

Site Details:

29A Cemetery
Road,Hemingfield,Barnsley,S73
0PU

Client Ref: EMS_421655_563468
Report Ref: EMS-421655_563468
Grid Ref: 439156, 401370

Map Name: County Series

Map date: 1890

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1890
Revised N/A
Edition 1890
Copyright N/A
Levelled N/A



Produced by
Groundsure Insights
www.groundsure.com

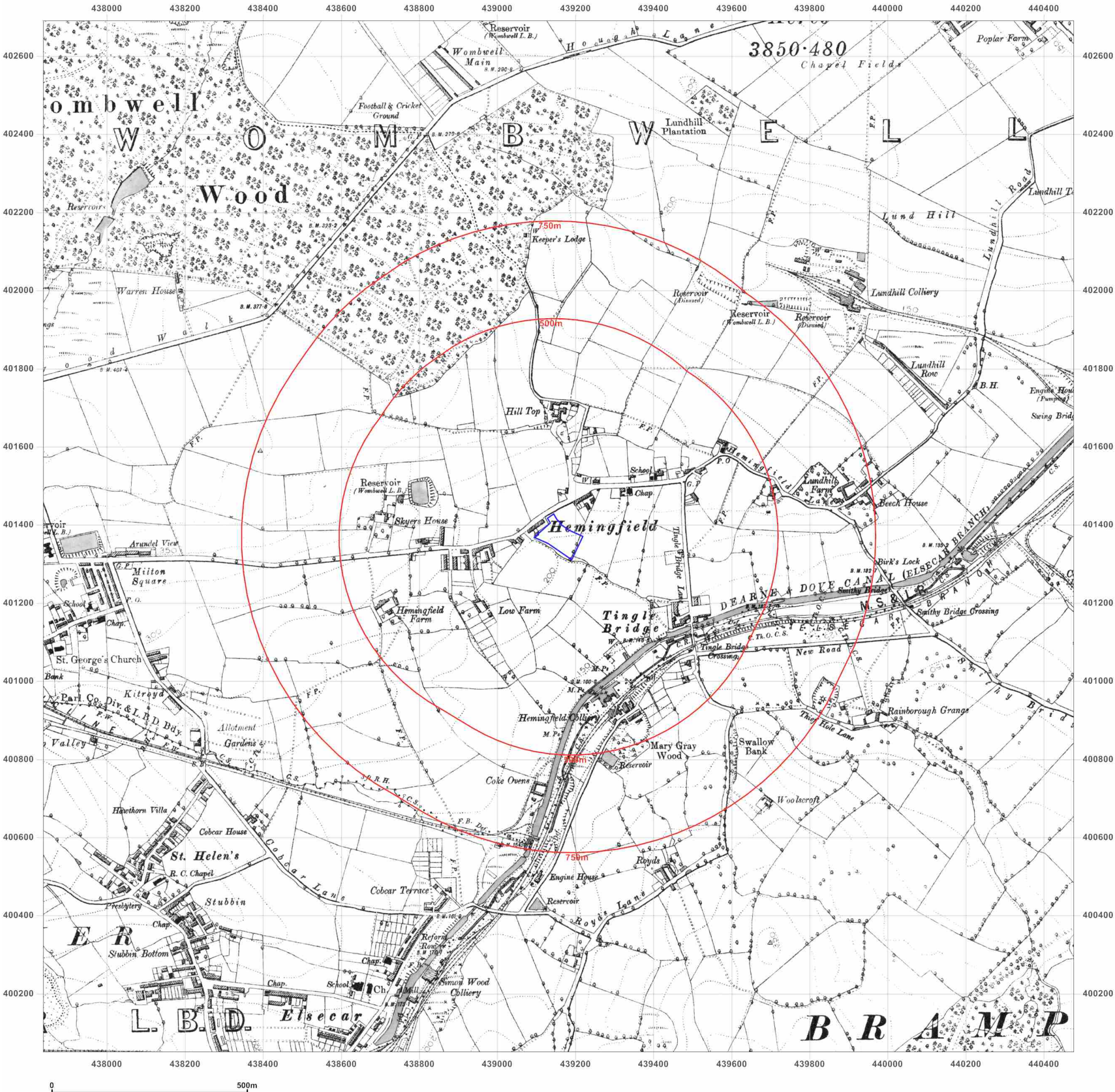


Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 22 May 2017

To view map legend click here [Legend](#)



Site Details:

