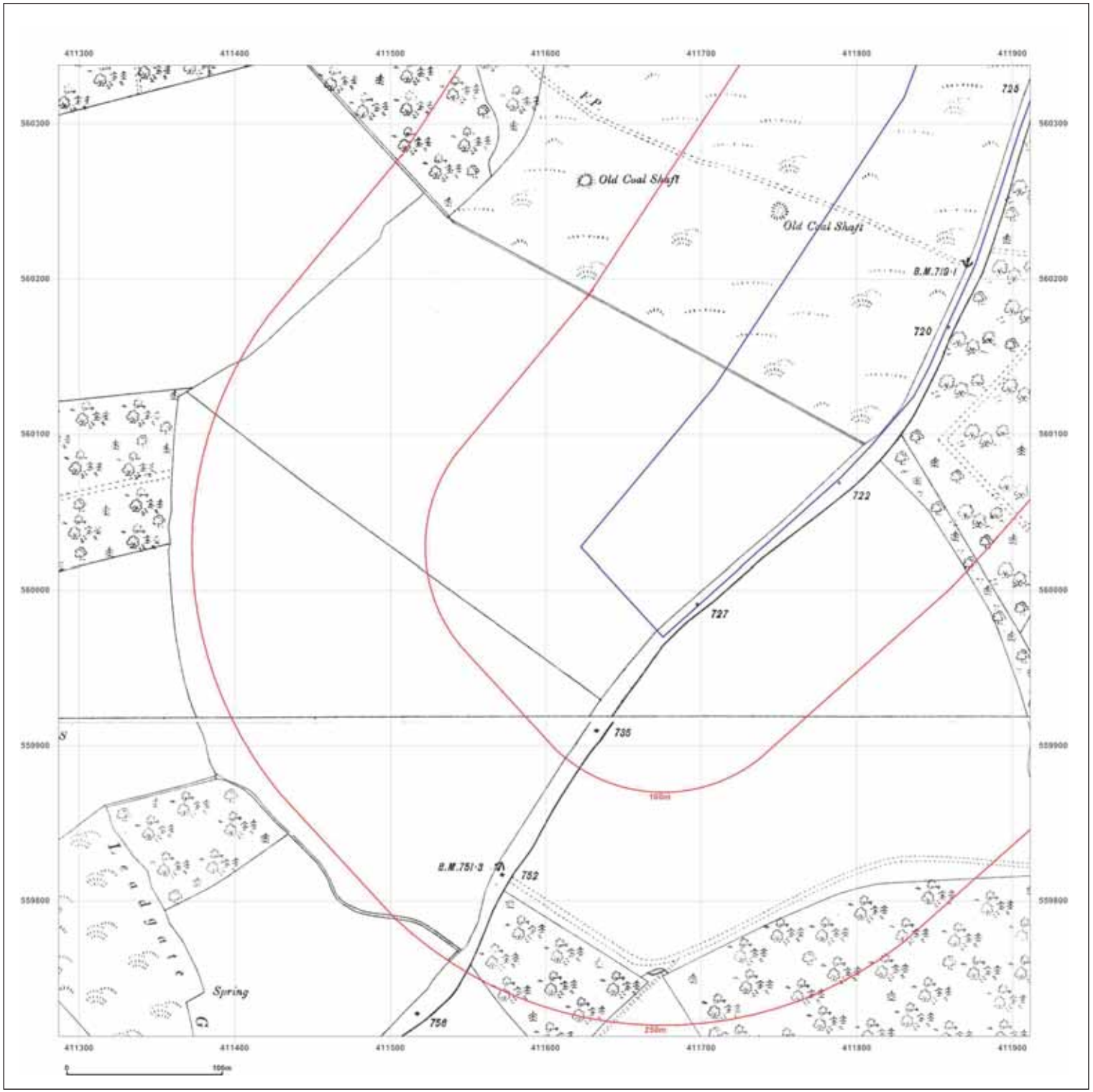
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_1_1
Grid Ref: 411599, 560025

Map Name: County Series
Map date: **1896-1897**
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S

Surveyed 1897
Revised 1897
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1896
Revised 1896
Edition N/A
Copyright N/A
Levelled N/A

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

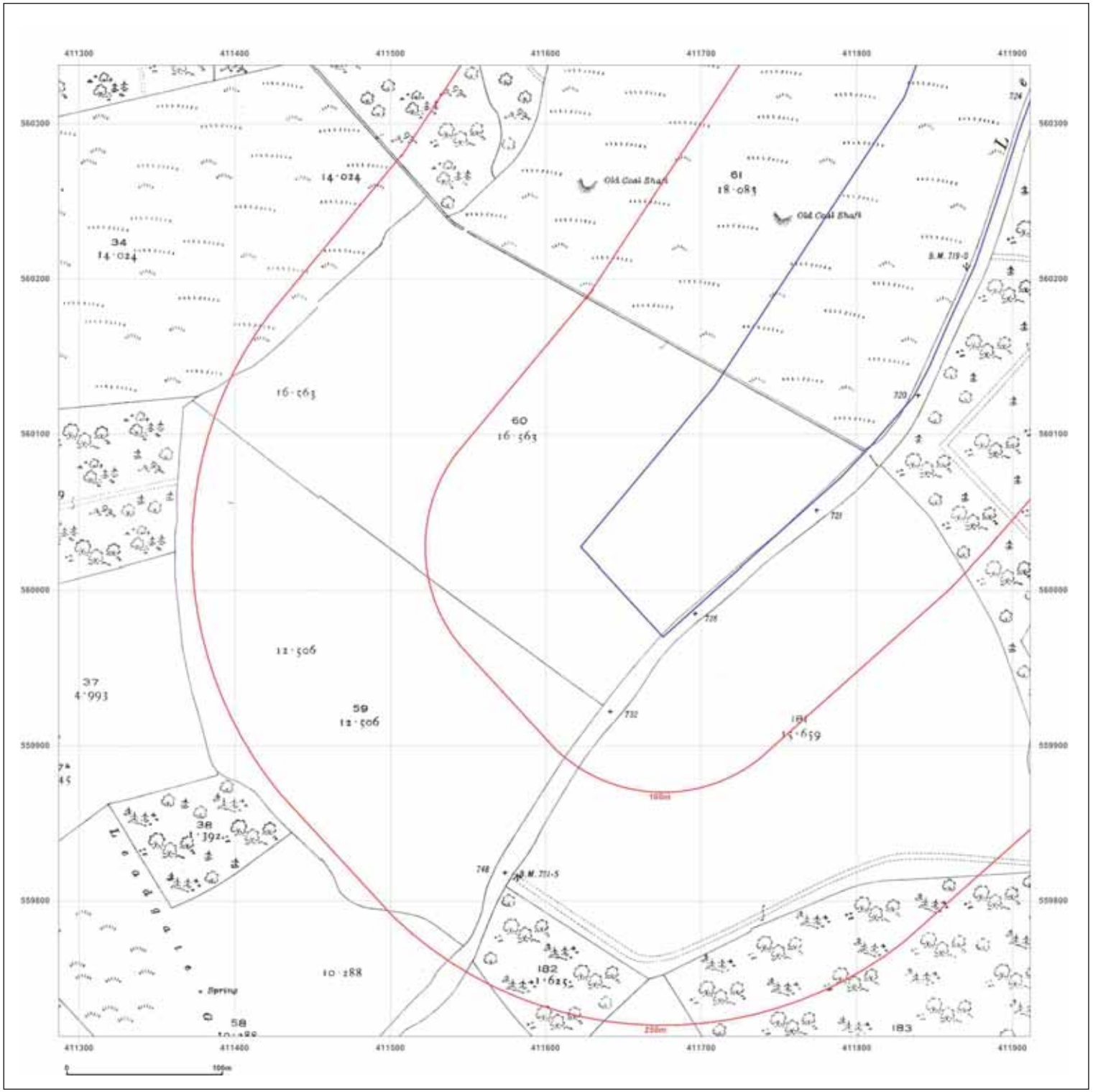
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

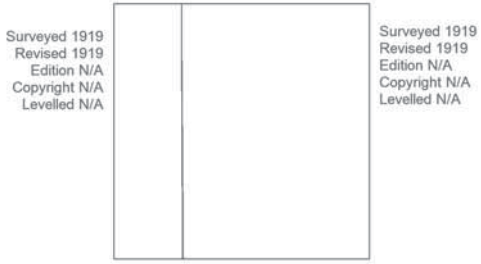
Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_1_1
Grid Ref: 411599, 560025

Map Name: County Series
Map date: 1919
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S



Groundsure

Produced by
Groundsure Insights
www.groundsure.com

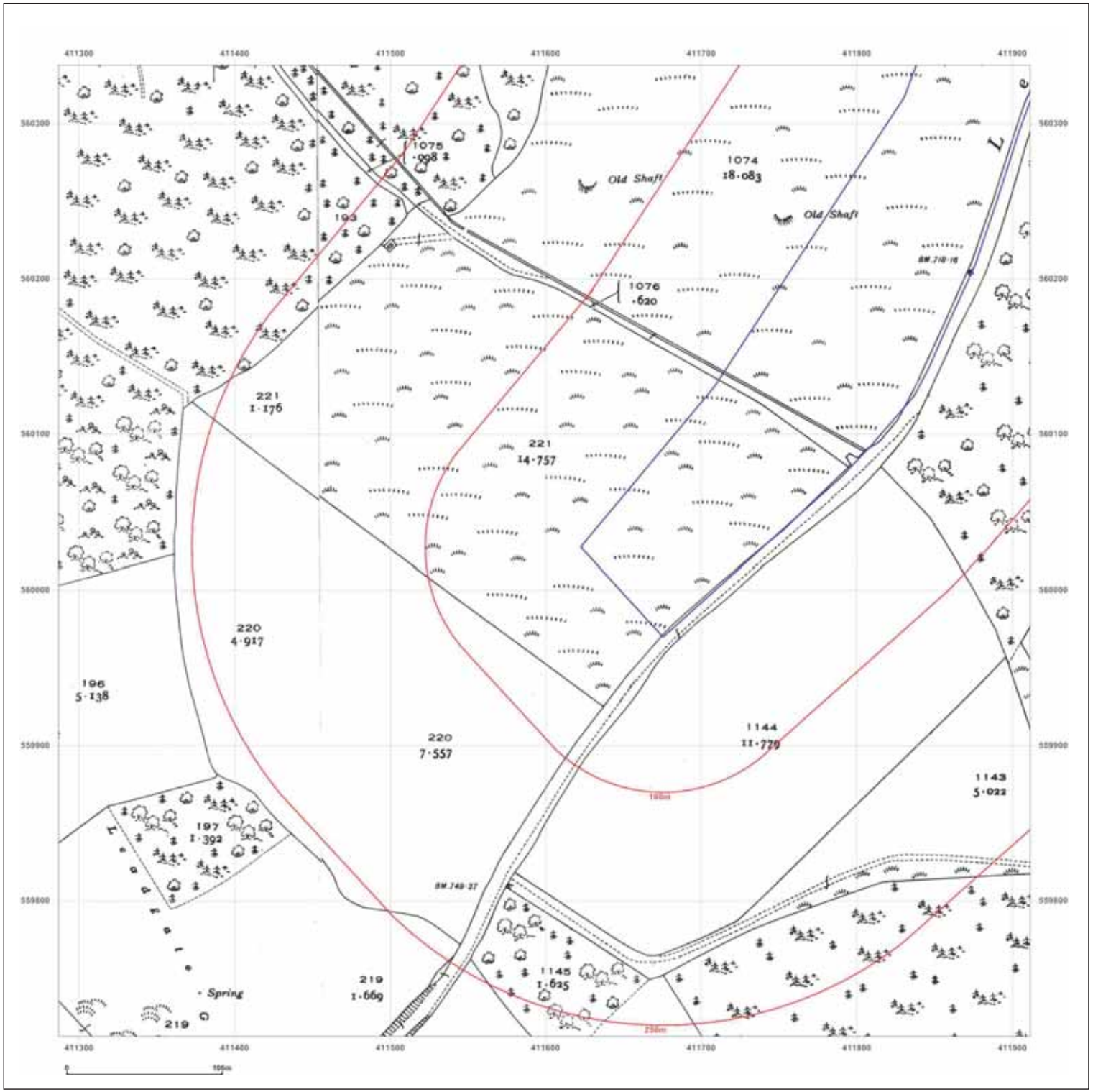
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

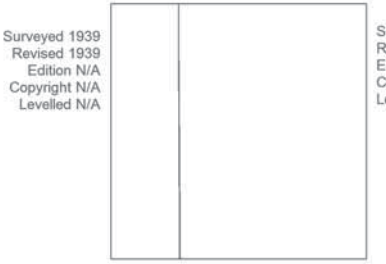
Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_1_1
Grid Ref: 411599, 560025

Map Name: County Series
Map date: 1939
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S



Groundsure

Produced by
Groundsure Insights
www.groundsure.com

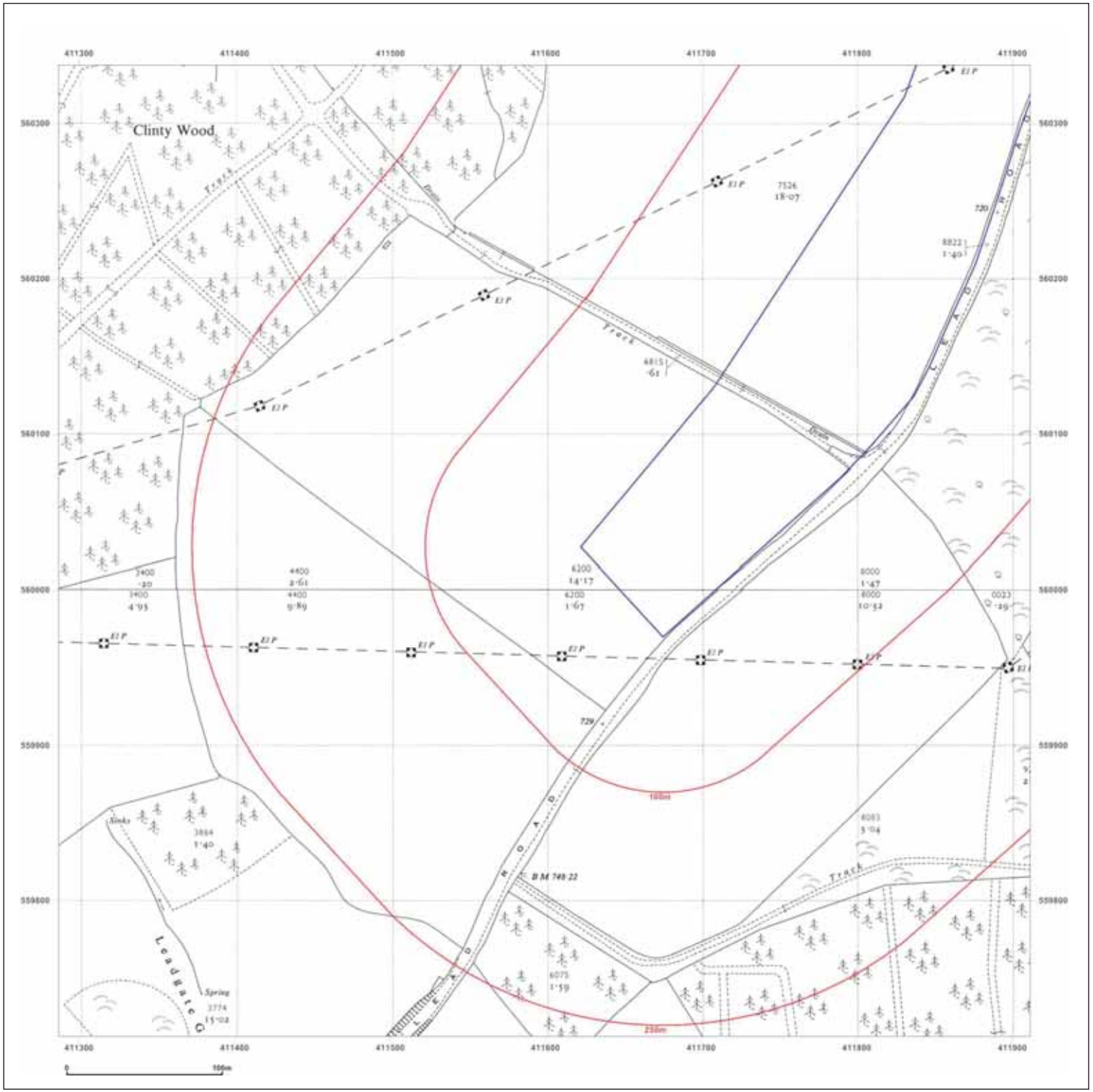
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_1_1
Grid Ref: 411599, 560025

Map Name: National Grid
Map date: 1960
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1962
Levelled 1956

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

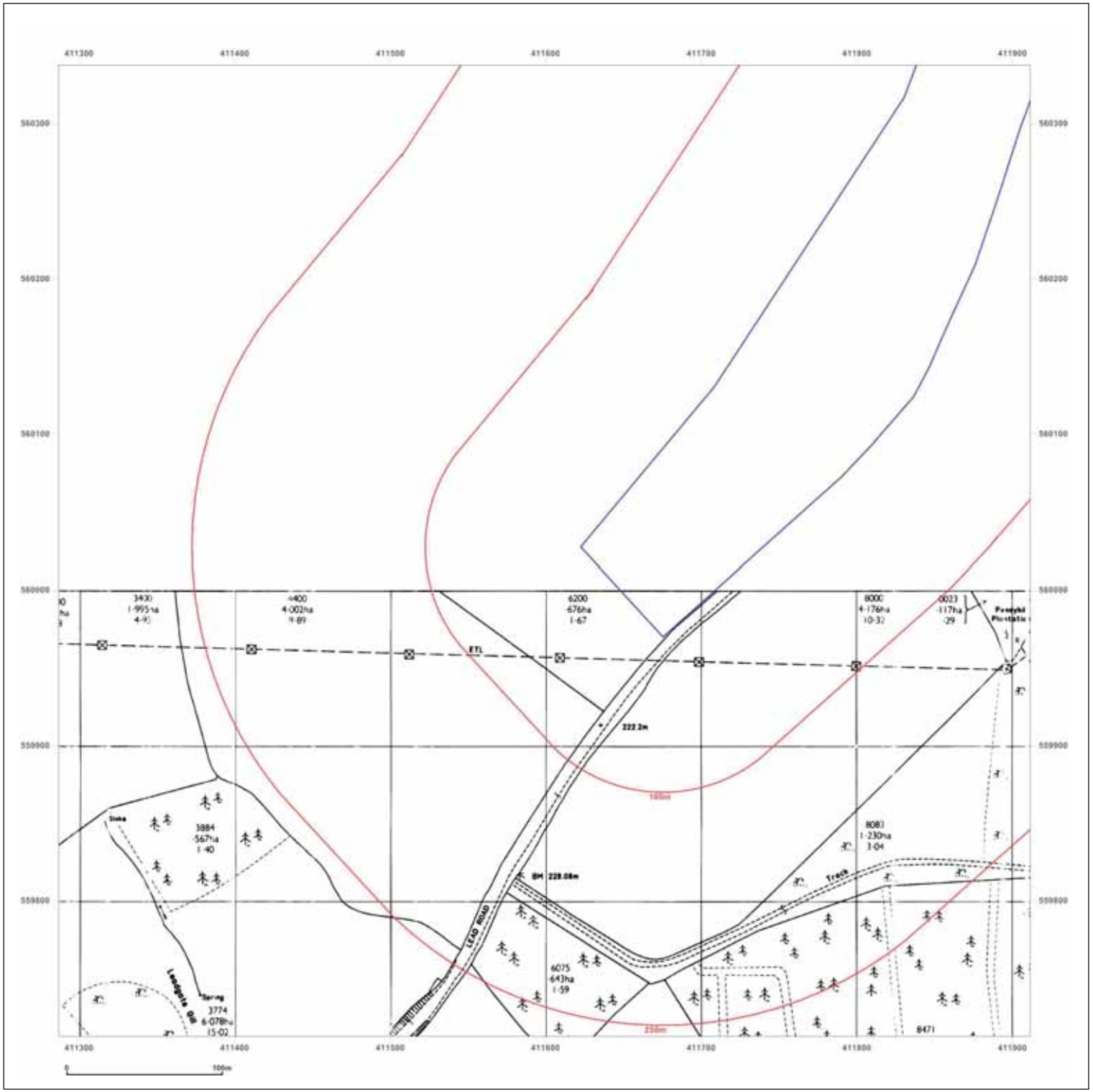
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_1_1
Grid Ref: 411599, 560025

Map Name: National Grid
Map date: 1979
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S

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

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

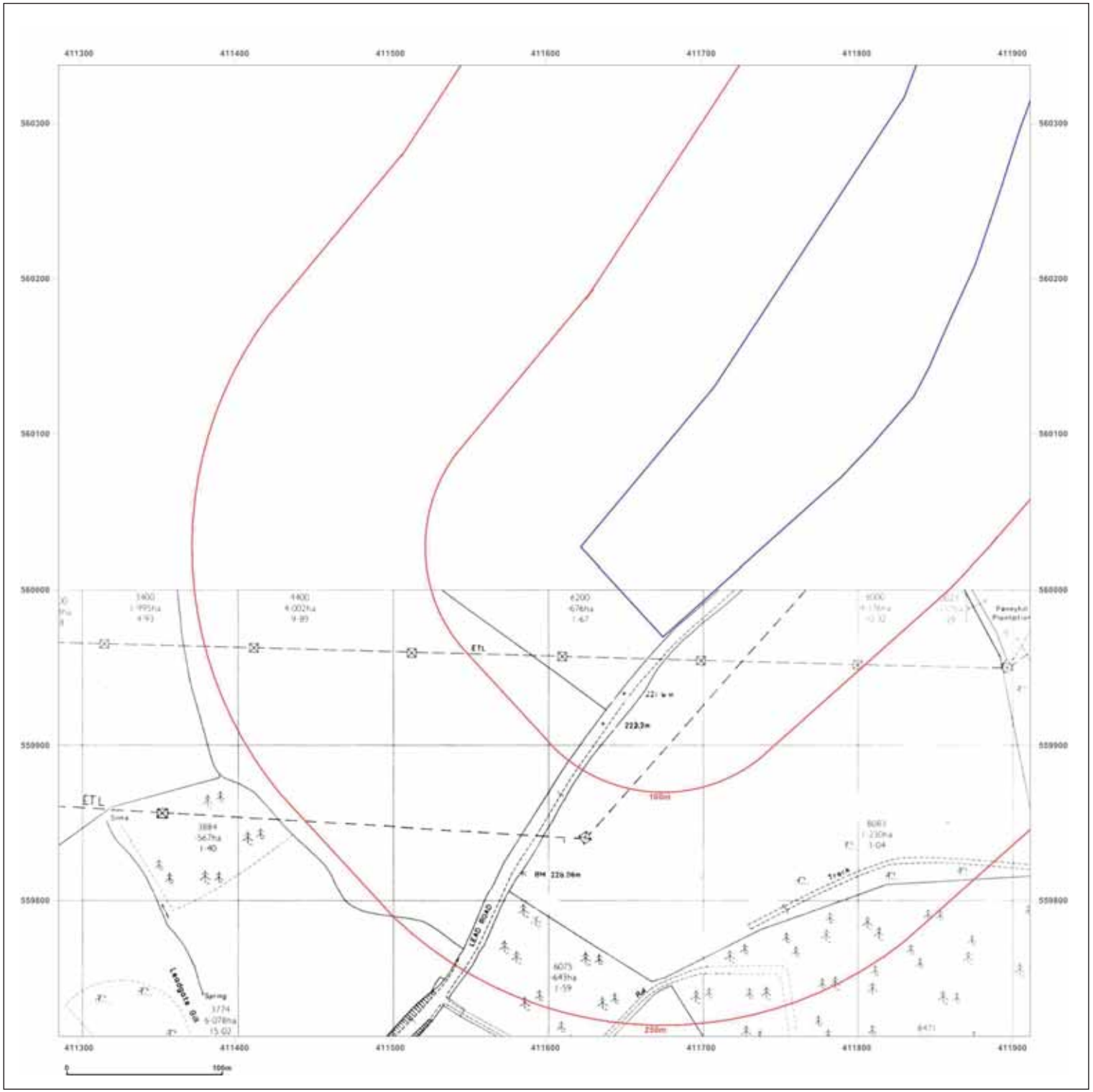
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_1_1
Grid Ref: 411599, 560025

Map Name: National Grid
Map date: 1992
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

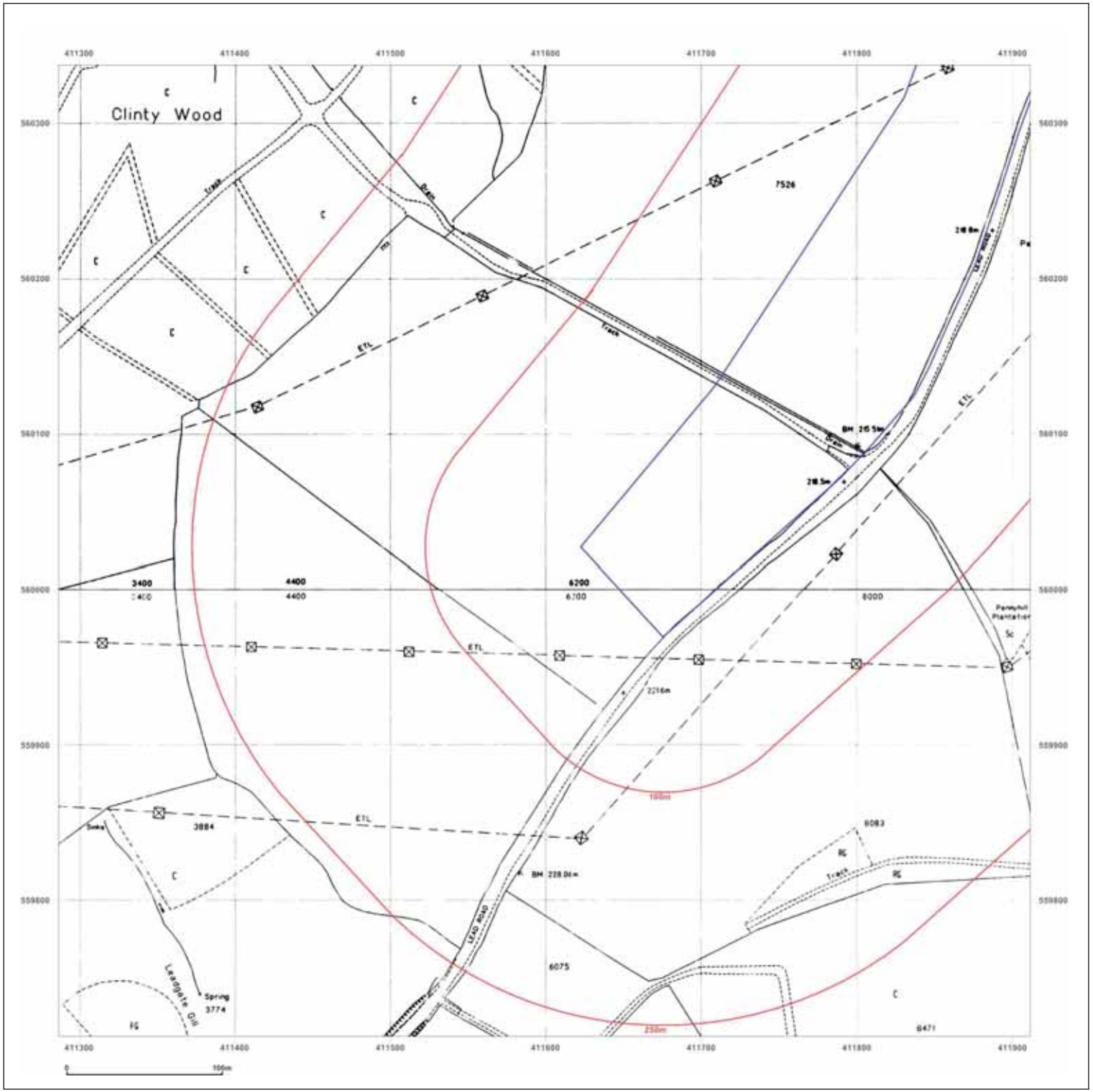
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_1_1
Grid Ref: 411599, 560025