29A Cemetery
Road,Hemingfield,Barnsley,S73
0PU

Client Ref: EMS_421655_563468
Report Ref: EMS-421655_563468
Grid Ref: 439156, 401370

Map Name: County Series

Map date: 1901

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1890
Revised 1901
Edition 1901
Copyright N/A
Levelled N/A



Produced by
Groundsure Insights
www.groundsure.com

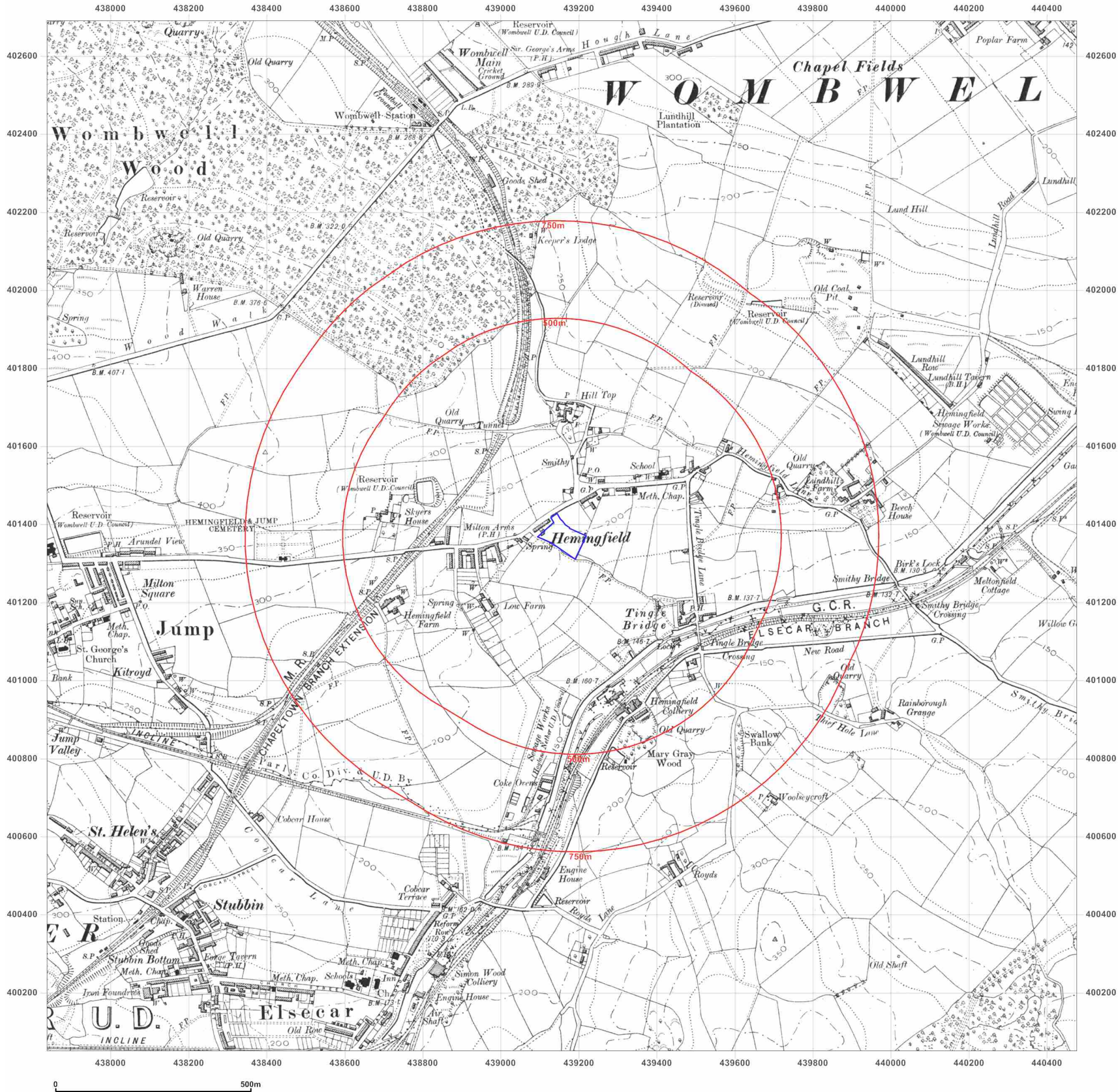


Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 22 May 2017

To view map legend click here [Legend](#)



Site Details:

29A Cemetery
Road,Hemingfield,Barnsley,S73
0PU

Client Ref: EMS_421655_563468
Report Ref: EMS-421655_563468
Grid Ref: 439156, 401370

Map Name: County Series

Map date: 1929

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1850
Revised 1929
Edition 1929
Copyright N/A
Levelled 1915



Produced by
Groundsure Insights
www.groundsure.com

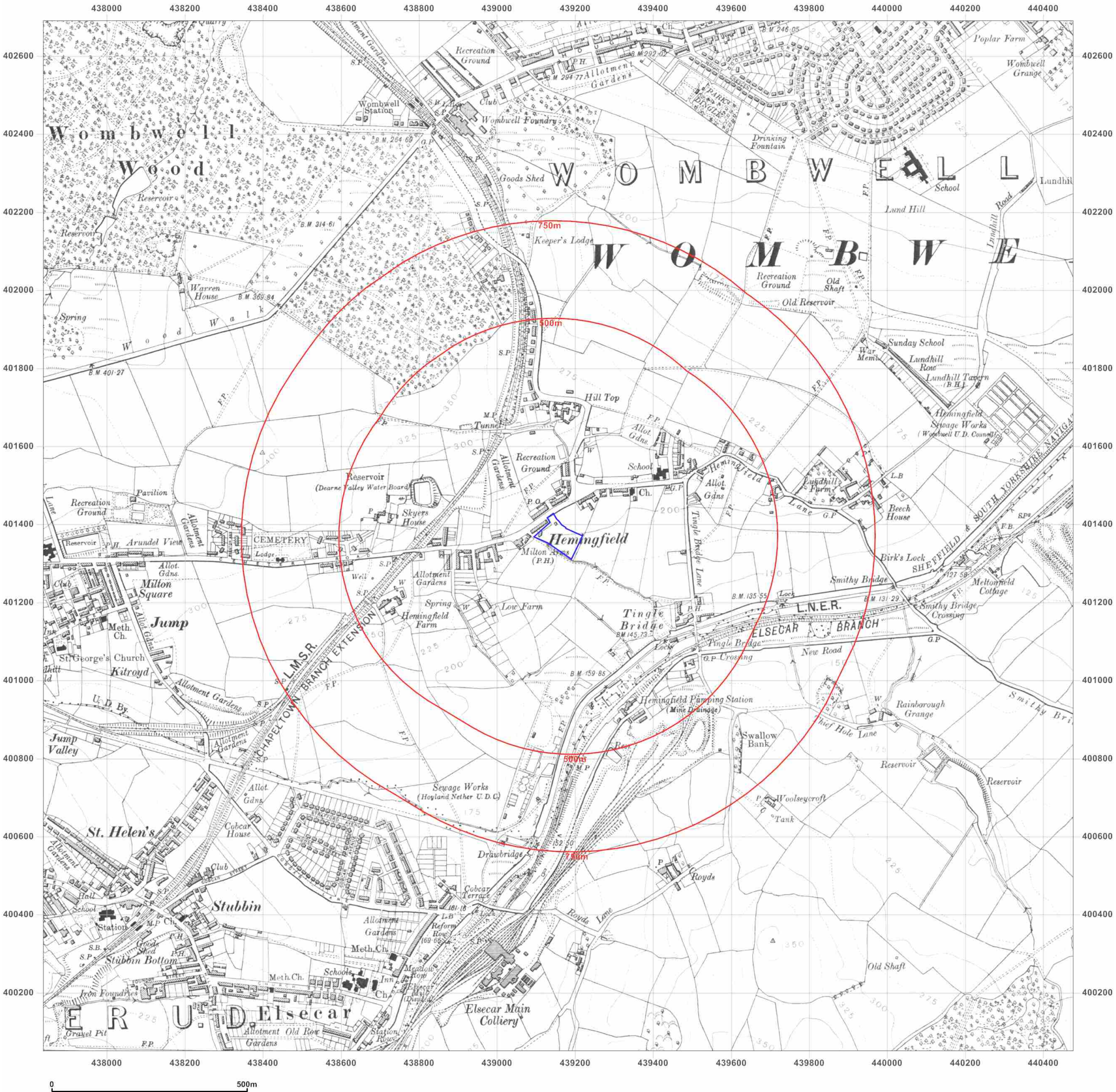


Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 22 May 2017

To view map legend click here [Legend](#)



Site Details:

29A Cemetery
Road,Hemingfield,Barnsley,S73
0PU

Client Ref: EMS_421655_563468
Report Ref: EMS-421655_563468
Grid Ref: 439156, 401370

Map Name: County Series

Map date: 1938

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1850
Revised 1938
Edition 1938
Copyright N/A
Levelled 1929