Map Name: National Grid
Map date: 1993
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S

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

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

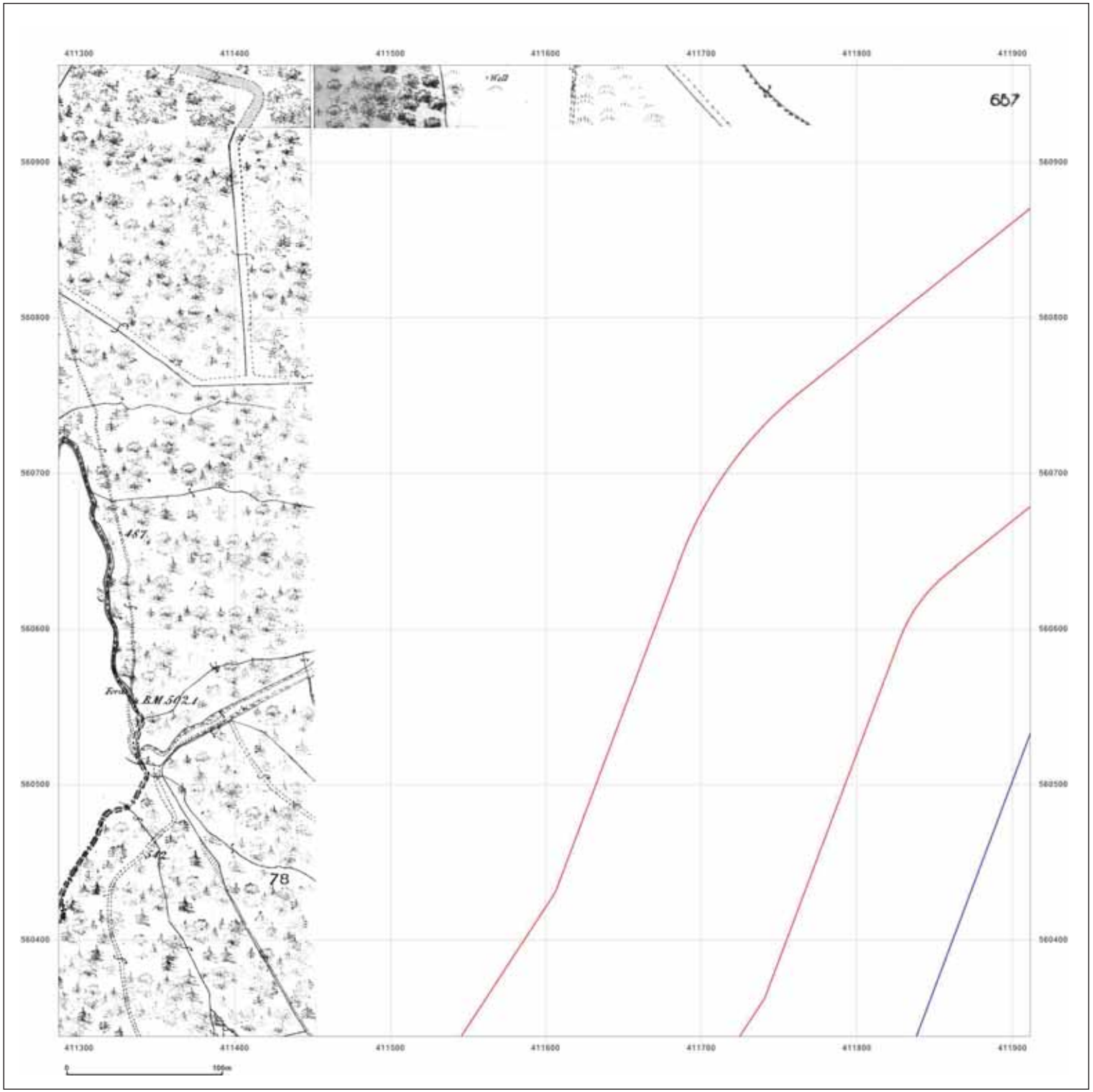
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

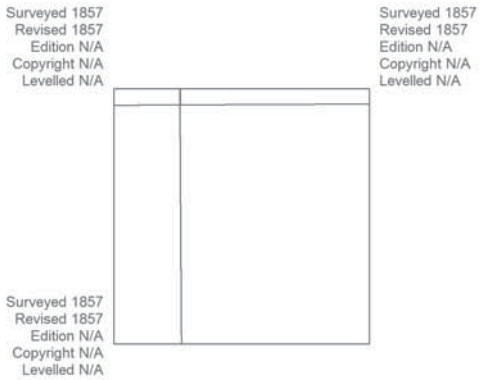
Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_1_2
Grid Ref: 411599, 560650

Map Name: County Series
Map date: **1857**
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S



Groundsure

Produced by
Groundsure Insights
www.groundsure.com

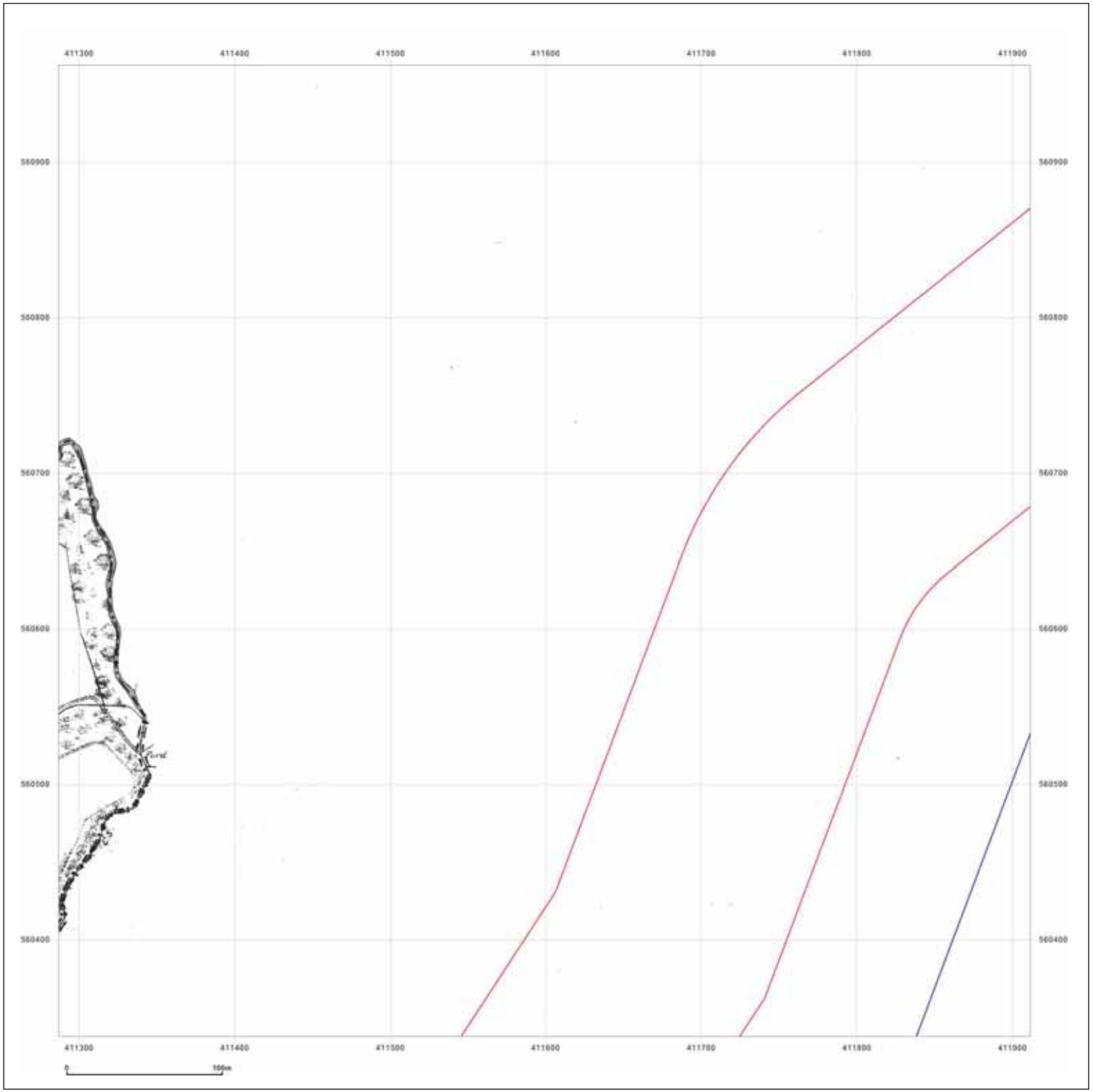
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_1_2
Grid Ref: 411599, 560650

Map Name: County Series

Map date: **1858**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1858
Revised 1858
Edition N/A
Copyright N/A
Levelled N/A

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

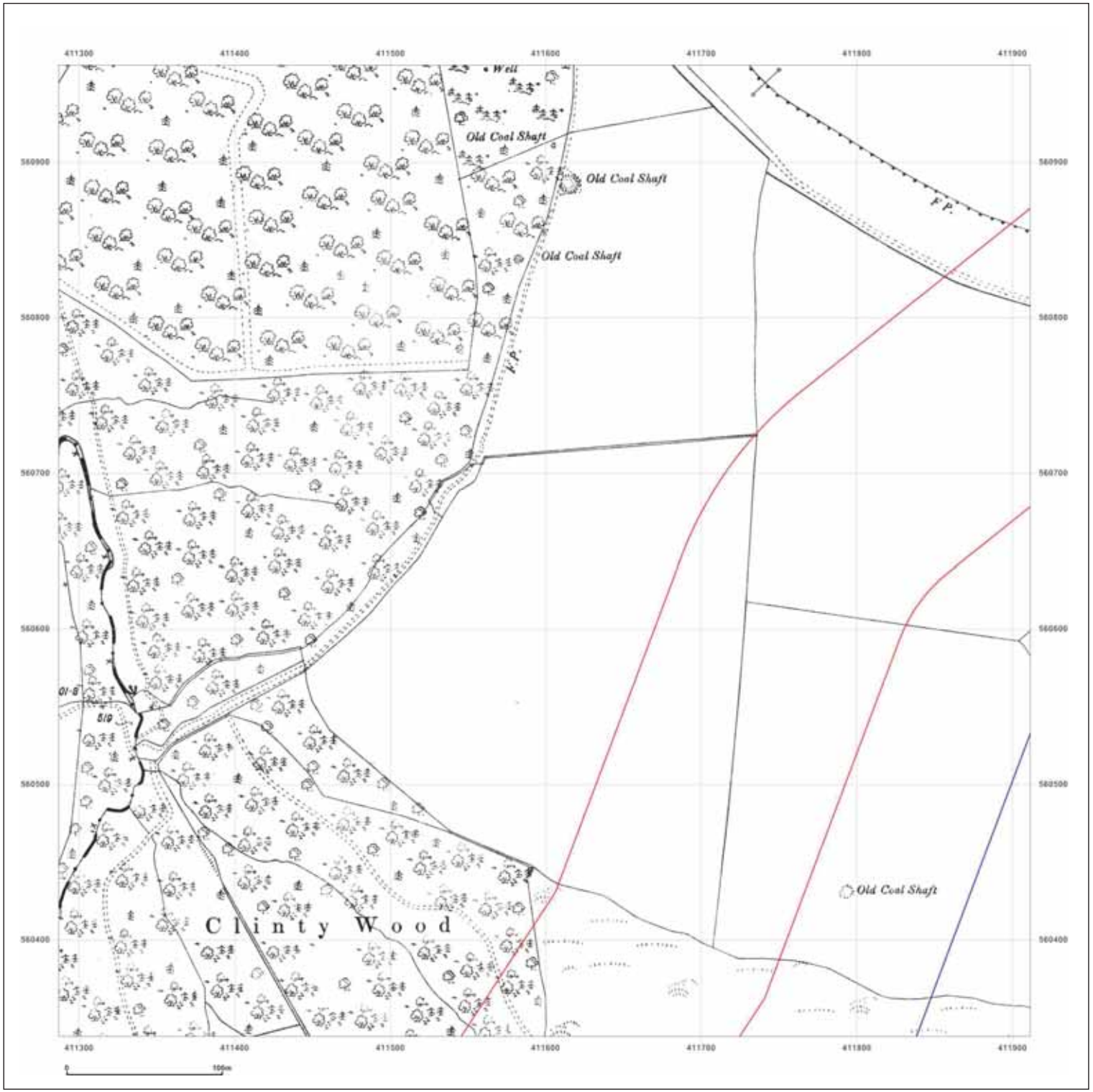
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

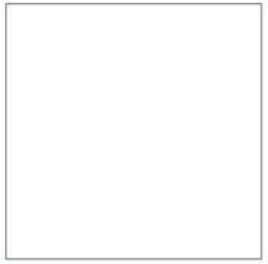
Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_1_2
Grid Ref: 411599, 560650

Map Name: County Series
Map date: 1897
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S



Surveyed 1897
Revised 1897
Edition N/A
Copyright N/A
Levelled N/A

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

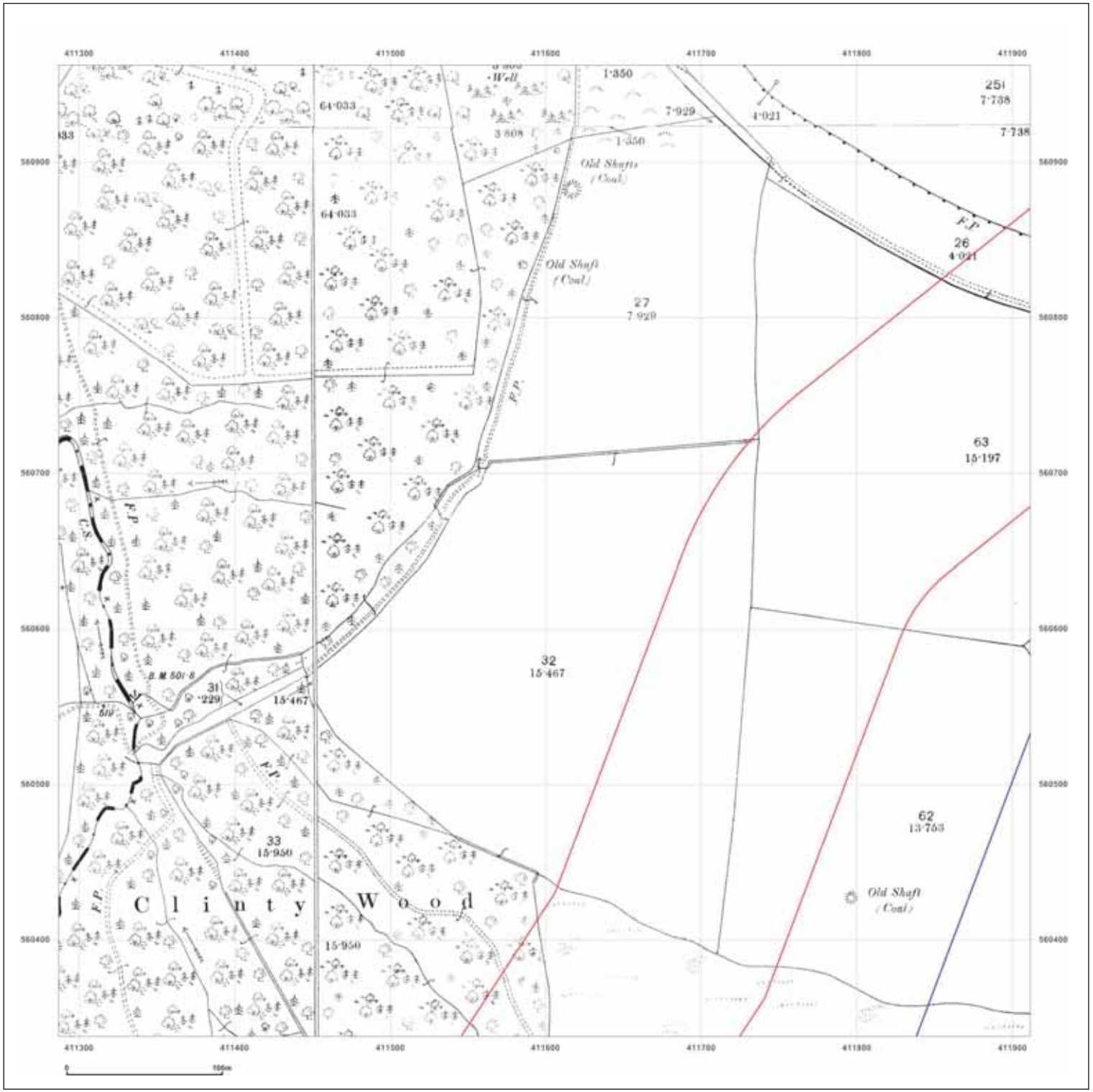
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

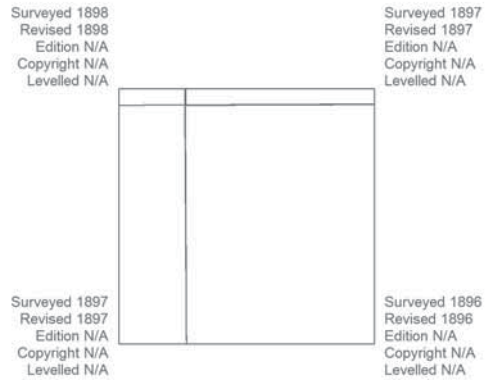
Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_1_2
Grid Ref: 411599, 560650

Map Name: County Series
Map date: 1896-1898
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S



Groundsure

Produced by
Groundsure Insights
www.groundsure.com

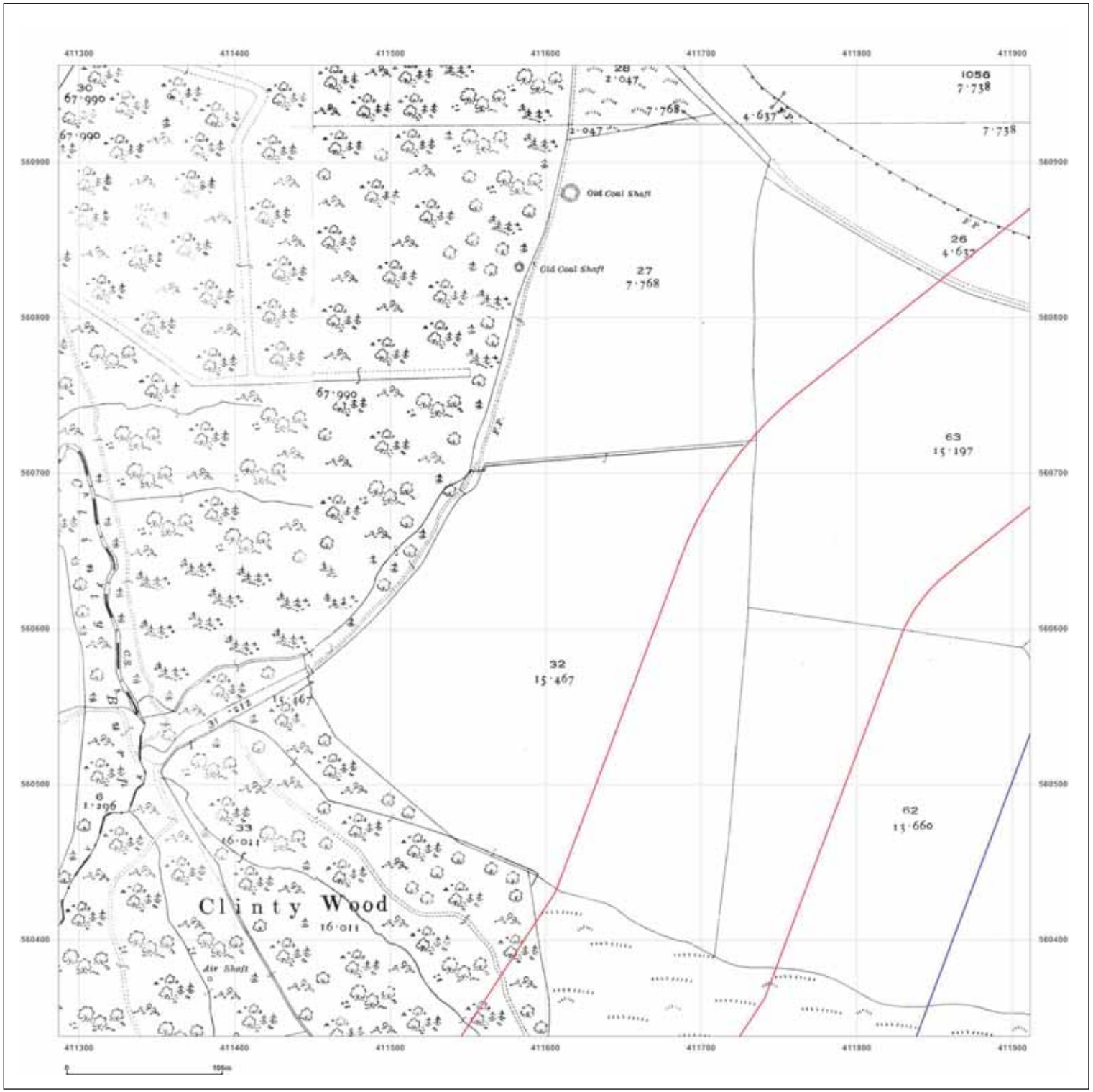
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

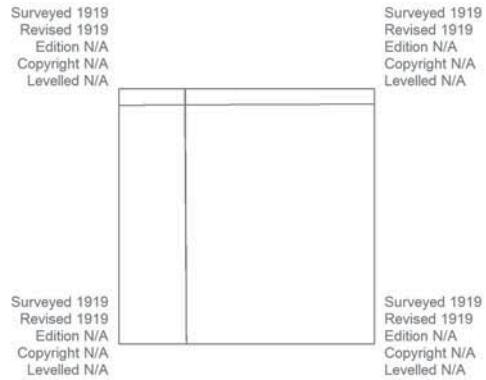
Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_1_2
Grid Ref: 411599, 560650

Map Name: County Series
Map date: 1919
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S



Groundsure

Produced by
Groundsure Insights
www.groundsure.com

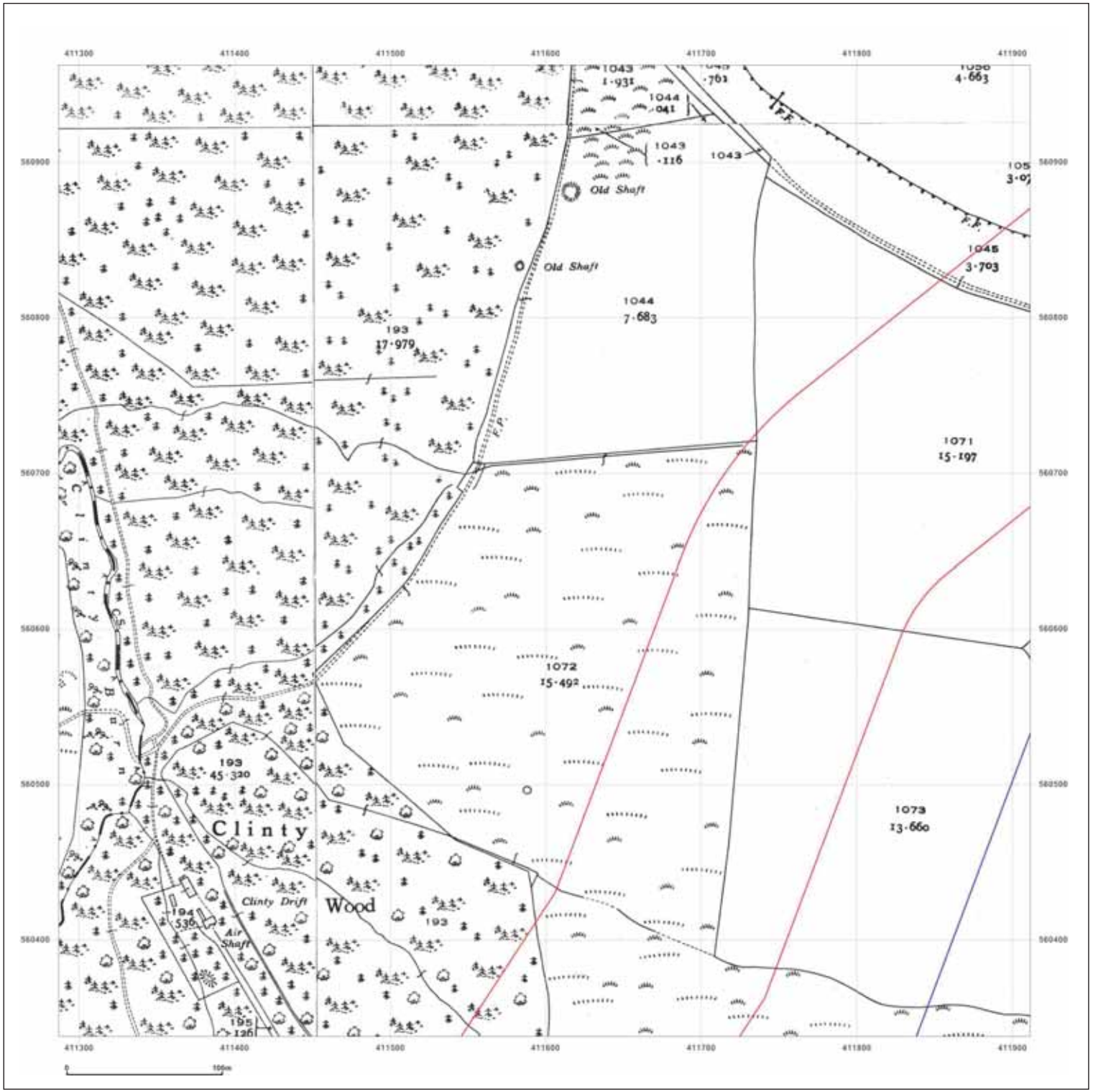
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_1_2
Grid Ref: 411599, 560650