Produced by
Groundsure Insights
www.groundsure.com

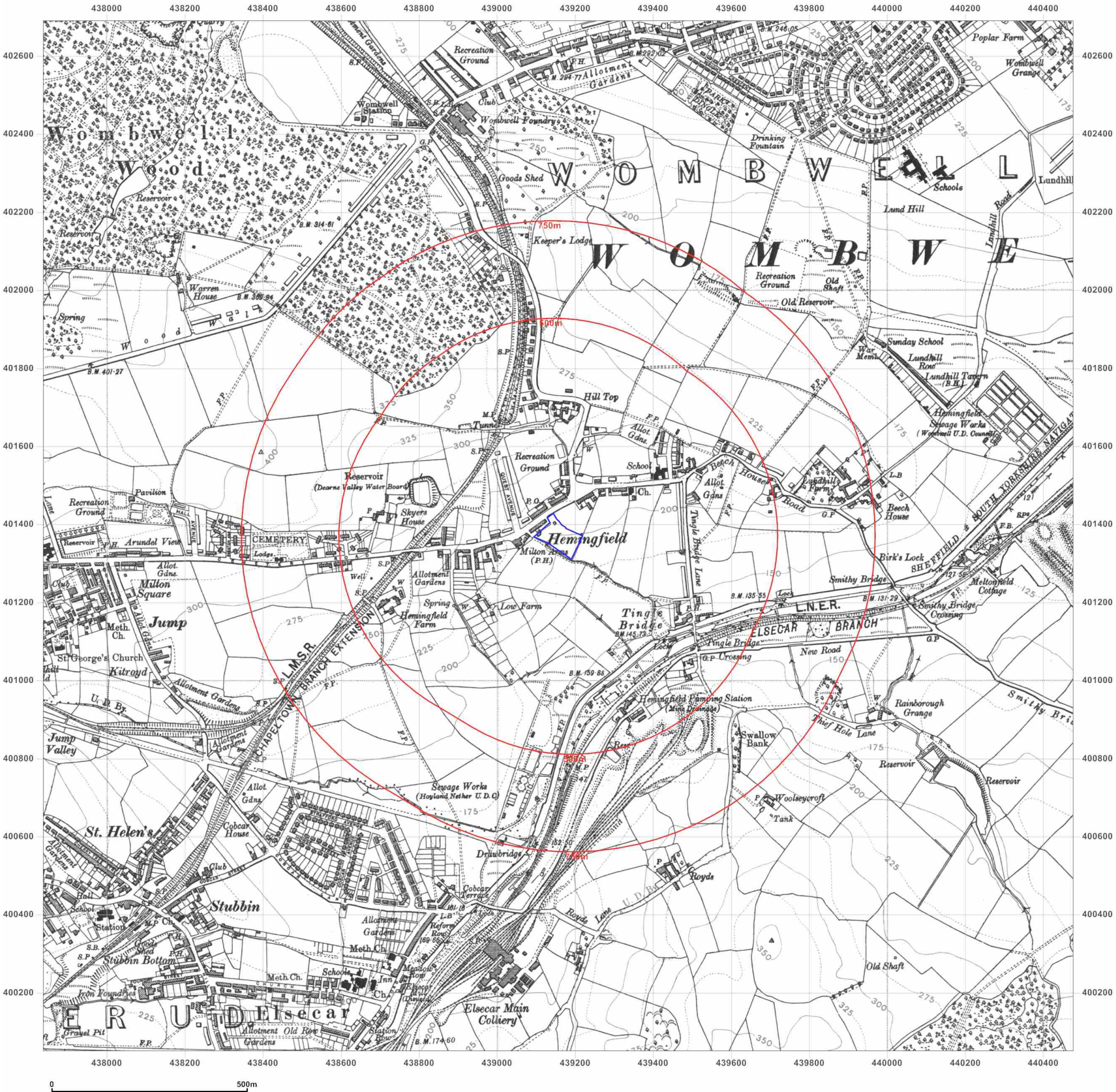


Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 22 May 2017

To view map legend click here [Legend](#)



Site Details:

29A Cemetery
Road,Hemingfield,Barnsley,S73
0PU

Client Ref: EMS_421655_563468
Report Ref: EMS-421655_563468
Grid Ref: 439156, 401370

Map Name: County Series

Map date: 1948

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1850
Revised 1948
Edition 1948
Copyright N/A
Levelled 1929