Map Name: County Series
Map date: 1939
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S

Surveyed 1939
Revised 1939
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1939
Revised 1939
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1939
Revised 1939
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1939
Revised 1939
Edition N/A
Copyright N/A
Levelled N/A

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

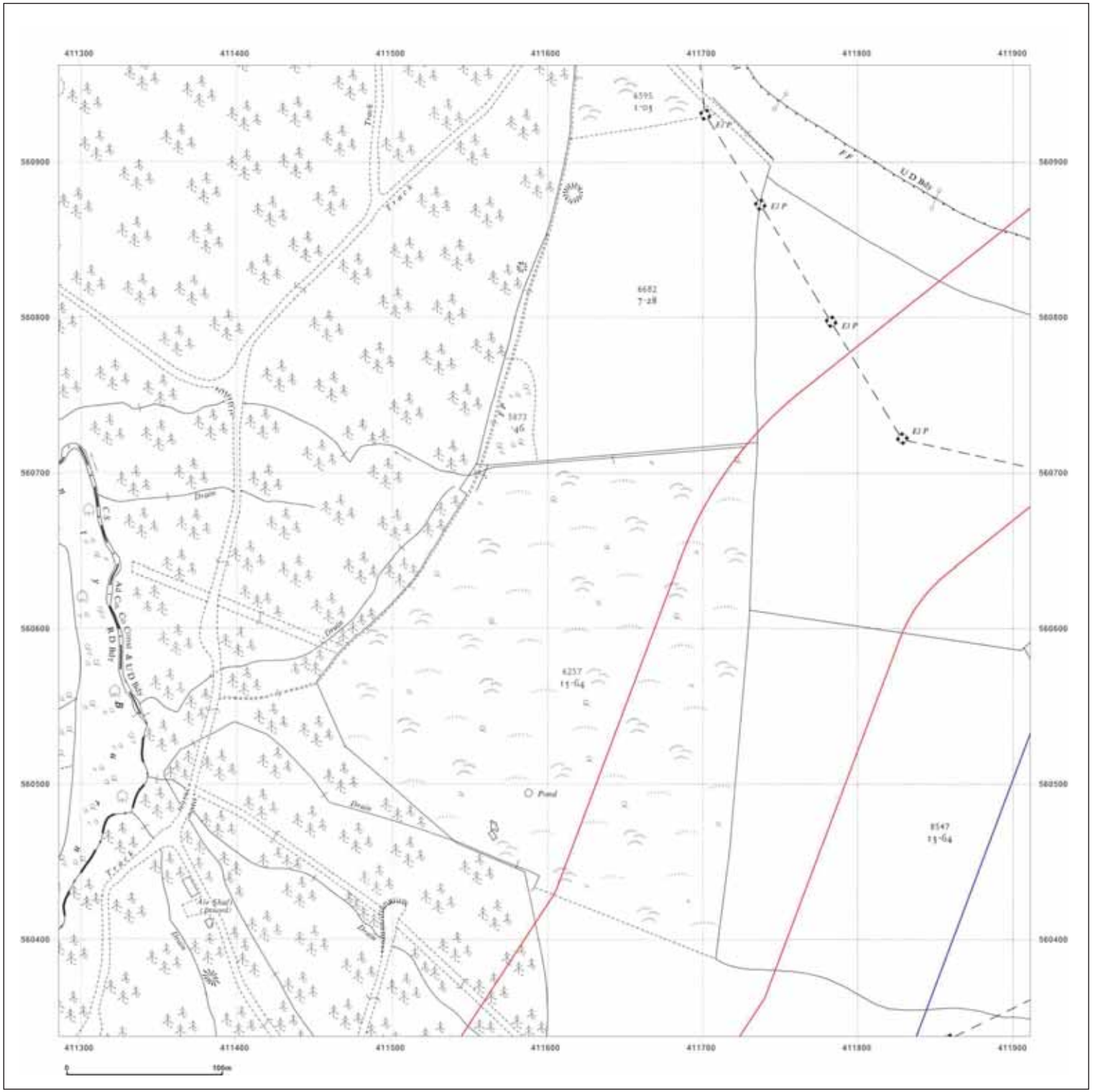
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_1_2
Grid Ref: 411599, 560650

Map Name: National Grid

Map date: **1960**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

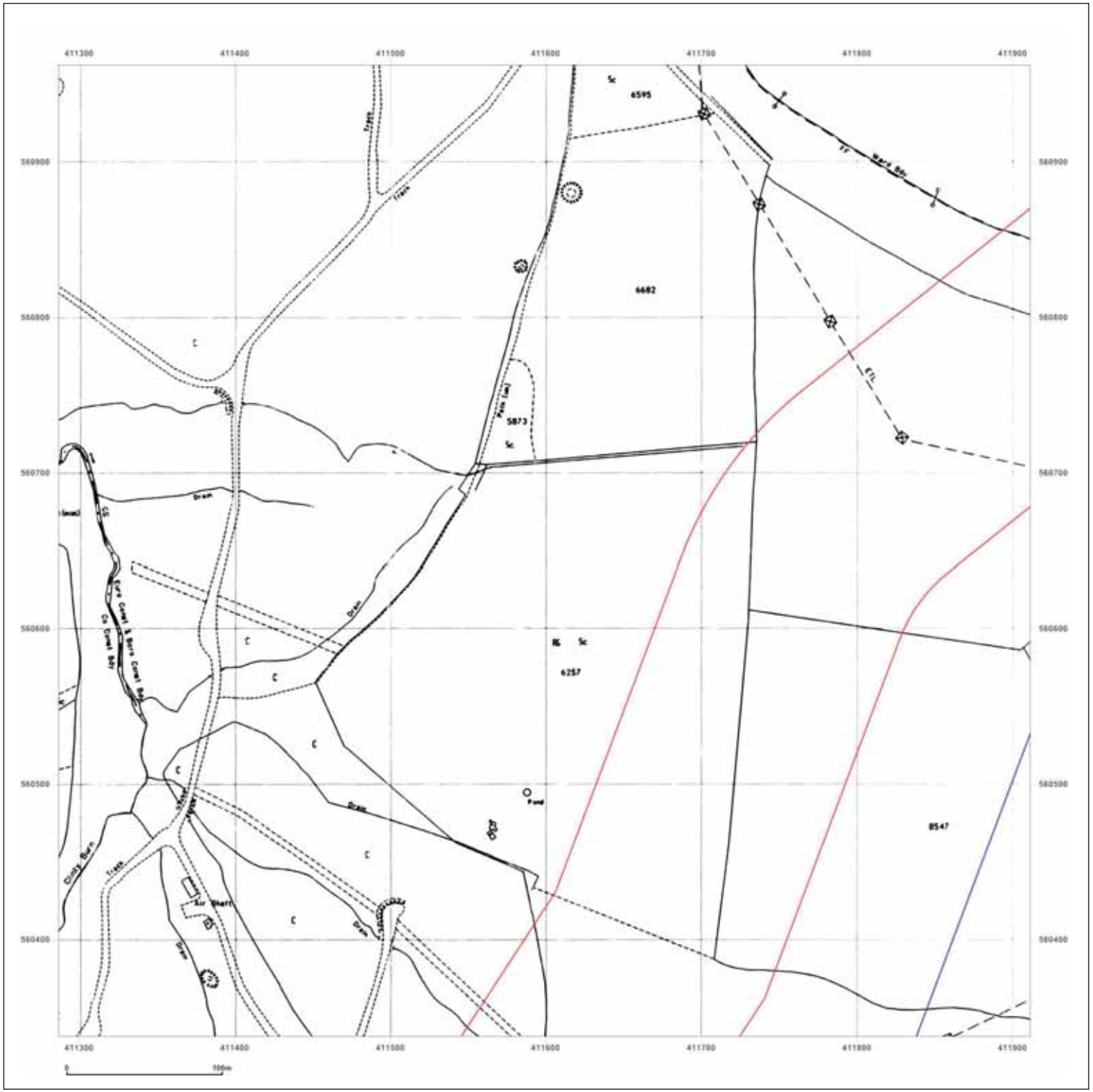
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_1_2
Grid Ref: 411599, 560650

Map Name: National Grid
Map date: 1993
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S

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

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

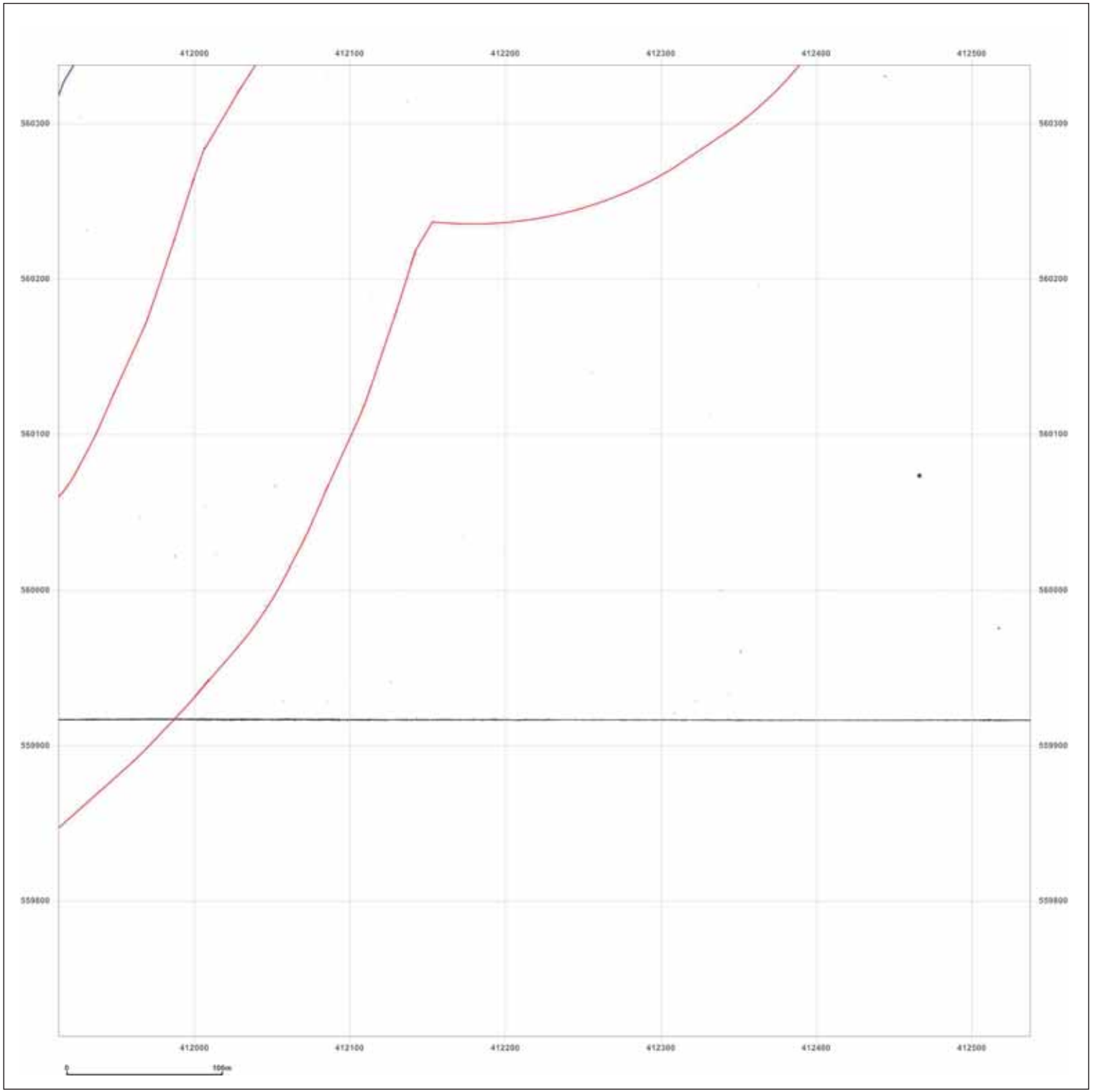
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_2_1
Grid Ref: 412225, 560025

Map Name: County Series

Map date: **1858**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1858
Revised 1858
Edition N/A
Copyright N/A
Levelled N/A

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

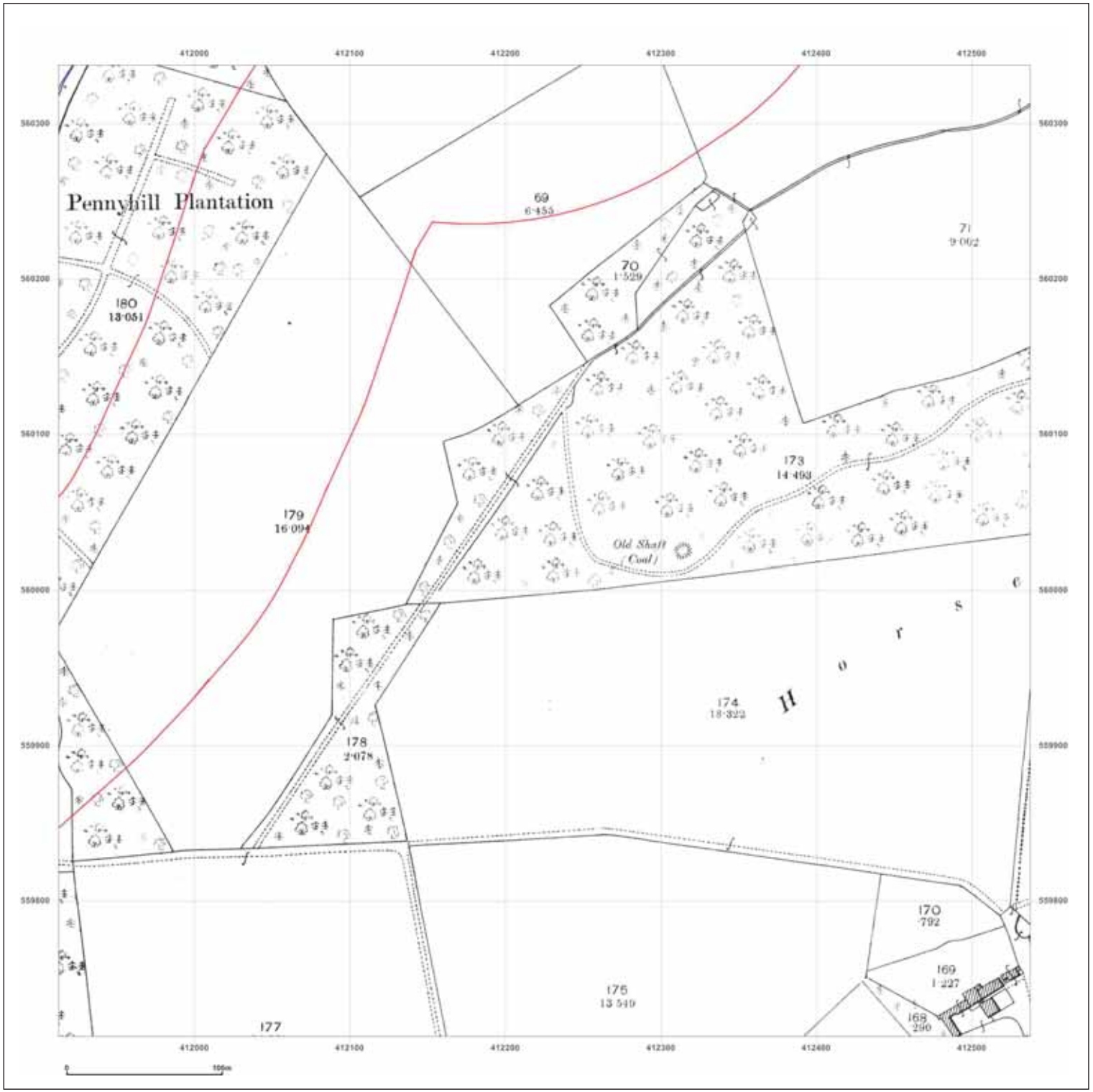
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

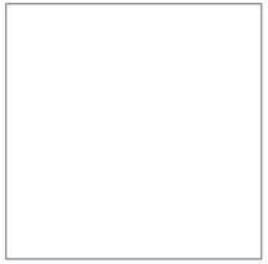
Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_2_1
Grid Ref: 412225, 560025

Map Name: County Series
Map date: 1896
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S



Surveyed 1896
Revised 1896
Edition N/A
Copyright N/A
Levelled N/A

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

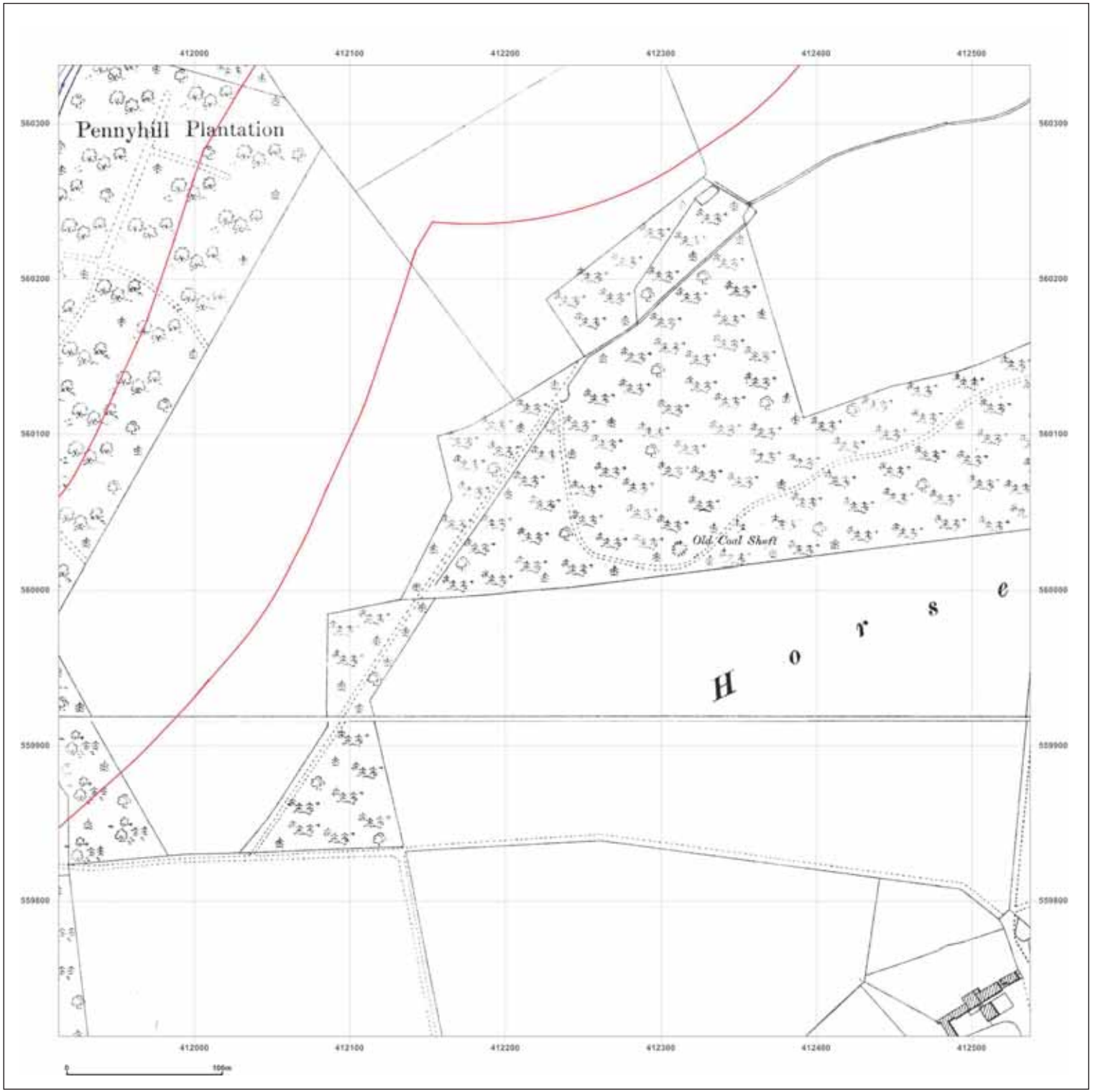
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_2_1
Grid Ref: 412225, 560025

Map Name: County Series
Map date: 1896-1897
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S

Surveyed 1897
Revised 1897
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1896
Revised 1896
Edition N/A
Copyright N/A
Levelled N/A

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

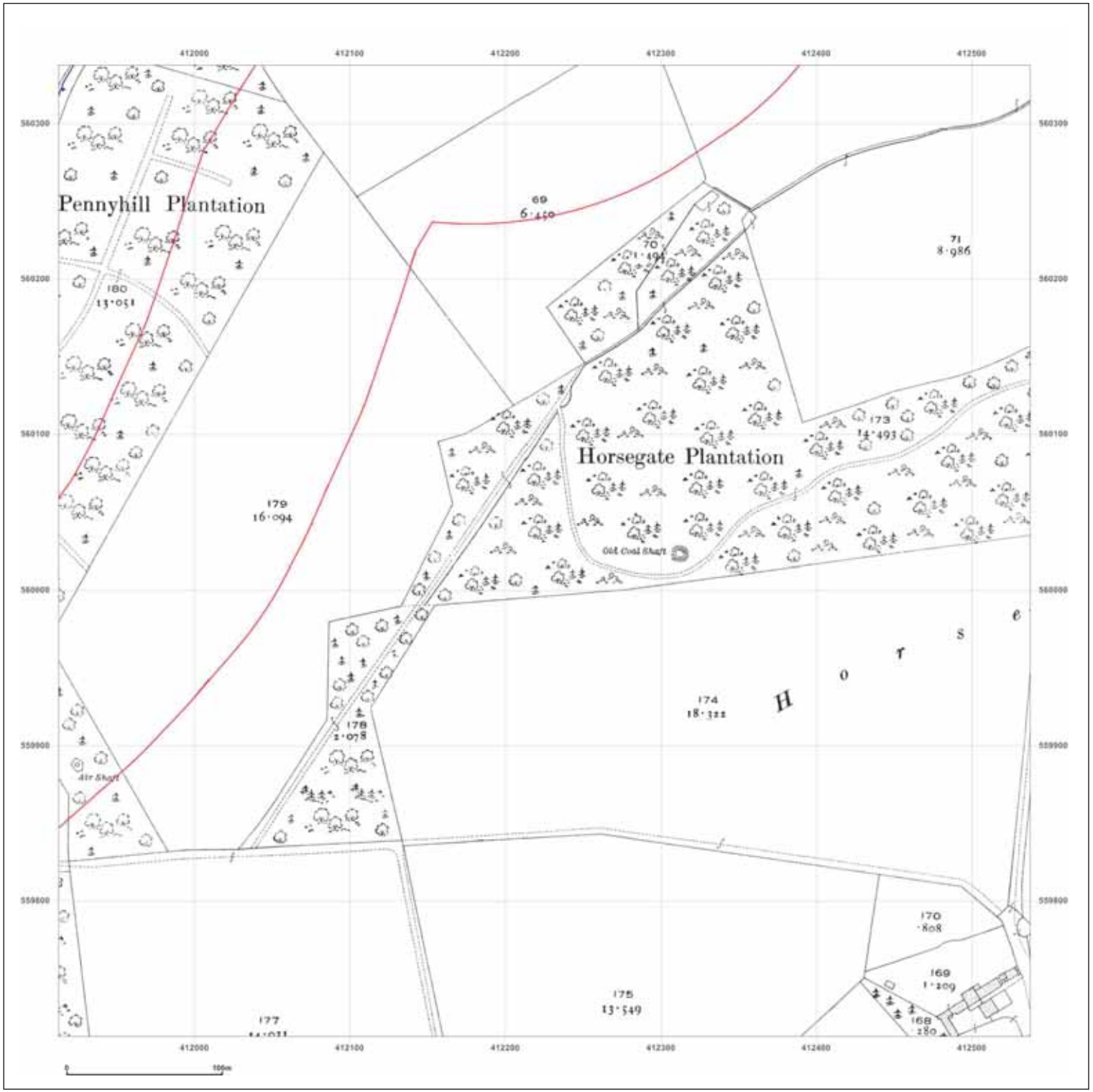
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

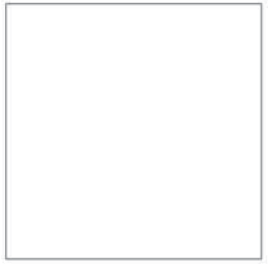
Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_2_1
Grid Ref: 412225, 560025

Map Name: County Series
Map date: 1919
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S