Produced by
Groundsure Insights
www.groundsure.com

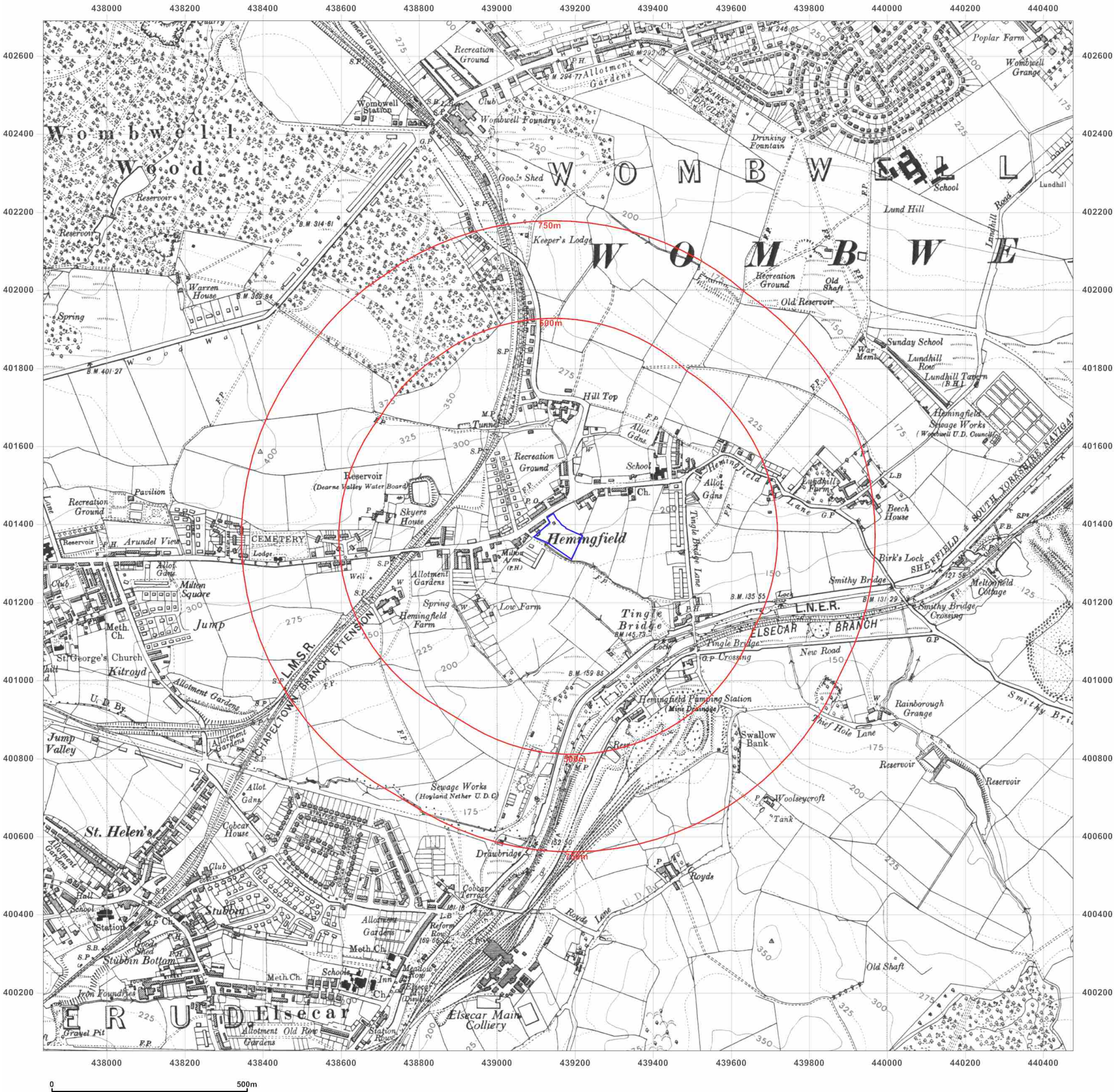


Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 22 May 2017

To view map legend click here [Legend](#)



Site Details:

29A Cemetery
Road,Hemingfield,Barnsley,S73
0PU

Client Ref: EMS_421655_563468
Report Ref: EMS-421655_563468
Grid Ref: 439156, 401370

Map Name: Provisional

Map date: 1966-1967

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1966
Revised 1966
Edition N/A
Copyright 1966
Levelled N/A