Surveyed 1919
Revised 1919
Edition N/A
Copyright N/A
Levelled N/A

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

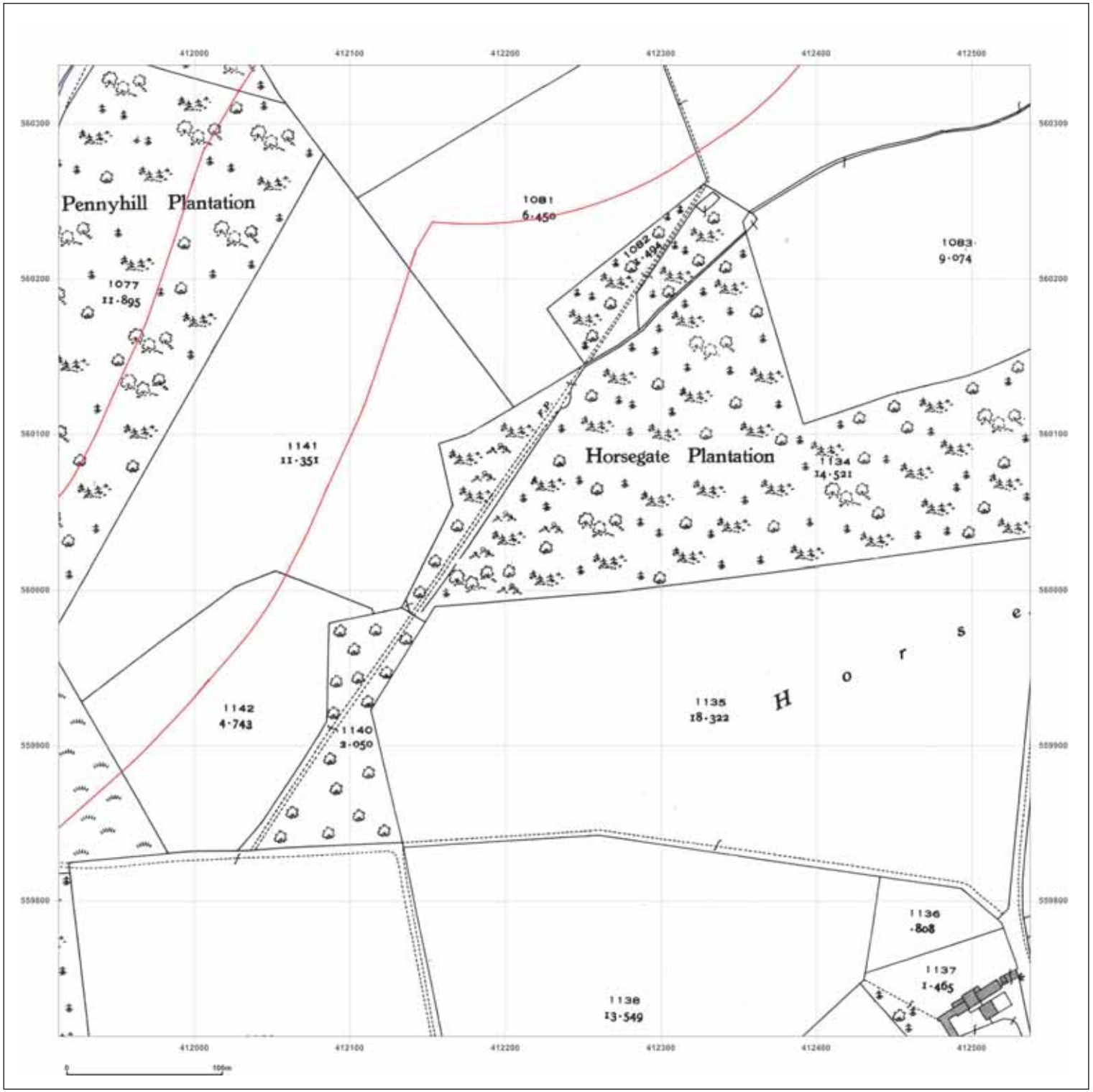
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_2_1
Grid Ref: 412225, 560025

Map Name: County Series
Map date: 1939
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S

Surveyed 1939
Revised 1939
Edition N/A
Copyright N/A
Levelled N/A

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

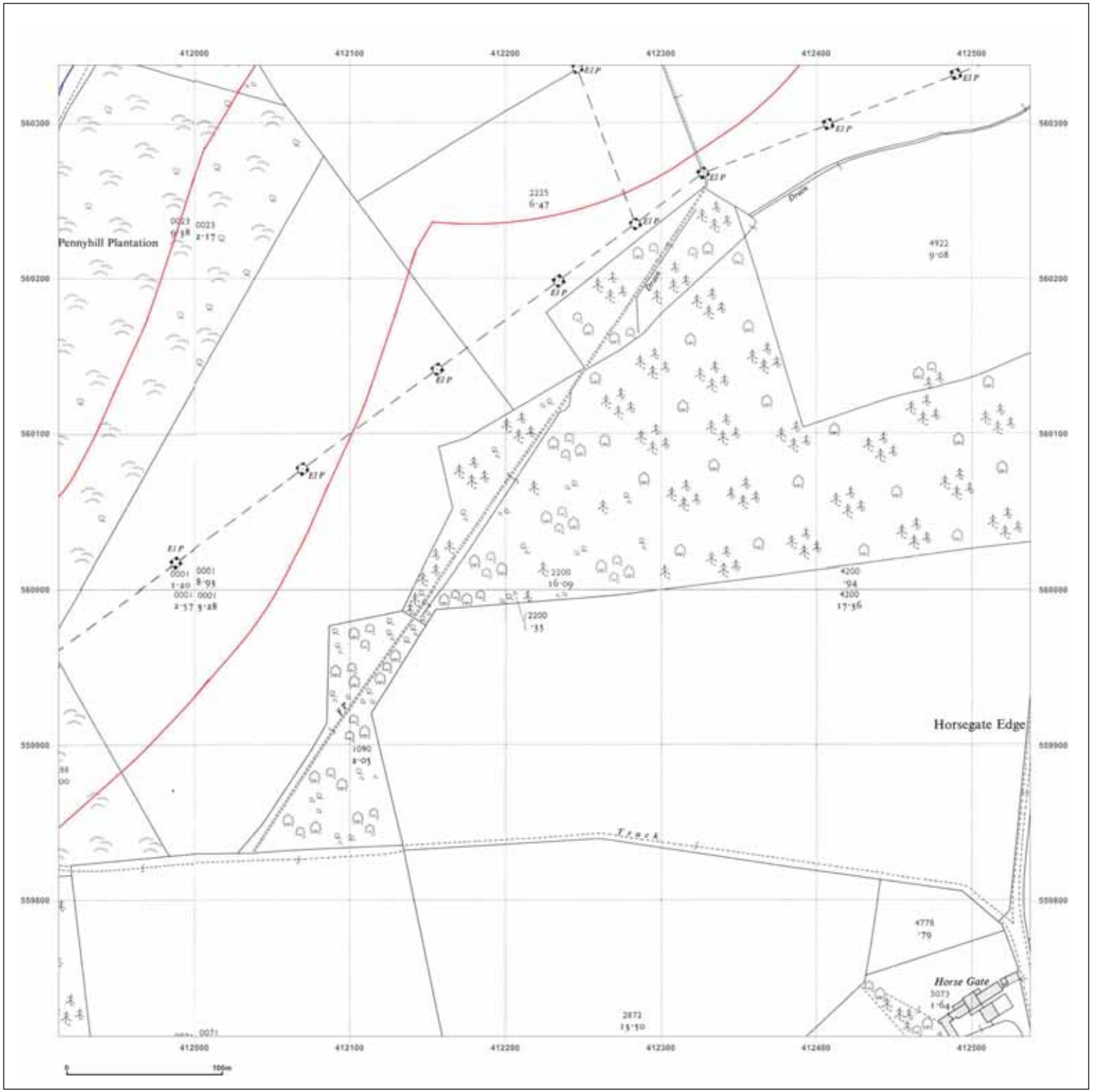
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

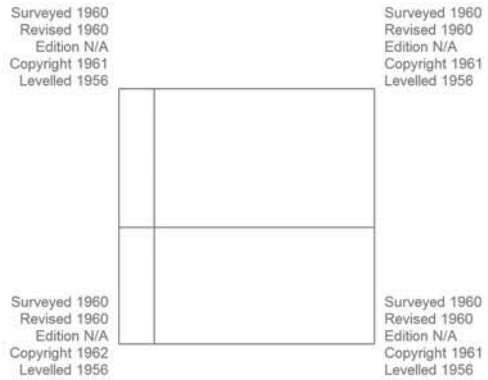
Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_2_1
Grid Ref: 412225, 560025

Map Name: National Grid
Map date: 1960-1961
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S



Groundsure

Produced by
Groundsure Insights
www.groundsure.com

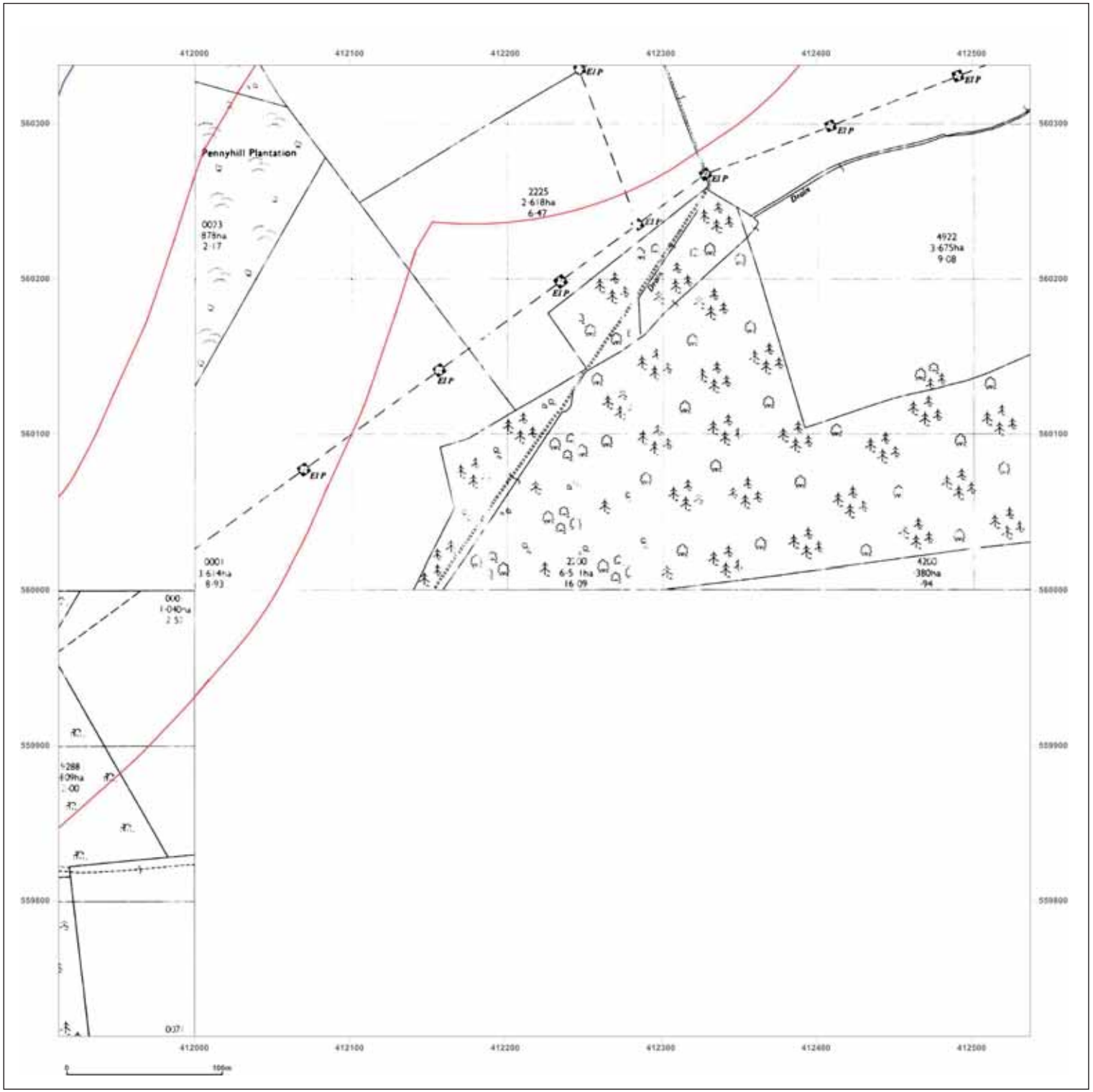
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

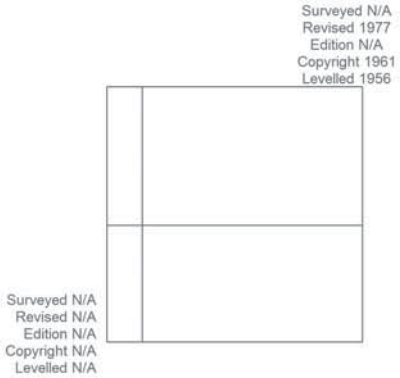
Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_2_1
Grid Ref: 412225, 560025

Map Name: National Grid
Map date: **1977-1979**
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S



Groundsure

Produced by
Groundsure Insights
www.groundsure.com

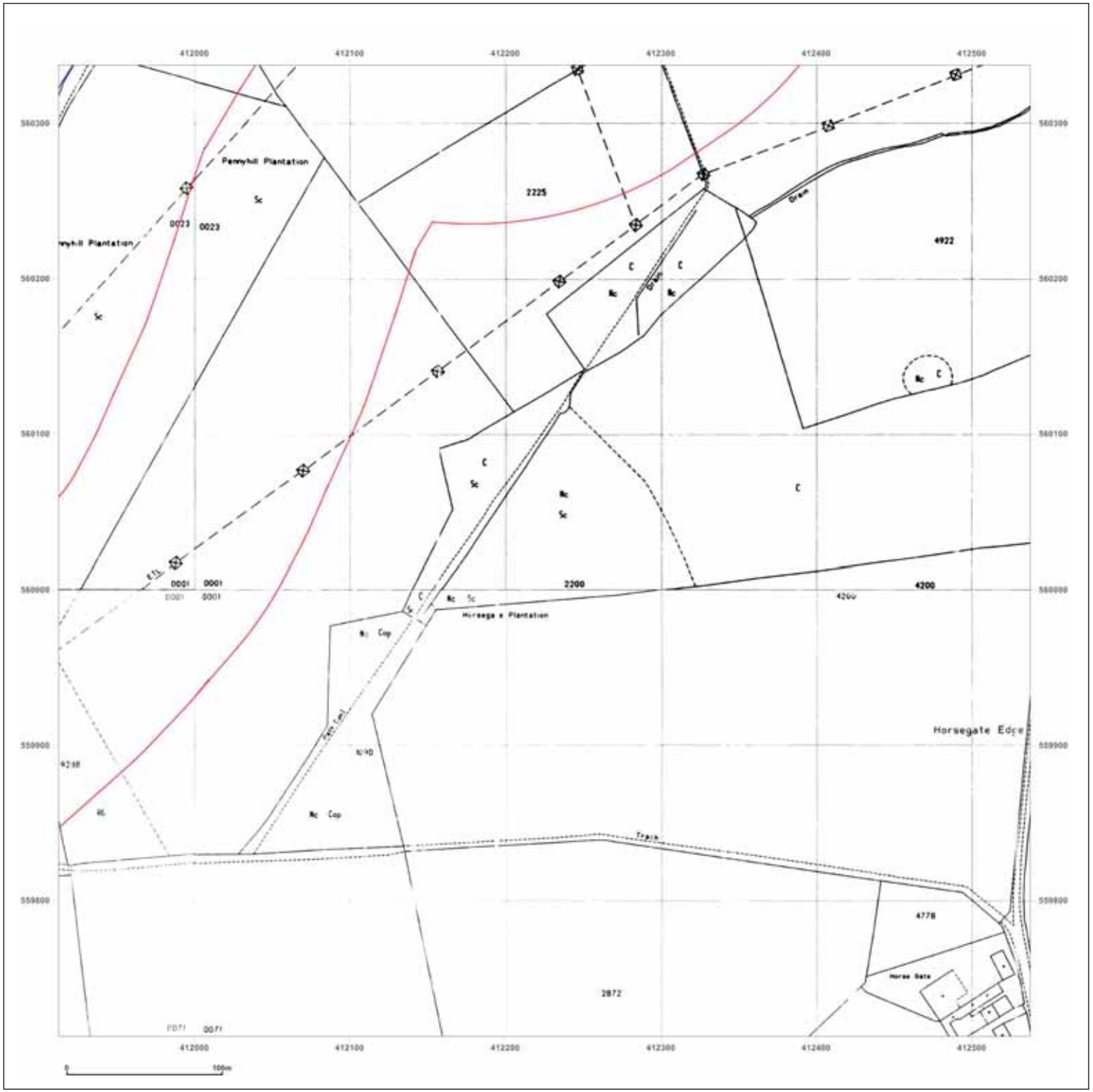
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

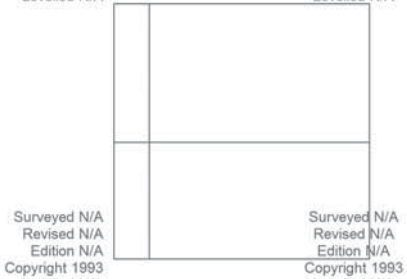
Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_2_1
Grid Ref: 412225, 560025

Map Name: National Grid
Map date: 1993
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S

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

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

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

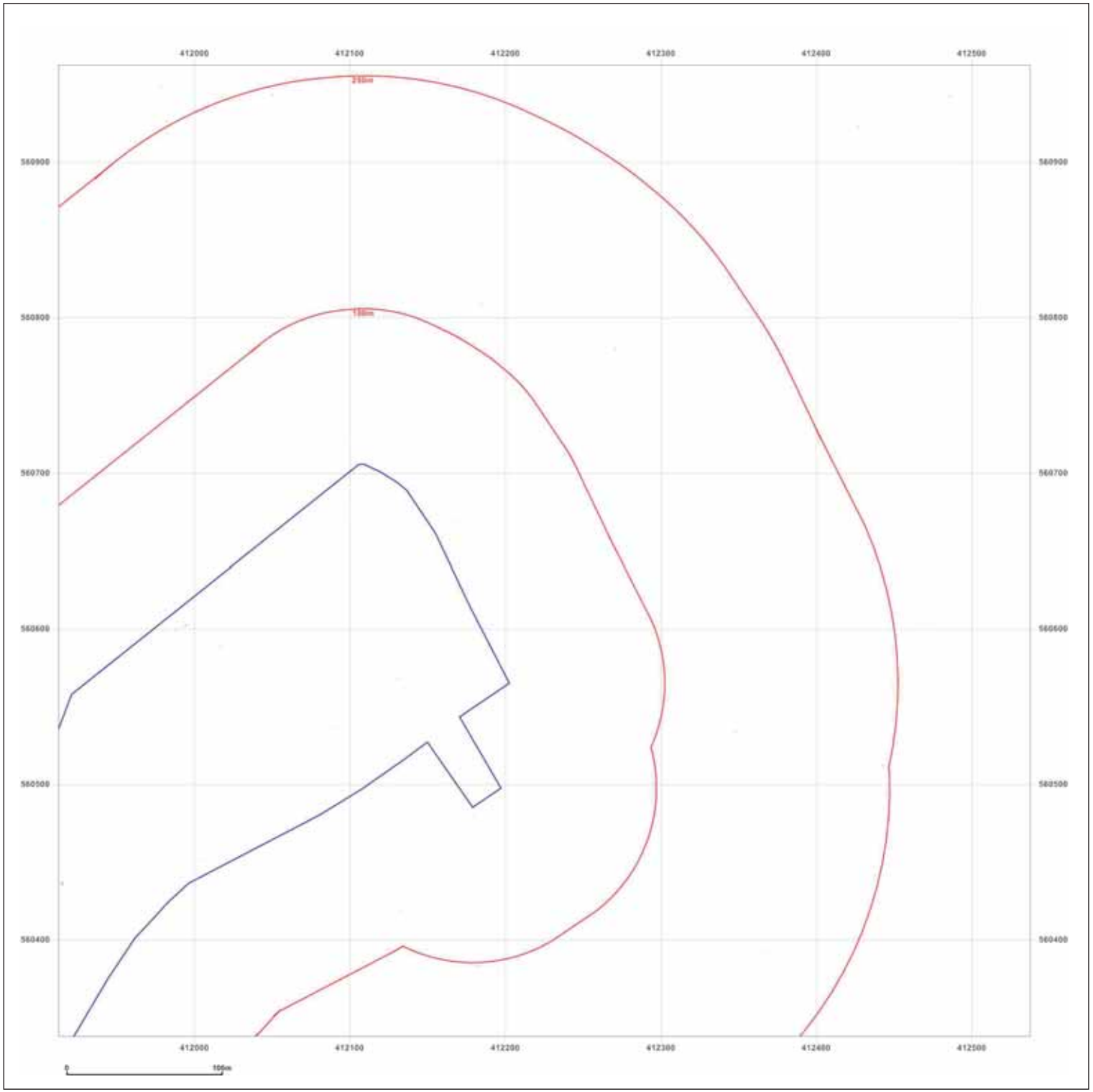
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_2_2
Grid Ref: 412225, 560650

Map Name: County Series

Map date: **1858**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1858
Revised 1858
Edition N/A
Copyright N/A
Levelled N/A

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

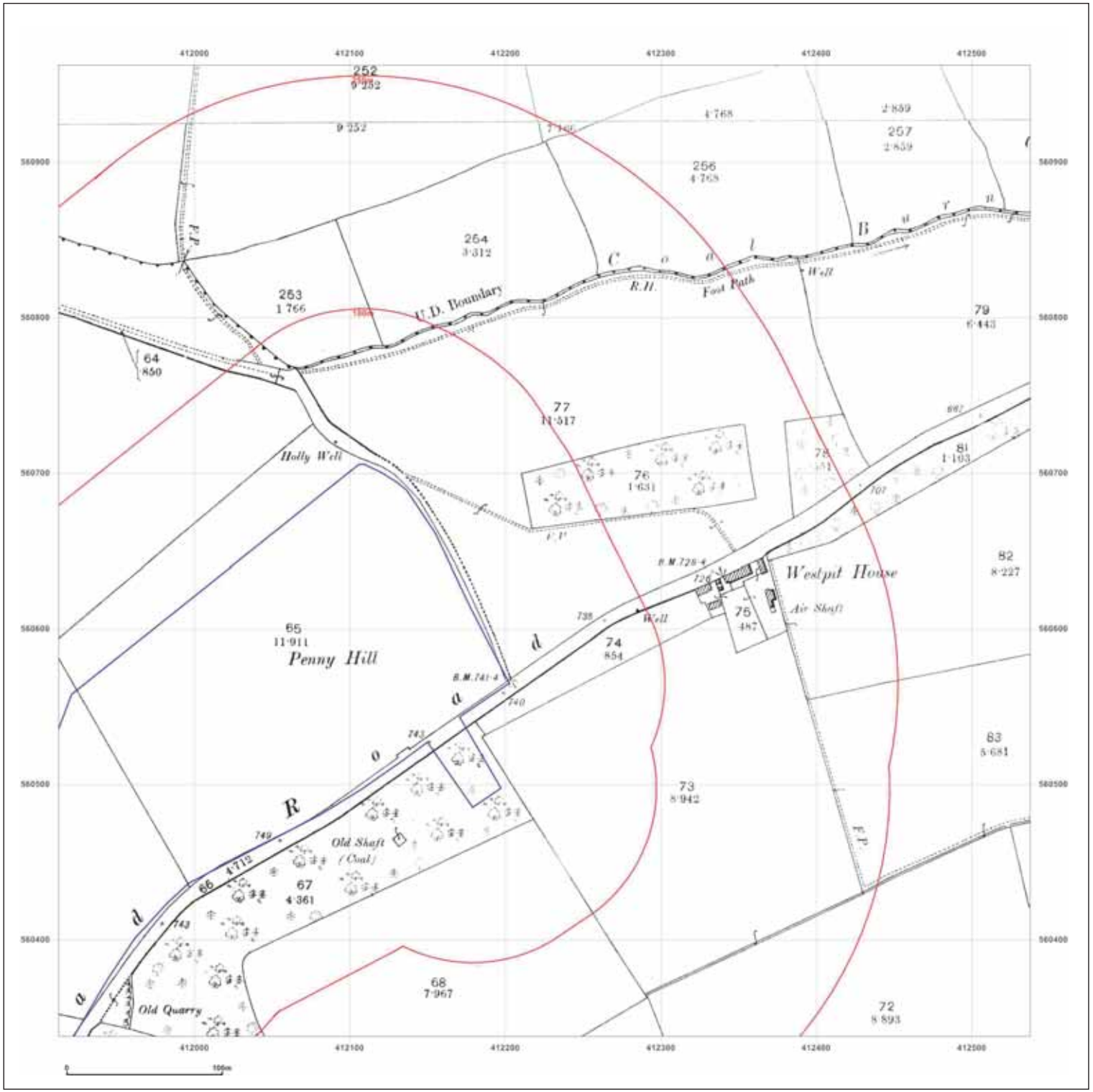
Powered by

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

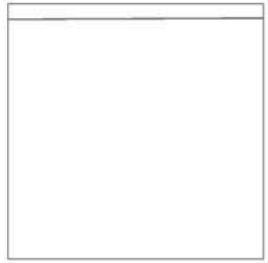
Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_2_2
Grid Ref: 412225, 560650

Map Name: County Series
Map date: 1896-1897
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S



Surveyed 1897
Revised 1897
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1896
Revised 1896
Edition N/A
Copyright N/A
Levelled N/A

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

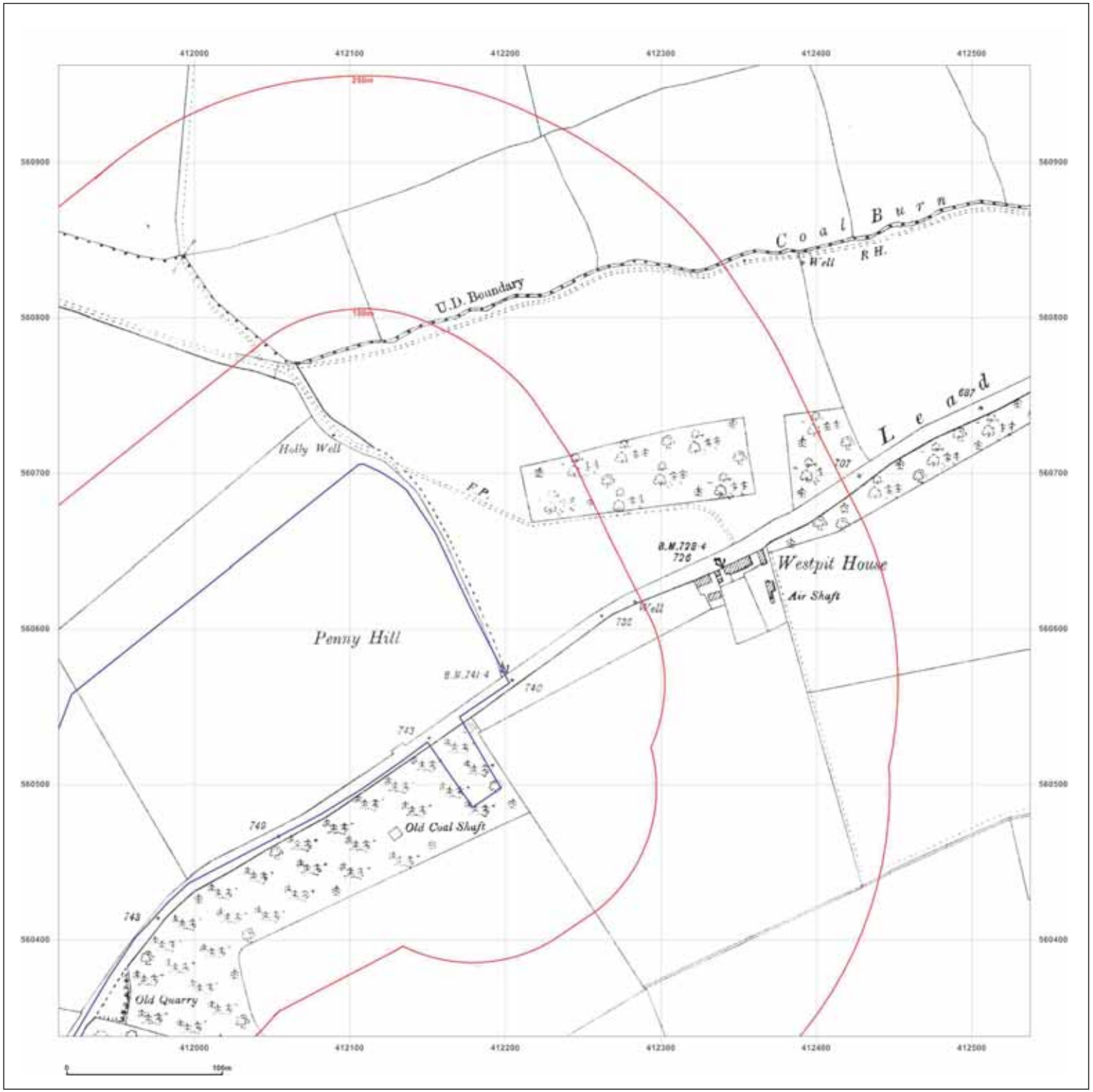
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_2_2
Grid Ref: 412225, 560650

Map Name: County Series
Map date: 1897
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S

Surveyed 1897
Revised 1897
Edition N/A
Copyright N/A
Levelled N/A

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

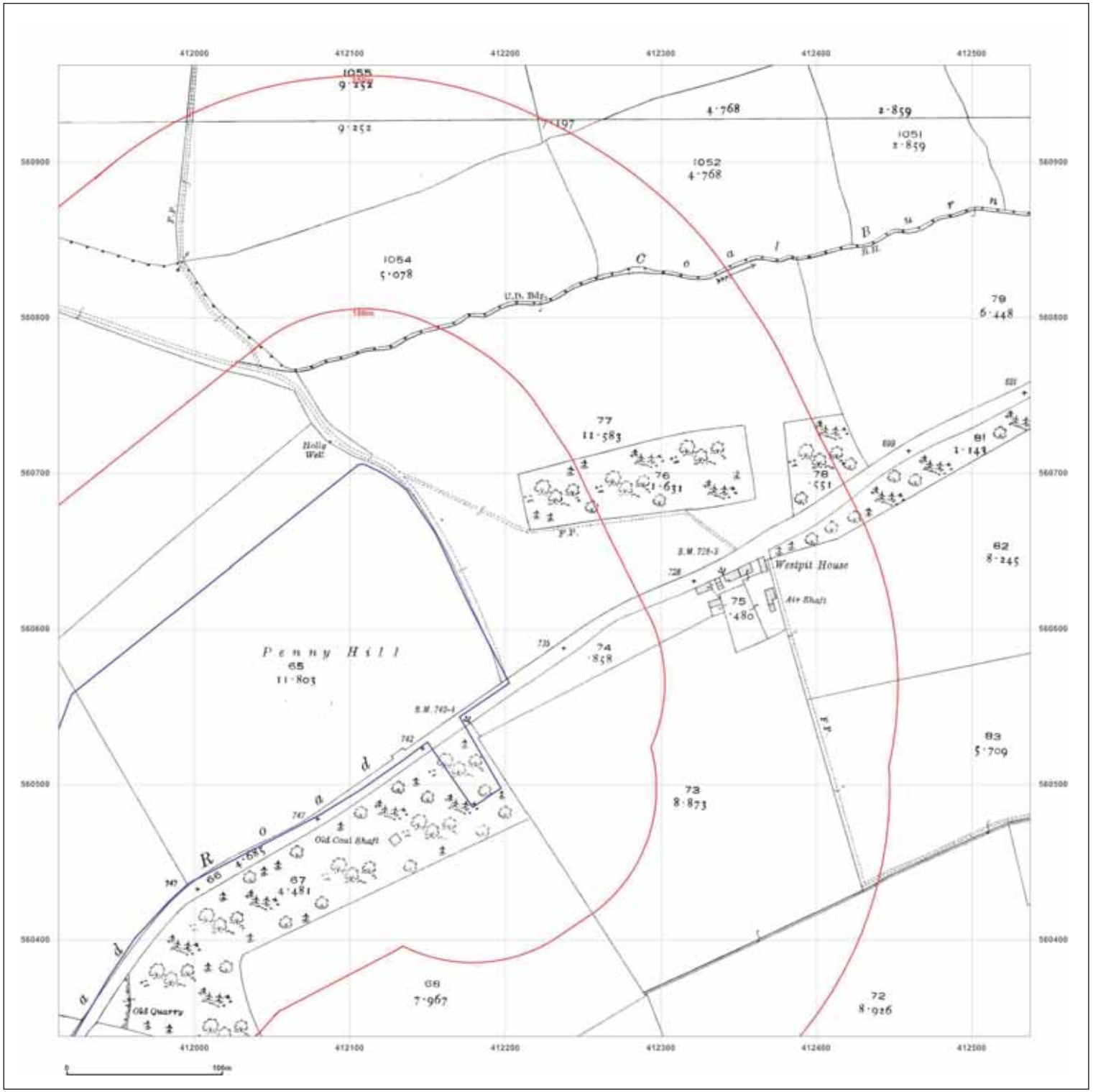
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

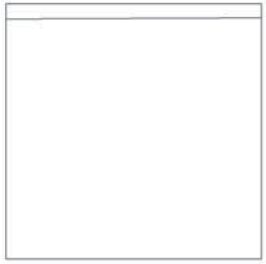
Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_2_2
Grid Ref: 412225, 560650

Map Name: County Series
Map date: 1919
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S

Surveyed 1919
Revised 1919
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1919
Revised 1919
Edition N/A
Copyright N/A
Levelled N/A

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

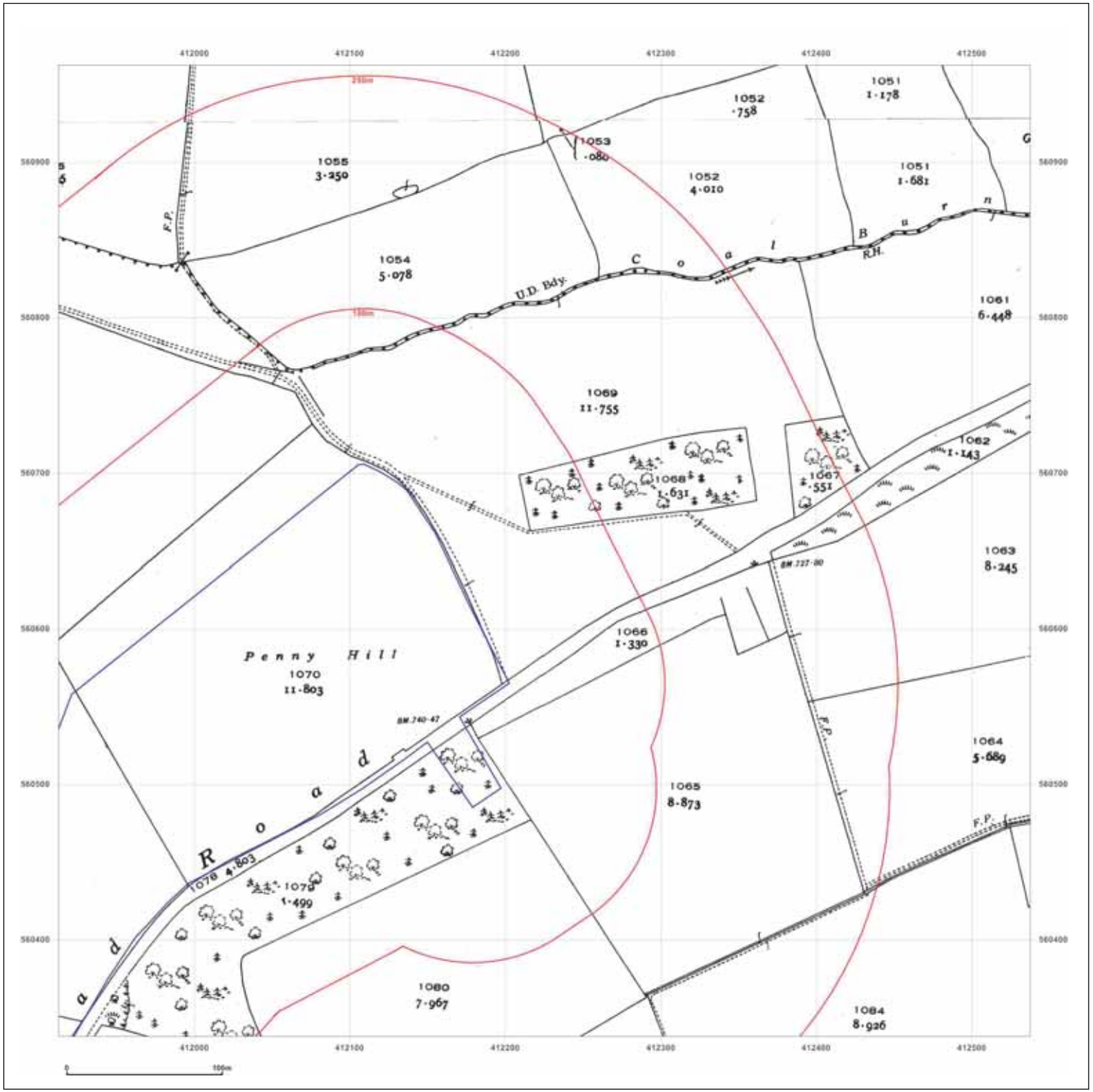
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

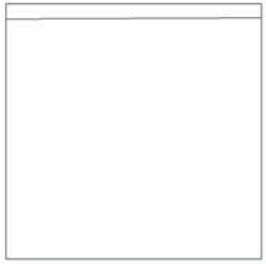
Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_2_2
Grid Ref: 412225, 560650

Map Name: County Series
Map date: 1939
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S

Surveyed 1939
Revised 1939
Edition N/A
Copyright N/A
Levelled N/A



Surveyed 1939
Revised 1939
Edition N/A
Copyright N/A
Levelled N/A

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

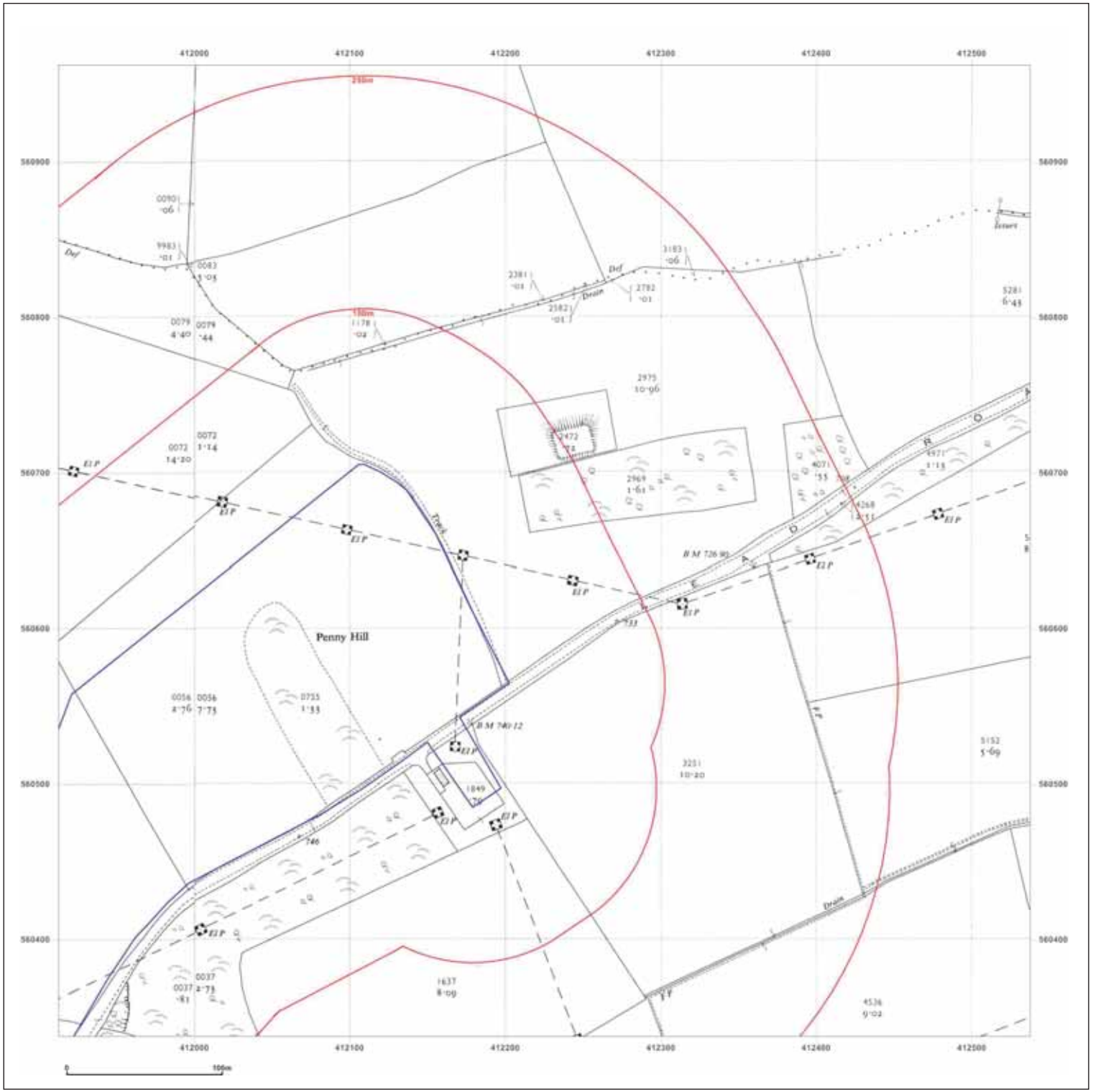
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_2_2
Grid Ref: 412225, 560650

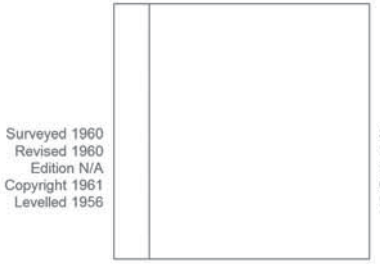
Map Name: National Grid

Map date: 1960-1961

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S



Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

Surveyed 1960
Revised 1960
Edition N/A
Copyright 1961
Levelled 1956

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

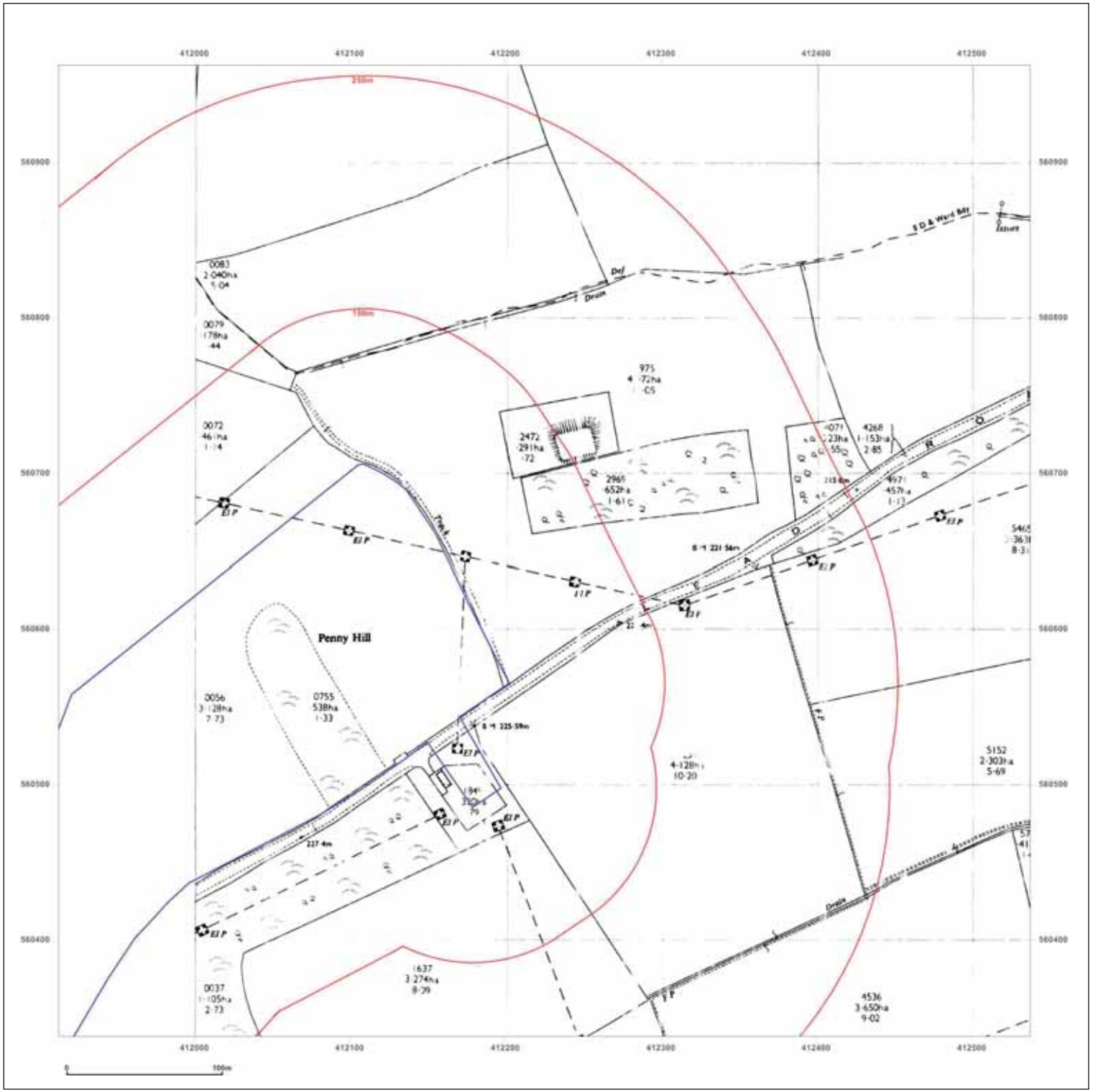
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

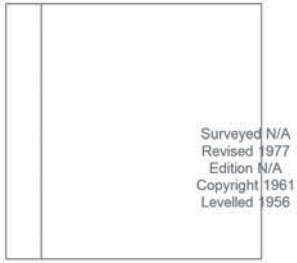
Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_2_2
Grid Ref: 412225, 560650

Map Name: National Grid
Map date: **1977**
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S



Groundsure

Produced by
Groundsure Insights
www.groundsure.com

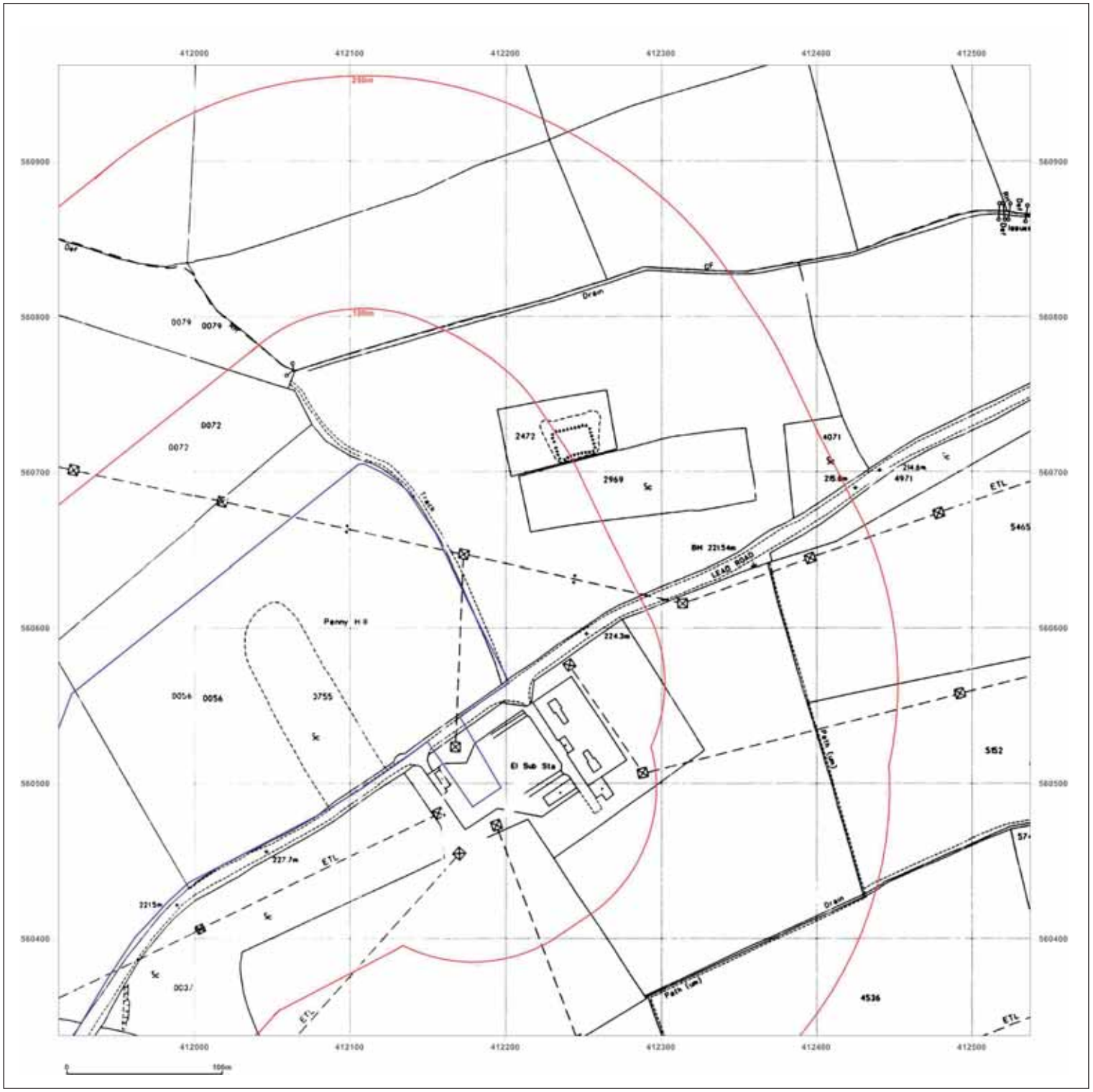
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

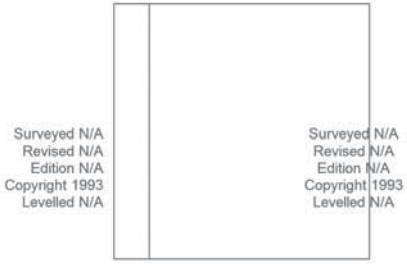
Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889_LS_2_2
Grid Ref: 412225, 560650

Map Name: National Grid
Map date: 1993
Scale: 1:2,500
Printed at: 1:2,500

N
W E
S



Groundsure

Produced by
Groundsure Insights
www.groundsure.com

Powered by OS

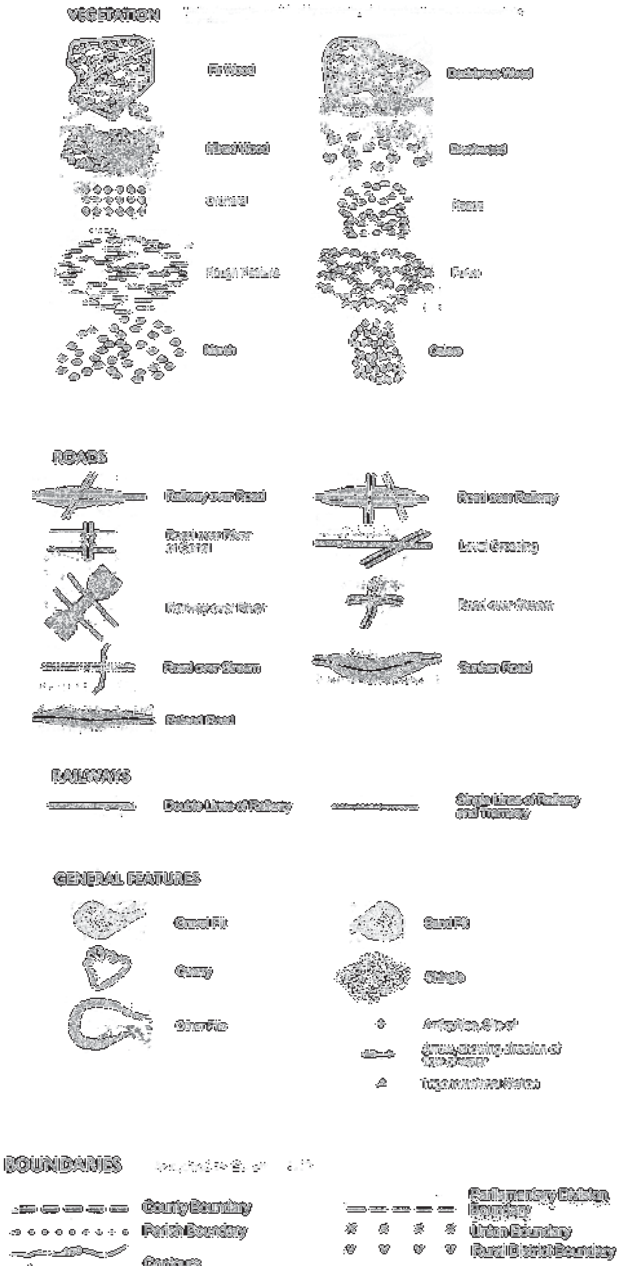
Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

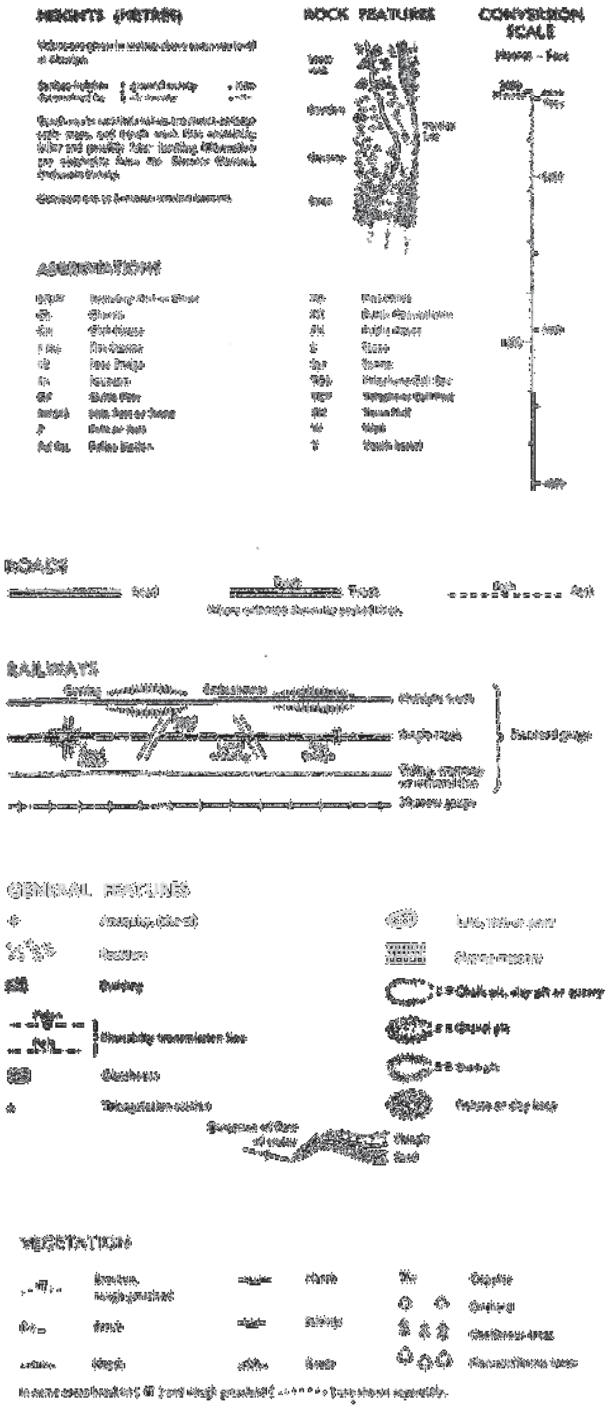
Production date: 04 April 2018

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

County Series 1:10,560 scale



National Grid 1:10,000 scale



GroundSure

Historical Map Pack Legend

County Series & National Grid

1:10,560 scale

Information present on these legends is sourced from the same Ordnance Survey mapping as the maps used in this product.

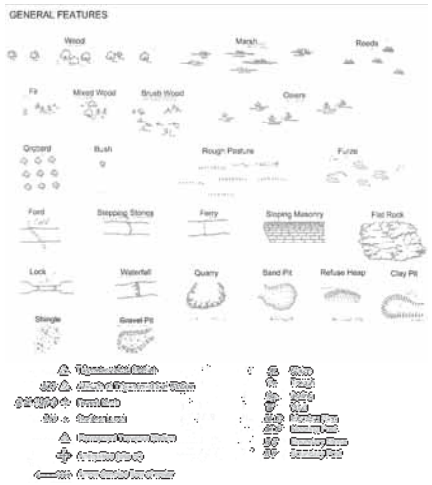
If you have a query regarding any of the maps provided please contact GroundSure's technical helpline. We will endeavour to answer any queries you may have.

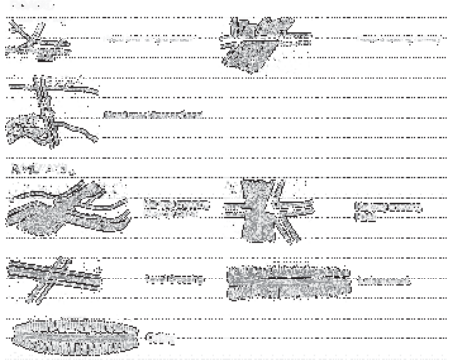
Technical Helpline

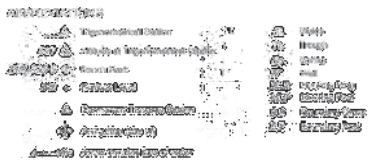
Tel 08444159000

groundsureinsight@groundsure.com
www.groundsure.com

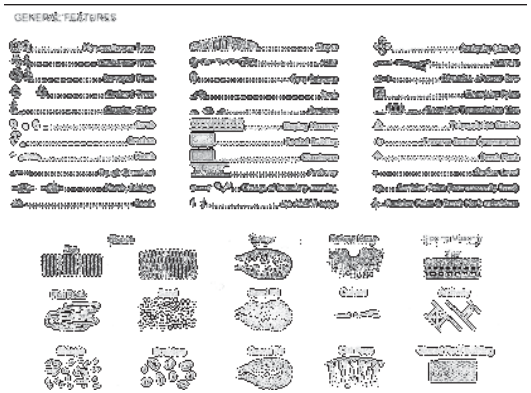
County Series 1:2,500 scale

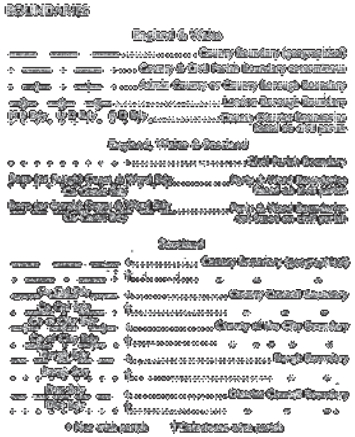


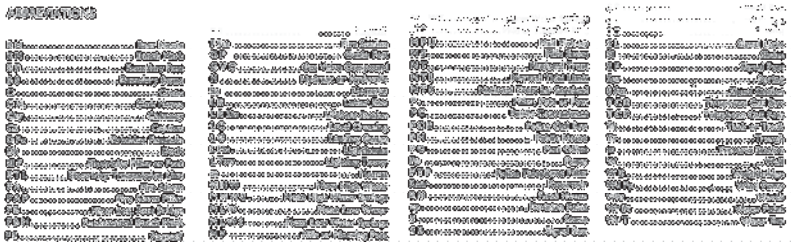




National Grid 1:2,500 / 1:1,250 scale







GroundSure

Historical Map Pack Legend

County Series

1:1,250 scale

~

County Series & National Grid

1:2,500 scale

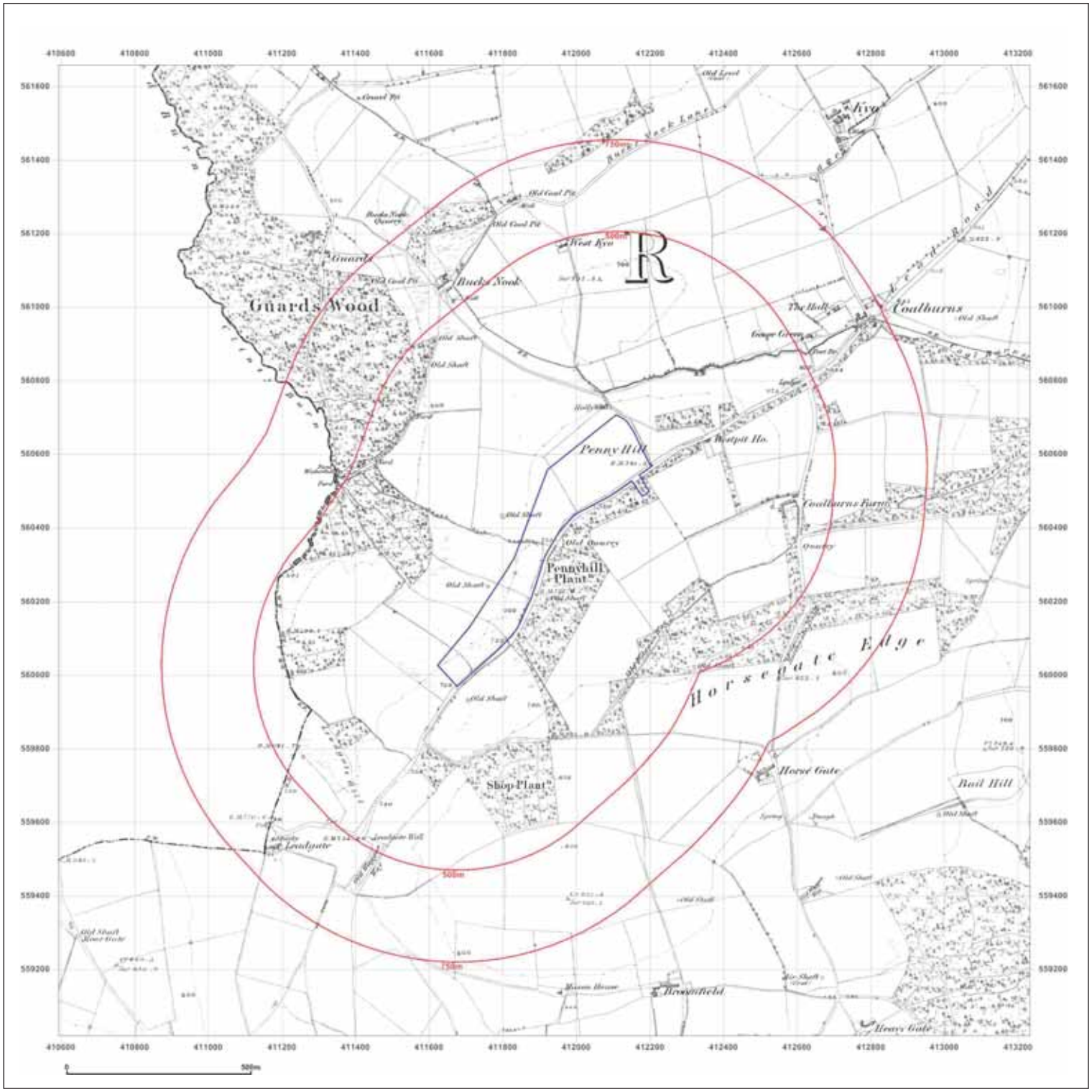
Information present on these legends is sourced from the same Ordnance Survey mapping as the maps used in this product.

If you have a query regarding any of the maps provided within this map pack, please contact GroundSure's technical helpline. We will endeavour to answer any queries you may have.

Technical Helpline:

Tel 08444159000

groundsureinsight@groundsure.com
www.groundsure.com



emapsite™

Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889
Grid Ref: 411912, 560338

Map Name: County Series

Map date: **1856**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
S

Surveyed 1856
Revised 1856
Edition N/A
Copyright N/A
Levelled N/A

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

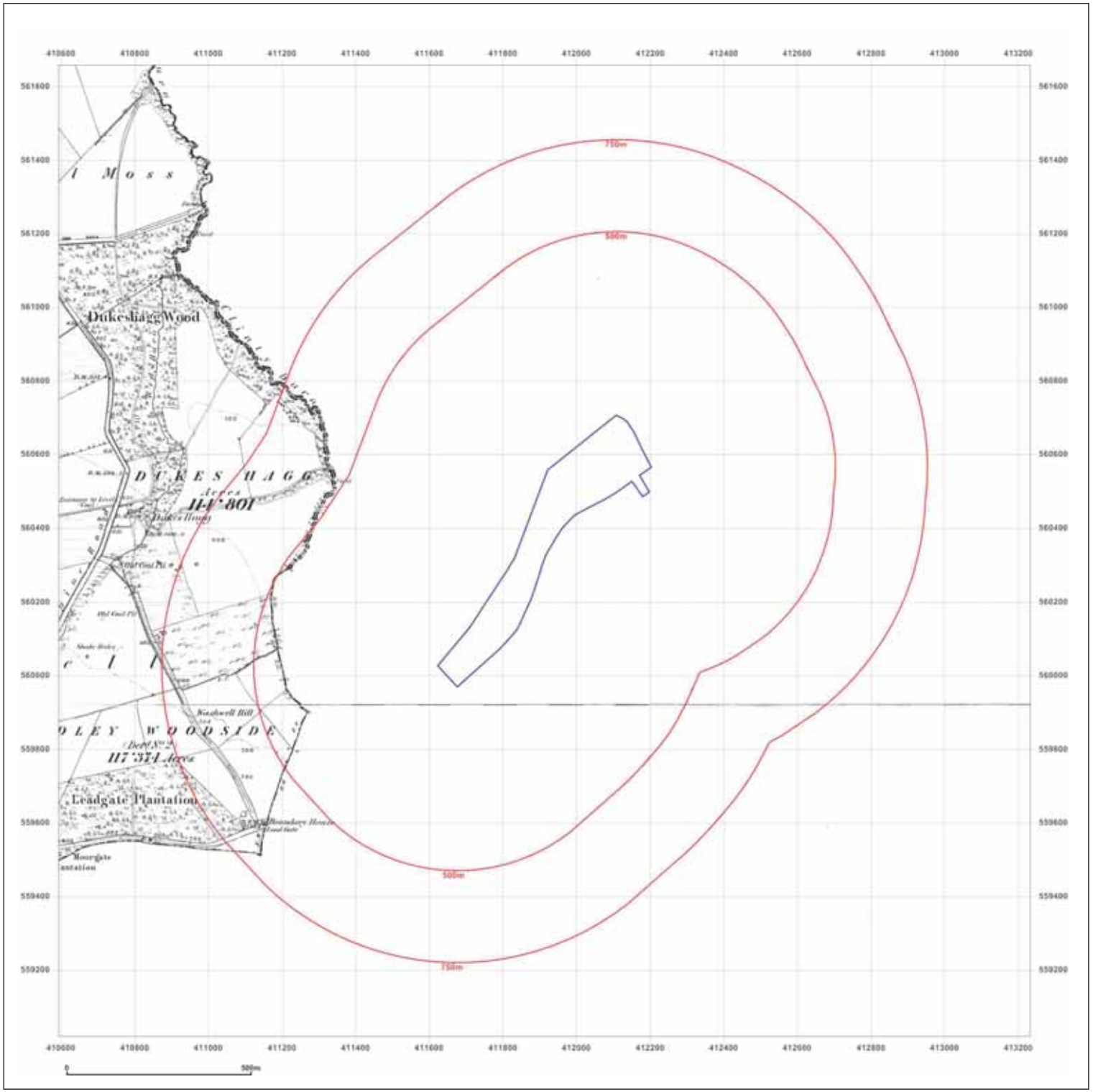
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889
Grid Ref: 411912, 560338

Map Name: County Series
Map date: **1859**
Scale: 1:10,560
Printed at: 1:10,560

N
W E
S

Surveyed 1859
Revised 1859
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1859
Revised 1859
Edition N/A
Copyright N/A
Levelled N/A

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

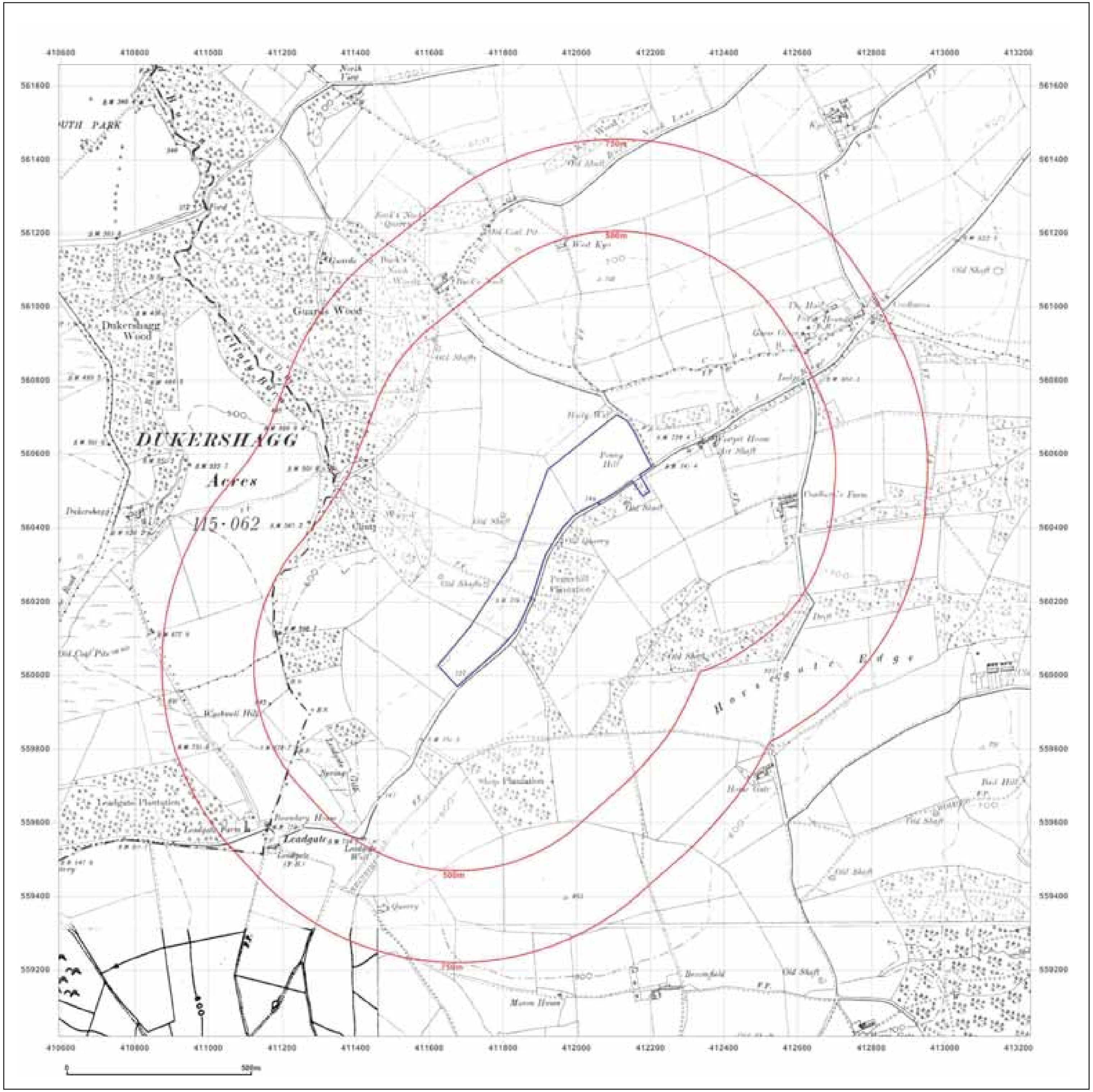
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889
Grid Ref: 411912, 560338

Map Name: County Series

Map date: **1895**

Scale: 1:10,560

Printed at: 1:10,560

N
W E
S

Surveyed 1856 Revised 1895 Edition N/A Copyright N/A Levelled N/A	Surveyed 1856 Revised 1895 Edition N/A Copyright N/A Levelled N/A
Surveyed N/A Revised N/A Edition N/A Copyright N/A Levelled N/A	Surveyed 1857 Revised 1895 Edition N/A Copyright N/A Levelled N/A

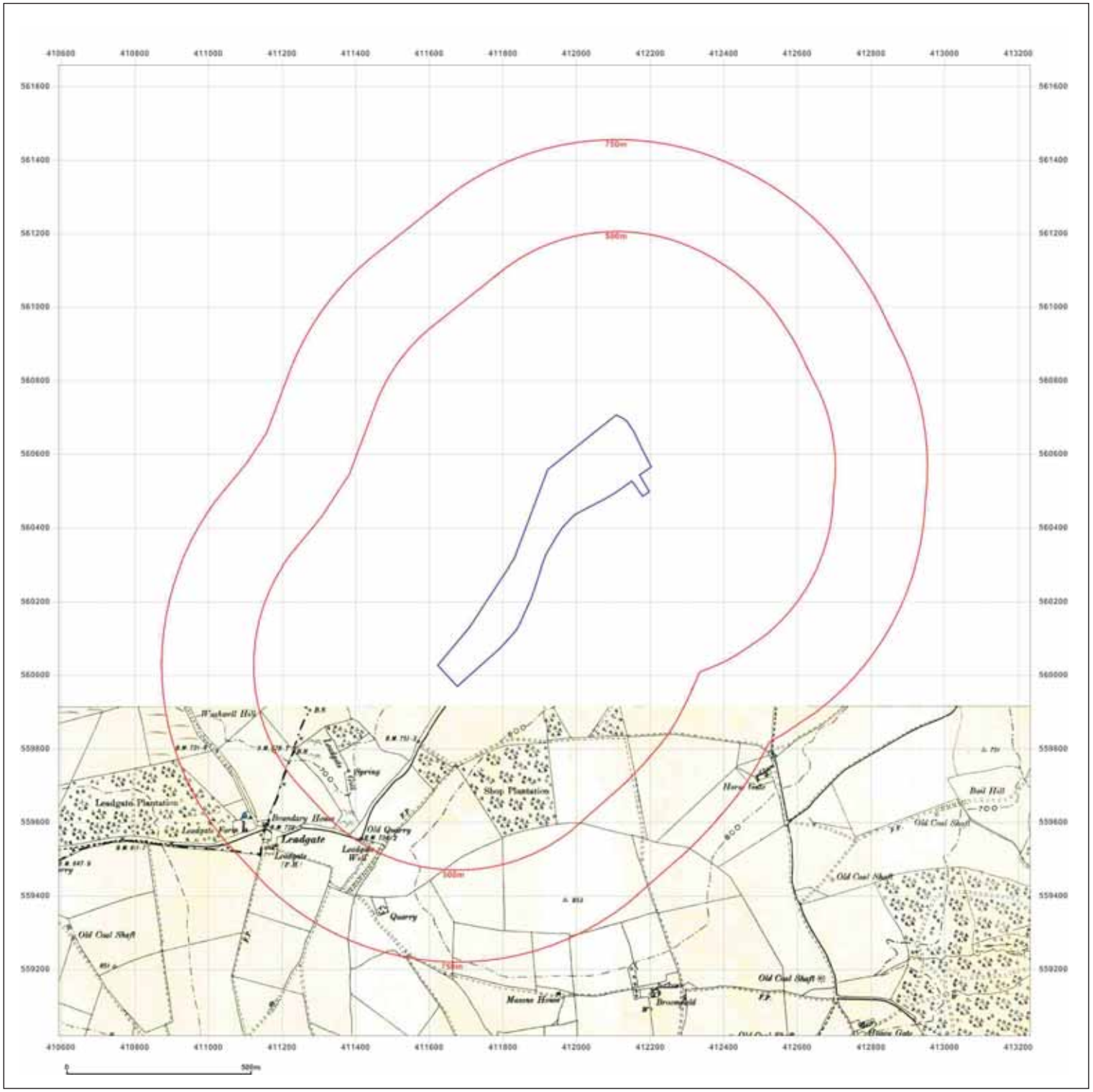
Produced by
Groundsure Insights
www.groundsure.com

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889
Grid Ref: 411912, 560338

Map Name: County Series
Map date: **1895**
Scale: 1:10,560
Printed at: 1:10,560

N
W E
S

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

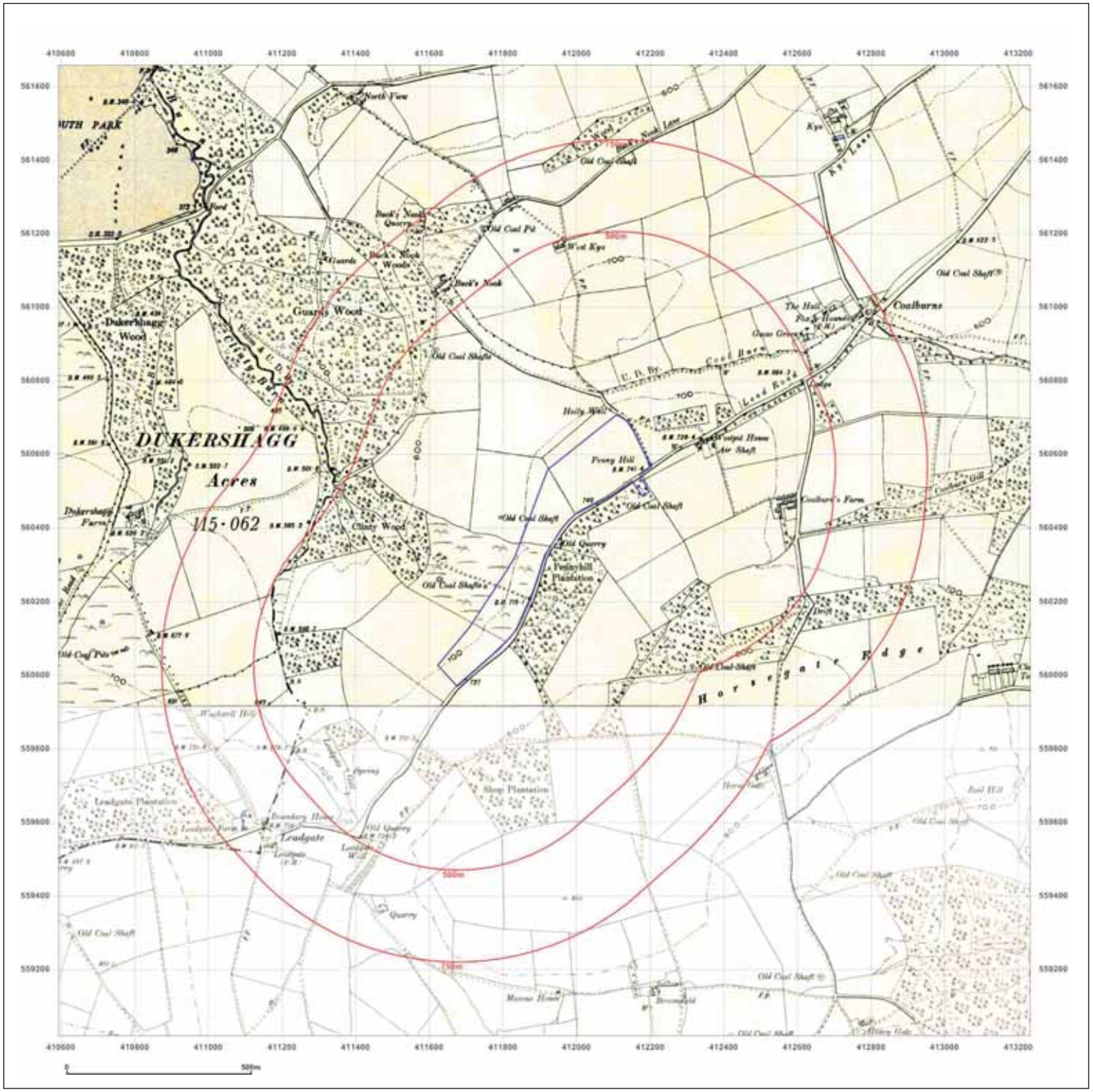
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889
Grid Ref: 411912, 560338

Map Name: County Series

Map date: 1895-1898

Scale: 1:10,560

Printed at: 1:10,560

N
W E
S

Surveyed 1860
Revised 1895
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1859
Revised 1895
Edition N/A
Copyright N/A
Levelled N/A

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

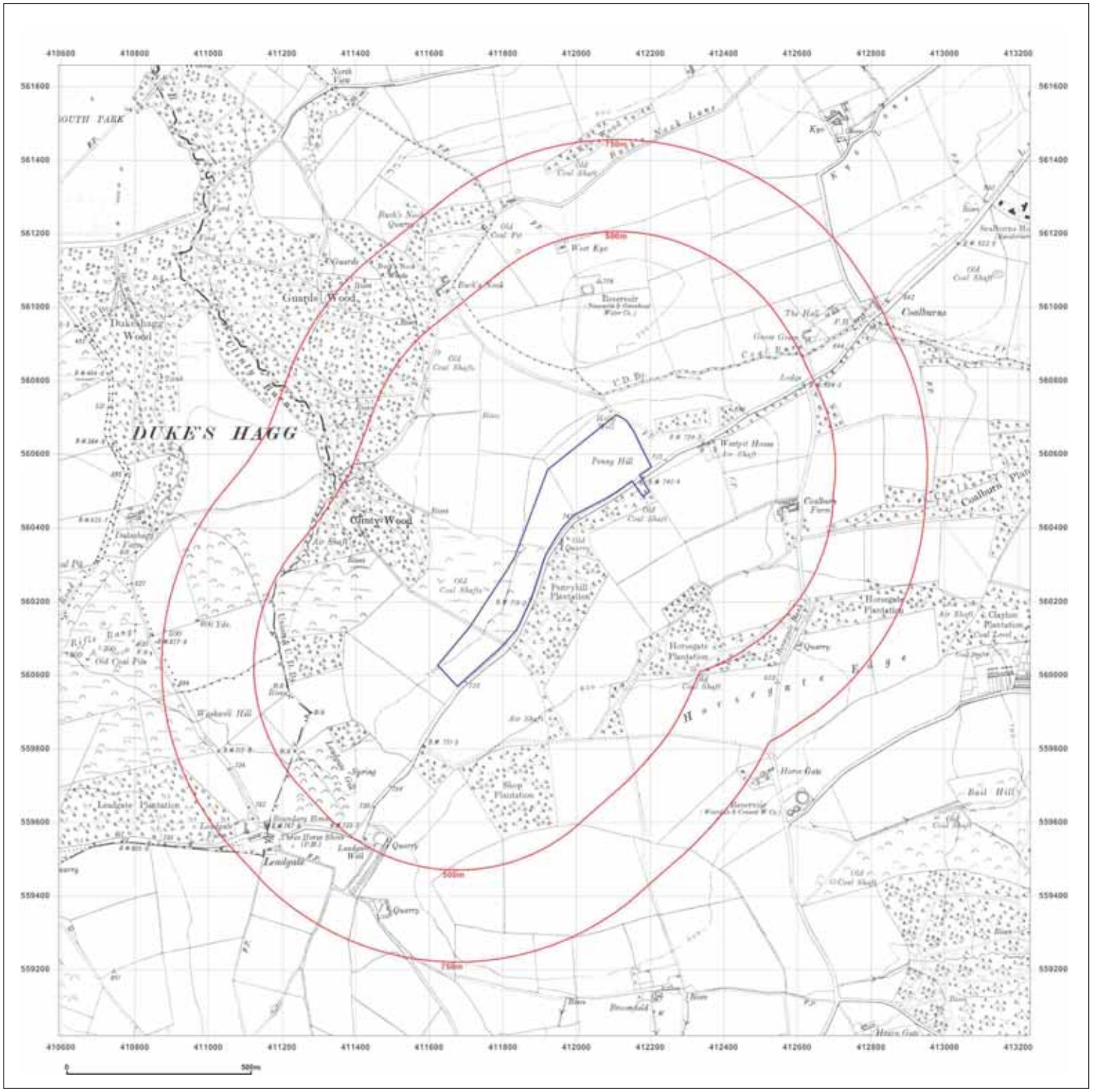
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889
Grid Ref: 411912, 560338

Map Name: County Series
Map date: **1921**
Scale: 1:10,560
Printed at: 1:10,560

N
W E
S

Surveyed 1857
Revised 1921
Edition N/A
Copyright N/A
Levelled N/A

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

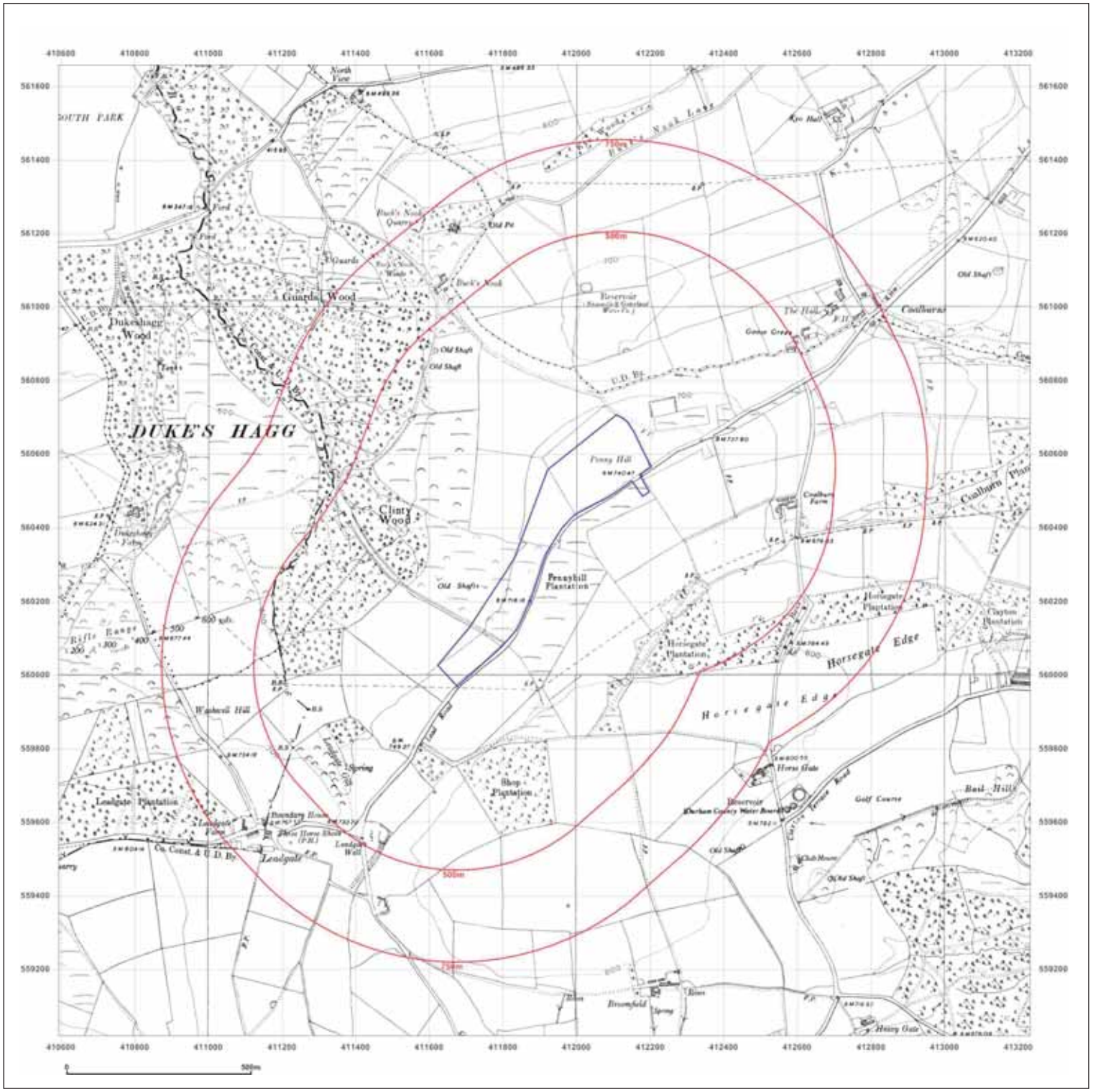
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889
Grid Ref: 411912, 560338

Map Name: Provisional
Map date: **1951-1952**
Scale: 1:10,560
Printed at: 1:10,560

N
W E
S

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

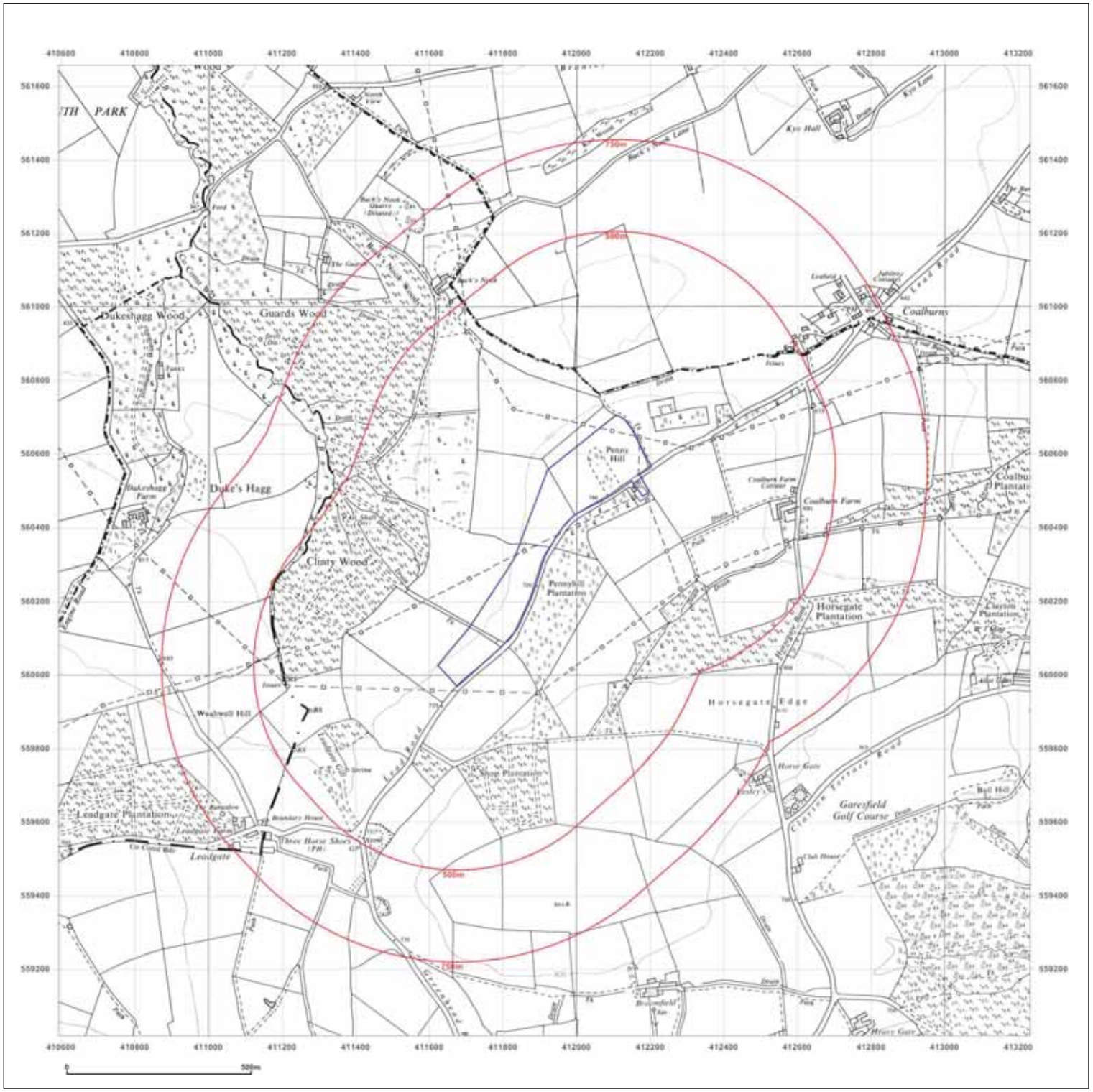
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889
Grid Ref: 411912, 560338

Map Name: Provisional
Map date: **1967**
Scale: 1:10,560
Printed at: 1:10,560

N
W E
S

Surveyed 1967
Revised 1967
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1967
Revised 1967
Edition N/A
Copyright N/A
Levelled N/A

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

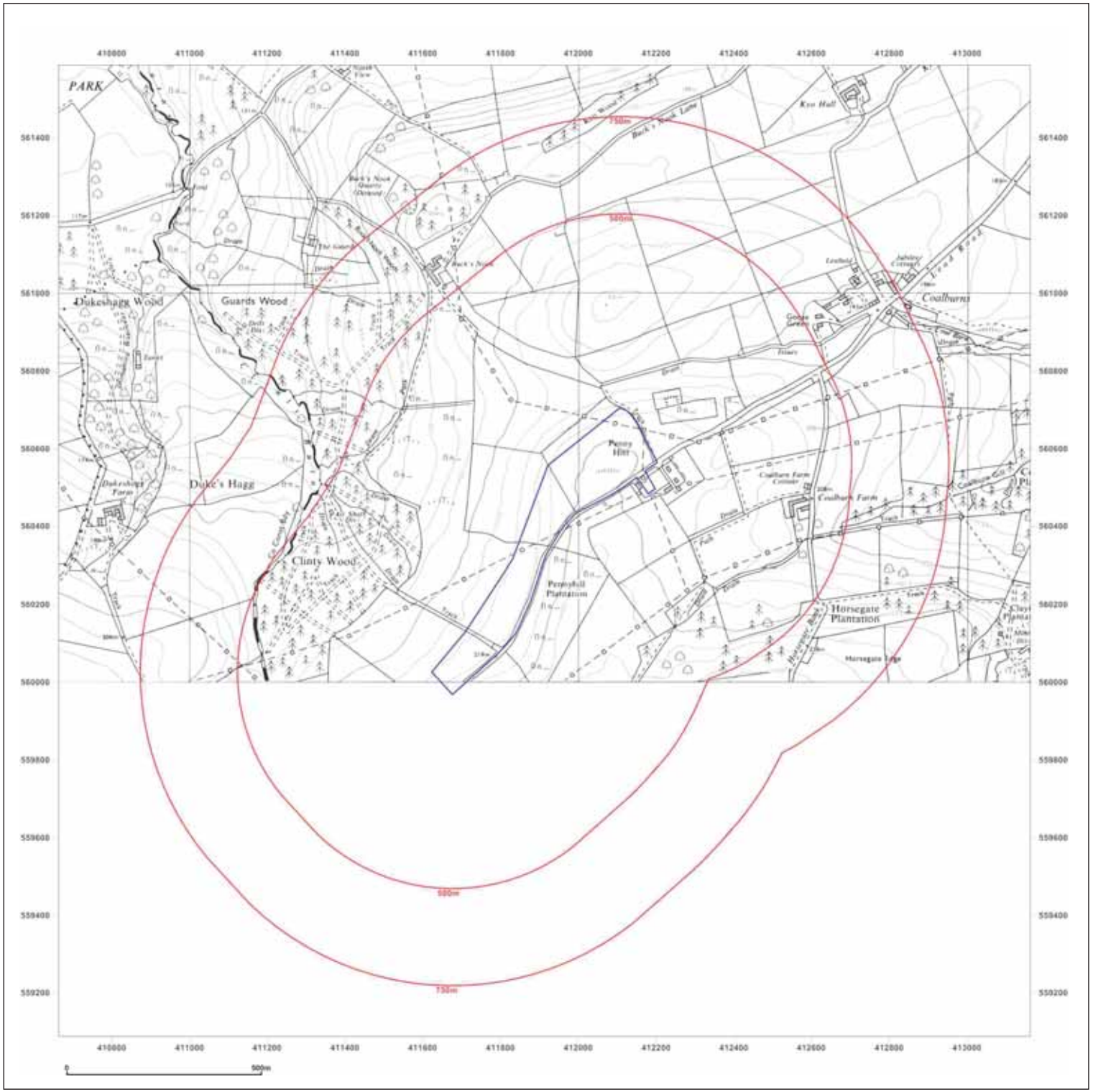
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889
Grid Ref: 411912, 560338

Map Name: National Grid
Map date: **1979**
Scale: 1:10,000
Printed at: 1:10,000

N
W E
S

Surveyed 1975
Revised 1979
Edition N/A
Copyright N/A
Levelled N/A

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

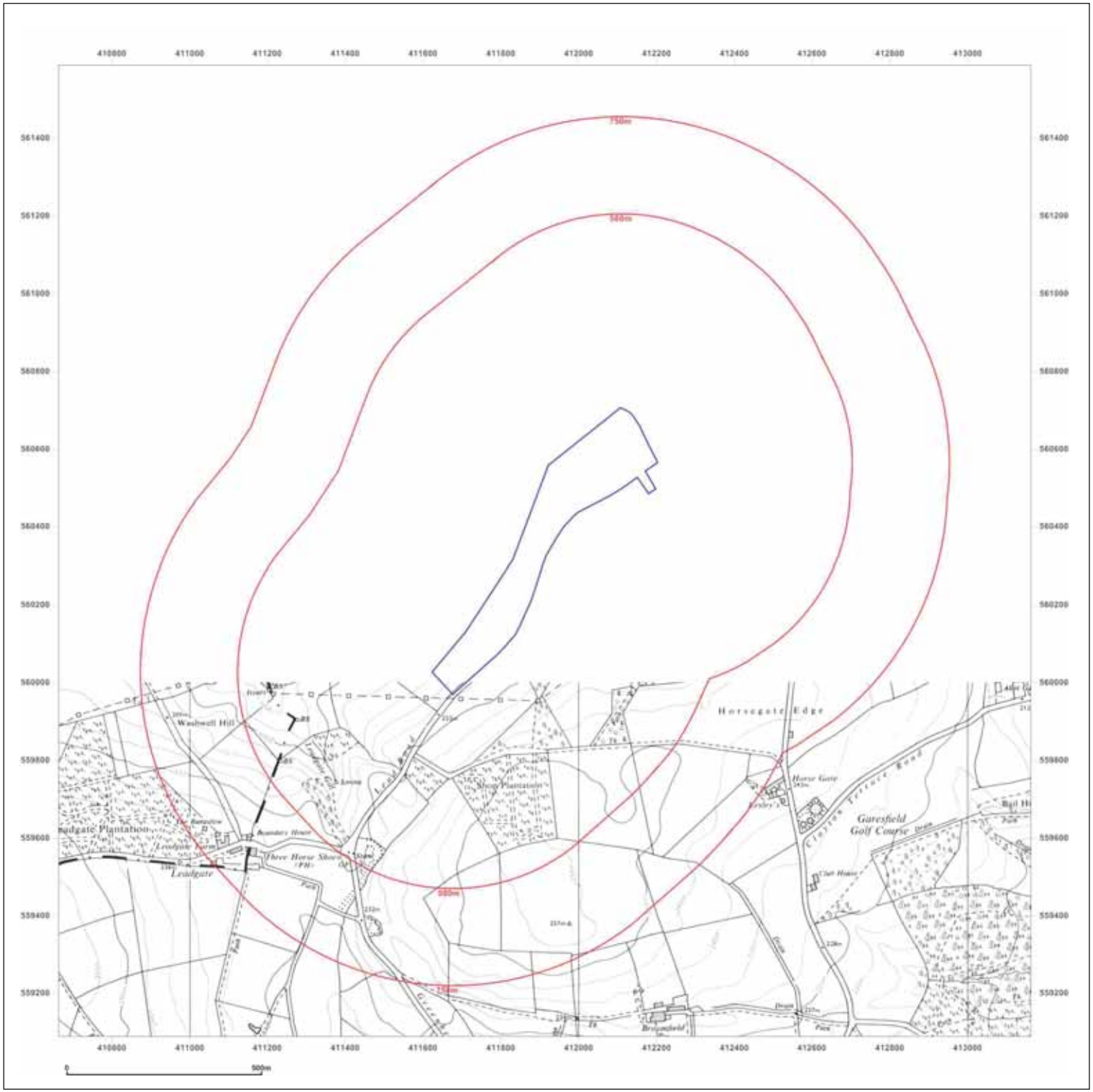
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889
Grid Ref: 411912, 560338

Map Name: National Grid

Map date: 1986

Scale: 1:10,000

Printed at: 1:10,000

N
W E
S

Surveyed 1961
Revised 1986
Edition N/A
Copyright N/A
Levelled N/A

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

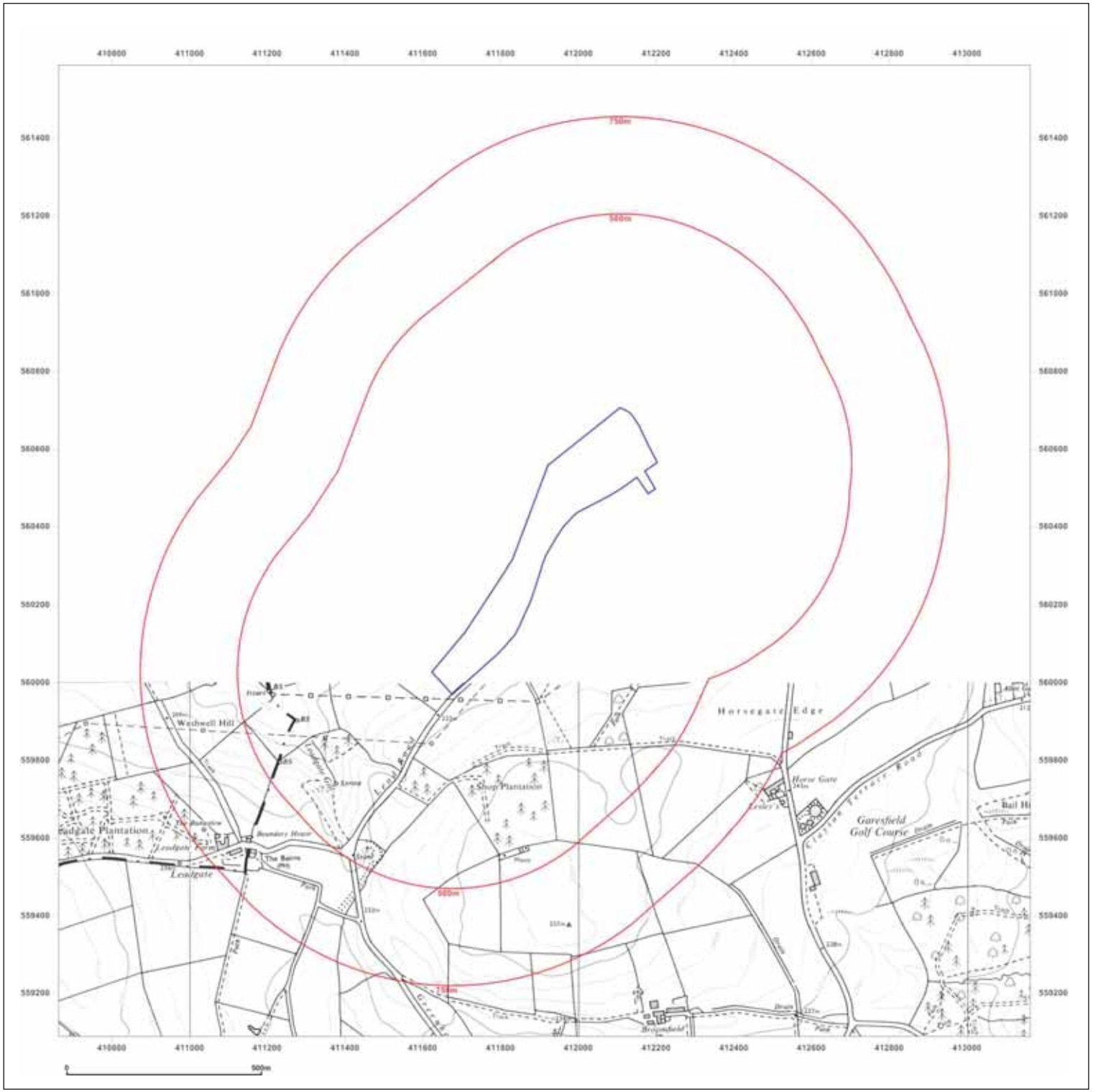
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889
Grid Ref: 411912, 560338

Map Name: National Grid
Map date: **1988**
Scale: 1:10,000
Printed at: 1:10,000

N
W E
S

Surveyed 1981
Revised 1988
Edition N/A
Copyright N/A
Levelled N/A

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

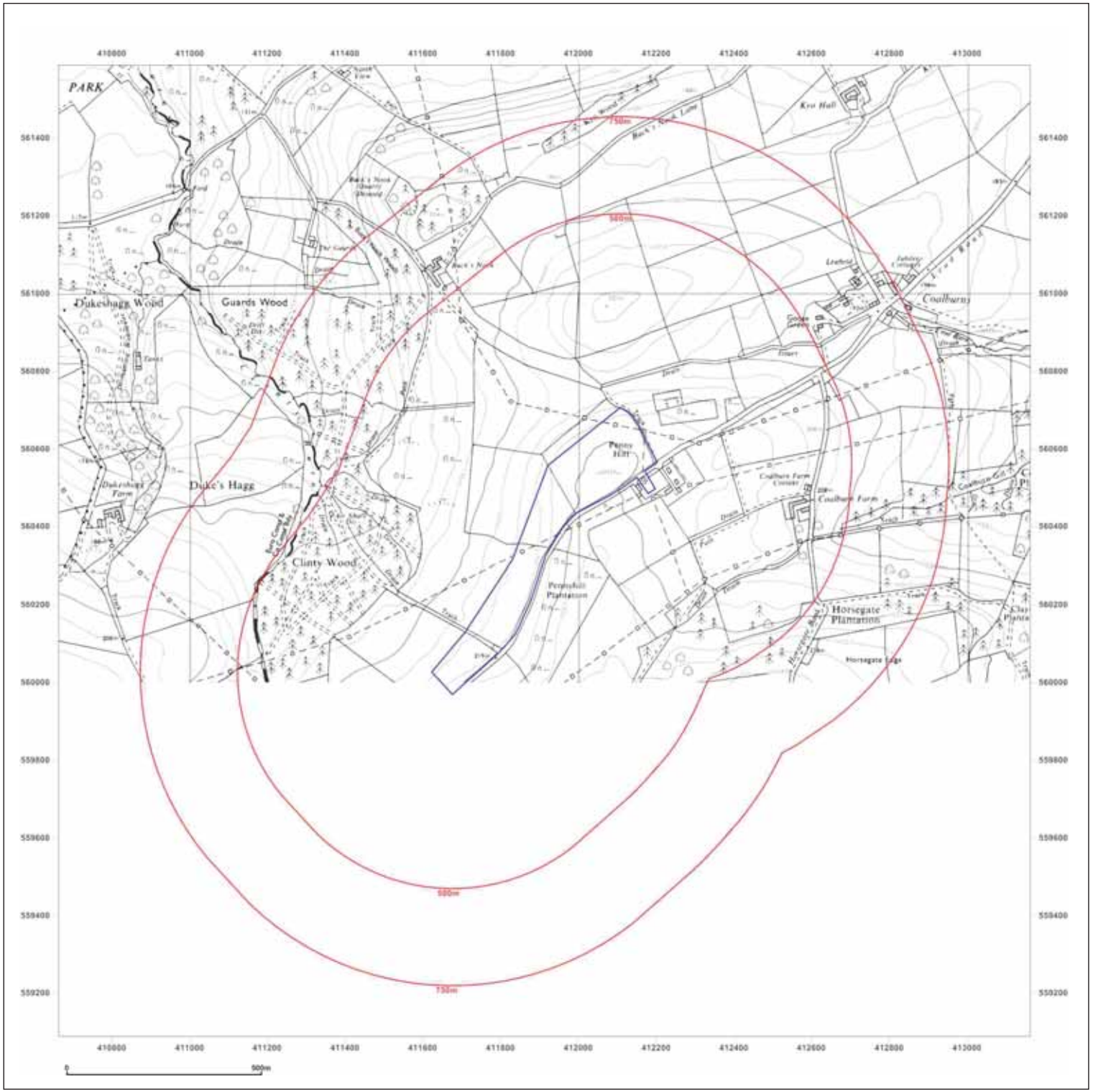
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889
Grid Ref: 411912, 560338

Map Name: National Grid
Map date: 1995
Scale: 1:10,000
Printed at: 1:10,000

N
W E
S

Surveyed 1975
Revised 1995
Edition N/A
Copyright N/A
Levelled N/A

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

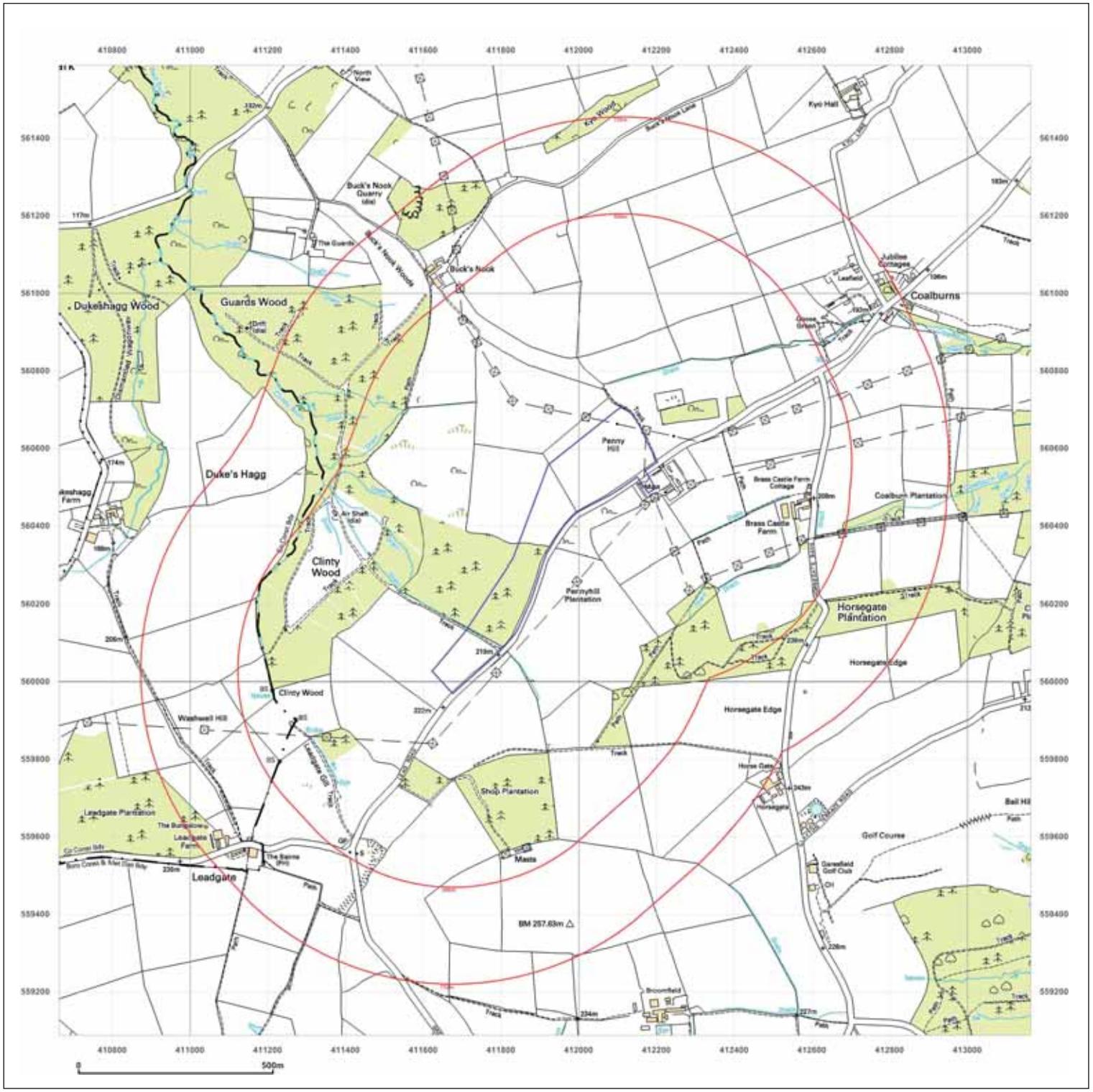
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889
Grid Ref: 411912, 560338

Map Name: 1:10,000 Raster
Map date: 2002
Scale: 1:10,000
Printed at: 1:10,000

N
W E
S

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

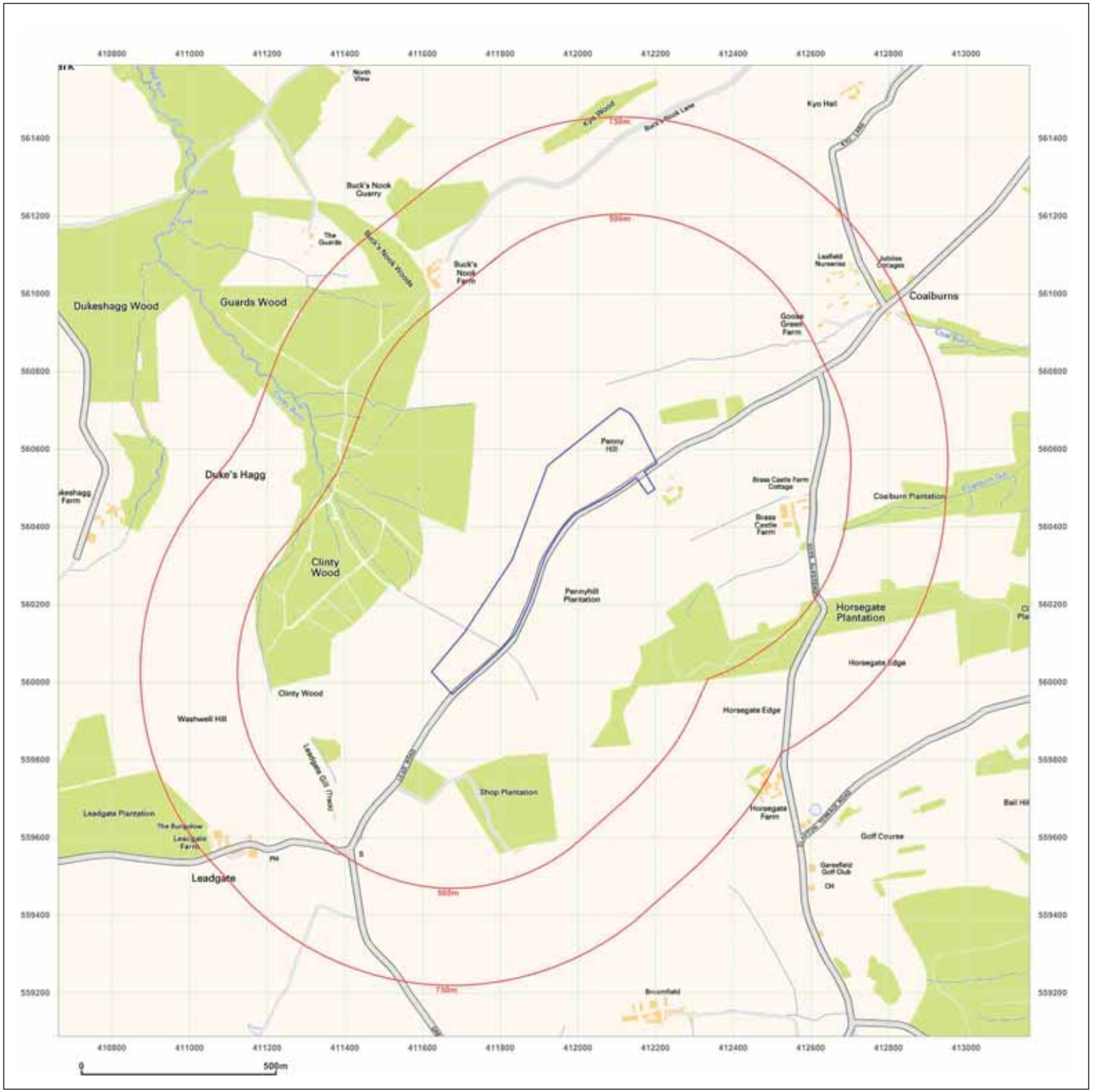
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889
Grid Ref: 411912, 560338

Map Name: National Grid
Map date: 2010
Scale: 1:10,000
Printed at: 1:10,000

N
W E
S

2010

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

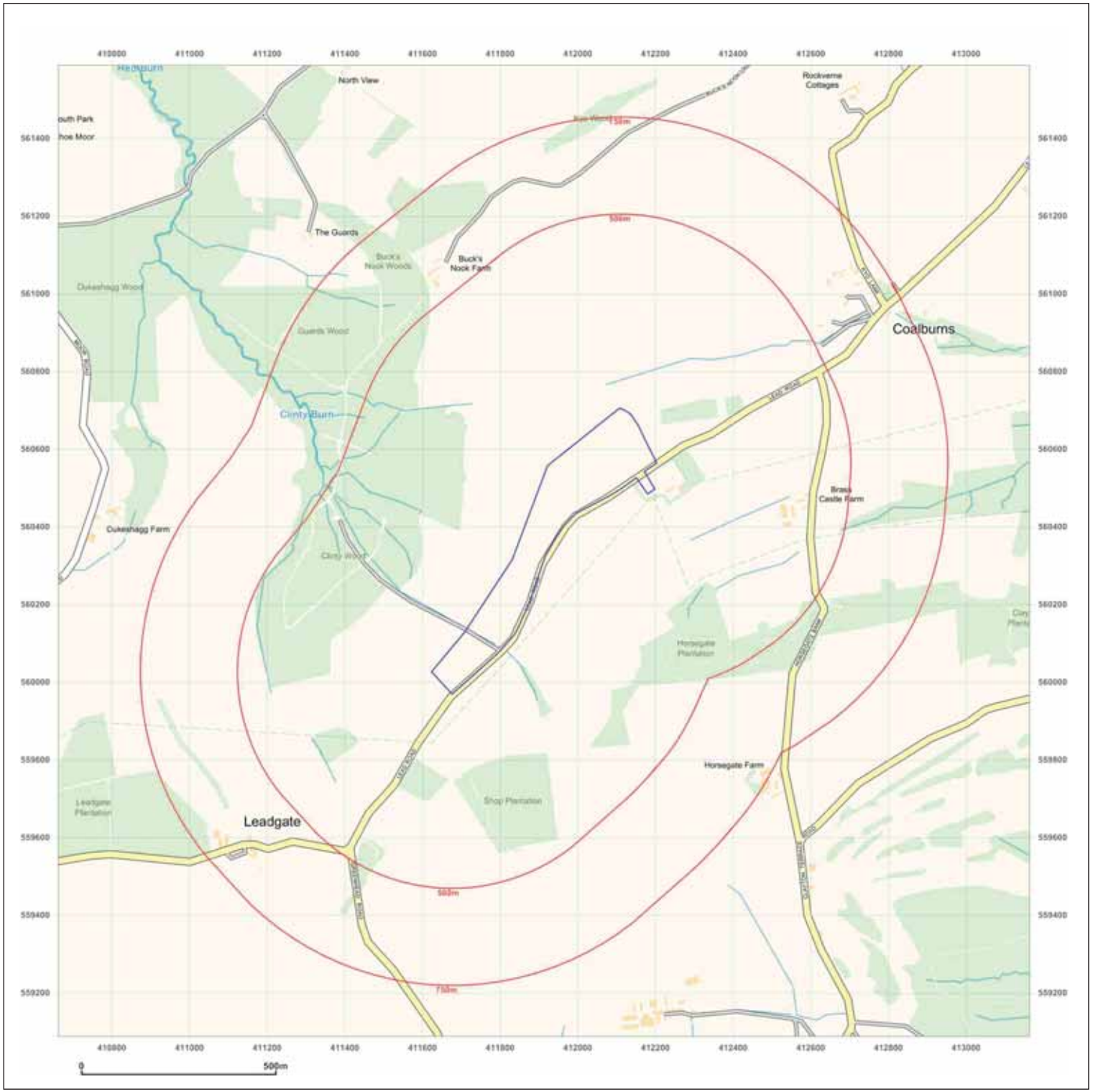
Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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



emapsite™

Site Details:

Lead Road,NE40 4JN

Client Ref: EMS_470471_631889
Report Ref: EMS-470471_631889
Grid Ref: 411912, 560338

Map Name: National Grid
Map date: 2014
Scale: 1:10,000
Printed at: 1:10,000

N
W E
S

Groundsure

Produced by
Groundsure Insights
www.groundsure.com

Powered by OS

Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2018 Ordnance Survey 100035207

Production date: 04 April 2018

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

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

BGS ID: 829102 : BGS Reference: NZ16SW168
British National Grid (27700) : 412280,560530
Report an issue with this borehole

<< < Prev Page 1 of 3 Next > >>

14

(08/2011) Wt. 4605/7 250 7/37 M. & St., Ltd. G 68

NZ 16 SW 168

344

SECTION OF CHOPWELL

Strata sunk through at the North Pit.

C. 224. Surface Level ~~726~~ Probably Nearer, ? 736 282 454 O.D.

Communicated by No 489 Borings and Sinkings.

Date of boring or sinking 1800 Borer NCR 1223/6054 735 97 655

One-inch Map 20 Six-inch Map (County and Half-Quarter Sheet) DURHAM 5.N.E.

	Thickness. FMS	feet.	ins.	Depth from Surface. FMS	feet.	ins.
Outset. 1.30		4	6			
Soft quarry post.	1	-	11	1	5	5
Brown shivers		4	11	2	4	4
Strong quarry post.	1	3	9	4	2	1
Post, grey.		1	8	4	3	9
Parting			6	4	4	3
Brown stone, slaty.	1	3	4	6	1	7
Parting.			3	6	1	10
Post, dun, mixed with white	1	2	-	7	3	10
Whin, whitish brown.		1	-	7	4	10
Scanny stone, brown, mixed with white post.		3	-	8	1	10
Black metal stone	1	4	-	9	5	10
COAL C HMB 18.26			1	9	5	11
Thill			8	10	-	7
COAL			6	10	1	1
Thill		2	7	10	3	8
Post, grey.	1	-	5	11	4	1
Blue metal stone		4	7	12	2	8
COAL			6	12	3	2
Thill		1	8	12	4	10
Post gridle, white			5	12	5	3
Blue cash parting.			7	12	5	10

Post, white	2 10	13 2 8
Coal seaming	7	13 3 3
Post girdle	5	13 3 8
Blue metal stone	2 2	13 5 10
Post, white	2 8	14 2 6

345

	Thickness. FMS	feet.	ins.	Depth from Surface. FMS.	feet.	ins.	
Blue metal, mixed with girdles		4	8	15	1	2	
Blue metal stone.		3	4	15	4	6	
COAL, splint (BARLOWFIELD OR TOWNELEY)			9	15	5	3	
COAL, clean. (BARLOWFIELD OR TOWNELEY)		1	2	16	-	5	
COAL, and stone mixed. (BARLOWFIELD OR TOWNELEY)			6	16	-	11	0.74 — 29.54
Thill		2	-	16	2	11	
Post, grey, mixed with girdles		1	10	16	4	9	
Post.	2	5	6	19	4	3	
COAL FOOT			9	19	5	-	0.23 — 36.27
Thill		2	3	20	1	3	
Post, white, strong.	2	3	7	22	4	10	
Grey metal stone		3	10	23	2	8	
Post, white, and girdles		3	2	23	5	10	
Post, white.	2	1	-	26	-	10	
COAL TILLEY 0.48 — 48.29		1	7	26	2	5	~~15 6~~ 15 8
Thill			4	26	2	9	3
Blue metal stone		4	8	27	1	5	
COAL			5	27	1	10	
Thill			3	27	2	1	
Blue metal, mixed with cathends		5	9	28	1	10	
COAL HAND			4	28	2	2	
Blue metal stone, mixed with girdles		4	-	29	-	2	
COAL			1	29	-	3	
Post girdles, cash parting		2	4	29	2	7	
Blue metal stone		4	3	30	-	10	
Black jet			4	30	1	2	
COAL. STONE COAL 0.81 — 56.03		2	8	30	3	10	
Thill		3	-	31	-	10	
Blue metal stone		3	7	31	4	5	
When girdles	1	-	5	32	4	10	

Whin				1 -	32	5	10	
Post, brown.				3 -	33	2	10	
Post, brown, slaty		0.84	62.94	2 11	33	5	9	
COAL	5/4			2 9	34	2	6	2047 6 0
Thill				1 -	34	3	6	2 208 6
								10527 6

NZ 16 SW 168

SECTION OF CHOPWELL – NORTH PIT. 346

Six-inch Map (County and Quarter Sheet) DURHAM 5 N.E.

9 (cont.)

	Thickness. FMS	feet.	ins.	Depth from Surface. FMS.	feet.	ins.
Grey metal, mixed with cathead.		4	1	35	1	7
Blue metal, mixed with cathead.		4	7	36	-	2
COAL			1	36	-	3
Grey metal stone		2	9	36	3	-
Black metal stone		1	8	36	4	8
Grey metal stone		2	5	37	1	1
White girdle		1	10	37	2	11
Black jet			5	37	3	4
COAL 3/4	0·76 = 69.44	2	6	37	5	10
Till			7	38	-	5
Post, grey, strong		1	-	38	1	5
White		4	2	38	5	7
Blue metal stone, with white girdle		4	6	39	4	1
COAL, coarse.			1	39	4	2
Till, strong, very whinny		1	6	39	5	8
Post, white, strong, mixed with white ofse.		4	6	40	4	2
Blue metal stone		1	3	40	5	6
COAL			1	40	5	6
Blue metal, mixed with cathead		5	-	41	4	6
Grey metal, mixed with strong girdle	1	1	6	43	-	-
Post, white		3	-	43	3	-
Post, white, mixed with COAL flyes		2	8	43	5	8
COAL			6	44	-	2
Blue metal, with partings		1	-	44	1	2
Post, grey, strong, with cams.		2	10	44	4	-
Post, white		3	-	45	1	-
Post, grey, mixed with cams	1	-	6	46	1	6
Blue metal stone		1	8	46	3	2
			6	46	3	8

Brack jet.							
COAL	BROCKWELL	0.84 – 86.08	2	2	46	5	10
COAL, splint				7	47	–	5

The Coal Authority

Resolving the impacts of mining

CON29M Non-Residential Mining Report

LEAD ROAD
RYTON
GATESHEAD
NE40 4JN

Date of enquiry:	26 April 2018
Date enquiry received:	26 April 2018
Issue date:	26 April 2018
Our reference:	51001834226001
Your reference:	CRM.349.008

CON29M Non-Residential Mining Report

This report is based on, and limited to, the records held by the Coal Authority and the Cheshire Brine Subsidence Compensation Board's records, at the time we answer the search.

Client name

ENZYGO LTD

Enquiry address

LEAD ROAD, RYTON, GATESHEAD, NE40 4JN

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

How to contact us

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

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

www.groundstability.com

/company/the-coal-authority
/thecoalauthority
/coalauthority

Summary

Has the search report highlighted evidence or potential of		
1	Past underground coal mining	Yes
2	Present underground coal mining	No
3	Future underground coal mining	Yes
4	Mine entries	Yes
5	Coal mining geology	No
6	Past opencast coal mining	No
7	Present opencast coal mining	No
8	Future opencast coal mining	No
9	Coal mining subsidence	No
10	Mine gas	No
11	Hazards related to coal mining	No
12	Withdrawal of support	Yes
13	Working facilities order	No
14	Payments to owners of former copyhold land	No
15	Information from the Cheshire Brine Subsidence Compensation Board	No

For detailed findings, please go to page 4.

Detailed findings

1. Past underground coal mining

The property is in a surface area that could be affected by underground mining in 4 seams of coal at shallow to 90m depth, and last worked in 1960.

2. Present underground coal mining

The property is not within a surface area that could be affected by present underground mining.

3. Future underground coal mining

The property is not in an area where the Coal Authority has plans to grant a licence to remove coal using underground methods.

The property is not in an area where a licence has been granted to remove or otherwise work coal using underground methods.

The property is not in an area likely to be affected from any planned future underground coal mining.

However, reserves of coal exist in the local area which could be worked at some time in the future.

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

4. Mine entries

There are no known coal mine entries within, or within 20 metres of, the boundary of the property.

There may however be mine entries/additional mine entries in the local area which the Coal Authority has no knowledge of.

5. Coal mining geology

The Coal Authority is not aware of any damage due to geological faults or other lines of weakness that have been affected by coal mining.

6. Past opencast coal mining
The property is not within the boundary of an opencast site from which coal has been removed by opencast methods.

7. Present opencast coal mining
The property does not lie within 200 metres of the boundary of an opencast site from which coal is being removed by opencast methods.

8. Future opencast coal mining
There are no licence requests outstanding to remove coal by opencast methods within 800 metres of the boundary.

The property is not within 800 metres of the boundary of an opencast site for which a licence to remove coal by opencast methods has been granted.

9. 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 31st 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.

10. Mine gas
The Coal Authority has no record of a mine gas emission requiring action.

11. Hazards related to coal mining
The property has not been subject to remedial works, by or on behalf of the Authority, under its Emergency Surface Hazard Call Out procedures.

12. Withdrawal of support
The property is in an area where a notice to withdraw support was given in 1946.

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.

13. Working facilities order
The property is not in an area where an order has been made, under the provisions of the Mines (Working Facilities and Support) Acts 1923 and 1966 or any statutory modification or amendment thereof.

14. 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.

15. Information from the Cheshire Brine Subsidence Compensation Board

The property lies outside the Cheshire Brine Compensation District.

Comments on the Coal Authority information

The Coal Authority own the copyright in this report and the information used is protected by our database right.

In view of the mining circumstances a prudent developer would seek appropriate technical advice before any works are undertaken.

Therefore if development proposals are being considered, technical advice relating to both the investigation of coal and former coal mines and their treatment should be obtained before beginning work on site. All proposals should apply good engineering practice developed for mining areas. No development should be undertaken that intersects, disturbs or interferes with any coal or mines of coal without the permission of the Coal Authority. Developers should be aware that the investigation of coal seams/former mines of coal may have the potential to generate and/or displace underground gases and these risks both under and adjacent to the development should be fully considered in developing any proposals. The need for effective measures to prevent gases entering into public properties either during investigation or after development also needs to be assessed and properly addressed. This is necessary due to the public safety implications of any development in these circumstances.

Additional remarks

Information provided by the Coal Authority in this report is compiled in response to the Law Society's Con29M Coal Mining and Brine Subsidence Claim enquiries. The said enquiries are protected by copyright owned by the Law Society of 113 Chancery Lane, London WC2A 1PL. Please note that Brine Subsidence Claim enquiries are only relevant for England and Wales. This report is prepared in accordance with the Law Society's Guidance Notes 2006, the User Guide 2006 and the Coal Authority and Cheshire Brine Board's Terms and Conditions applicable at the time the report was produced.

Disclaimer

The Coal Authority owns the copyright in this report and the information used to produce this report is protected by our database rights. All rights are reserved and unauthorised use is prohibited. If we provide a report for you, this does not mean that copyright and any other rights will pass to you. However, you can use the report for your own purposes.

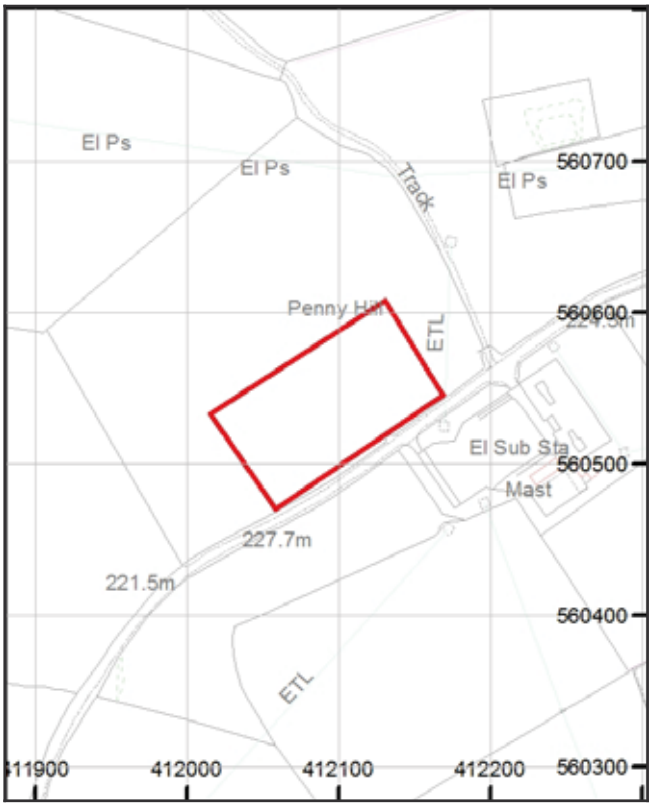
Alternative formats

If you would like this report in an alternative format, please contact our communications team.

Enquiry boundary

Key

Approximate position of enquiry boundary shown



Map data

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

Ordnance Survey Licence number: 100020315

How to contact us

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

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

www.groundstability.com

/company/the-coal-authority
/thecoalauthority
/coalauthority

Enzygo specialise in a wide range of technical services:

Property and Sites
Waste and Mineral Planning
Flooding, Drainage and Hydrology
Landscape Architecture
Arboriculture
Permitting and Regulation
Waste Technologies and Renewables
Waste Contract Procurement
Noise and Vibration
Ecology Services
Contaminated Land and Geotechnical
Traffic and Transportation
Planning Services

BRISTOL OFFICE
The Byre
Woodend Lane
Cromhall
Gloucestershire GL12 8AA
Tel: 01454 269 237

SHEFFIELD OFFICE
Samuel House
5 Fox Valley Way
Stocksbridge
Sheffield S36 2AA
Tel: 0114 321 5151

MANCHESTER OFFICE
First Floor
3 Hardman Square
Spinningfields
Manchester M3 3EB
Tel: 0161 413 6444

Please visit our website for more information.

enzygo.com