Surveyed 1967
Revised 1967
Edition N/A
Copyright 1967
Levelled N/A



Produced by
Groundsure Insights
www.groundsure.com

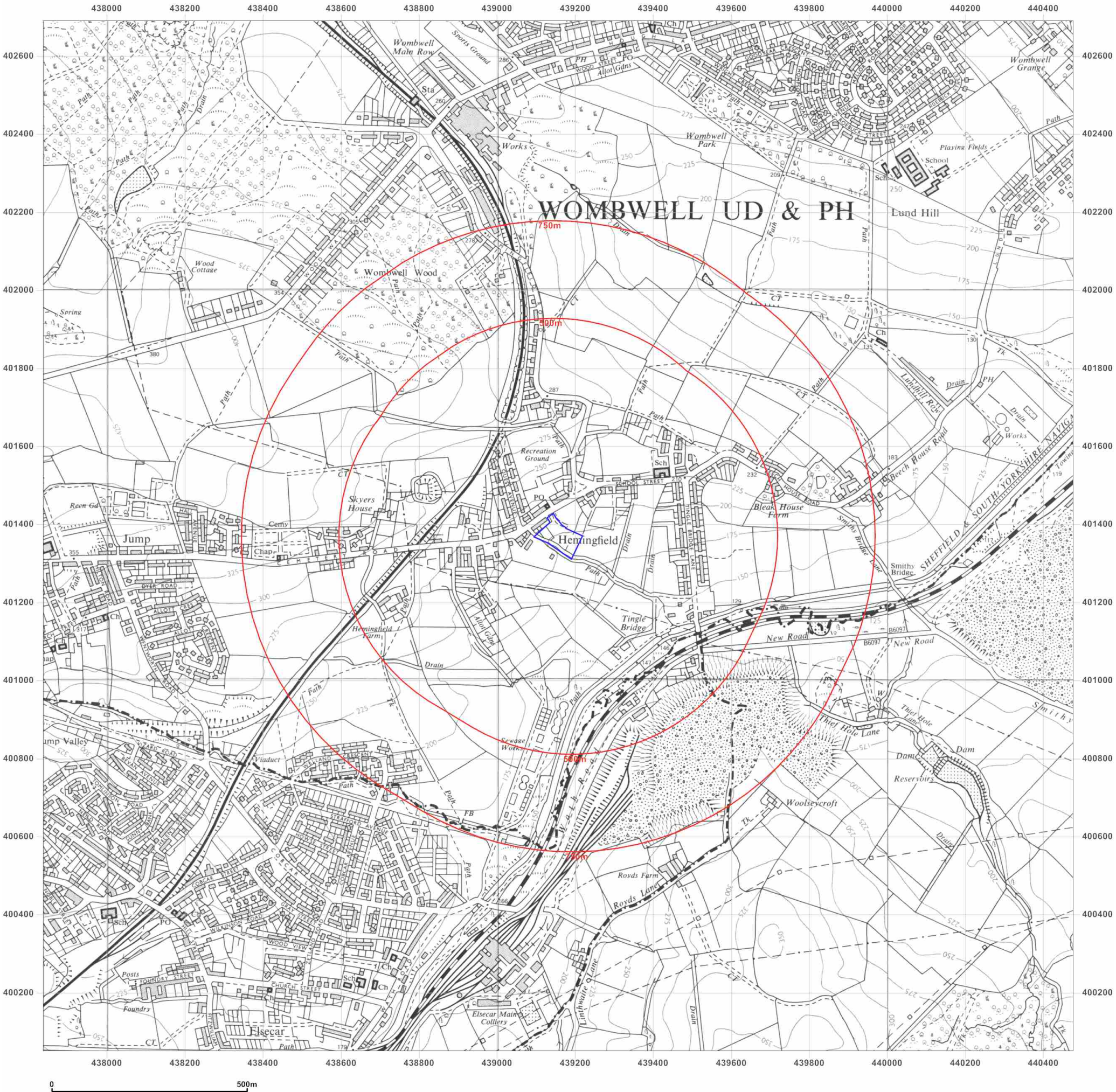


Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 22 May 2017

To view map legend click here [Legend](#)



Site Details:

29A Cemetery
Road,Hemingfield,Barnsley,S73
0PU

Client Ref: EMS_421655_563468
Report Ref: EMS-421655_563468
Grid Ref: 439156, 401370

Map Name: National Grid

Map date: 1977

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1976
Revised 1977
Edition N/A
Copyright 1978
Levelled 1978

Surveyed 1976
Revised 1977
Edition N/A
Copyright 1978
Levelled 1978



Produced by
Groundsure Insights
www.groundsure.com

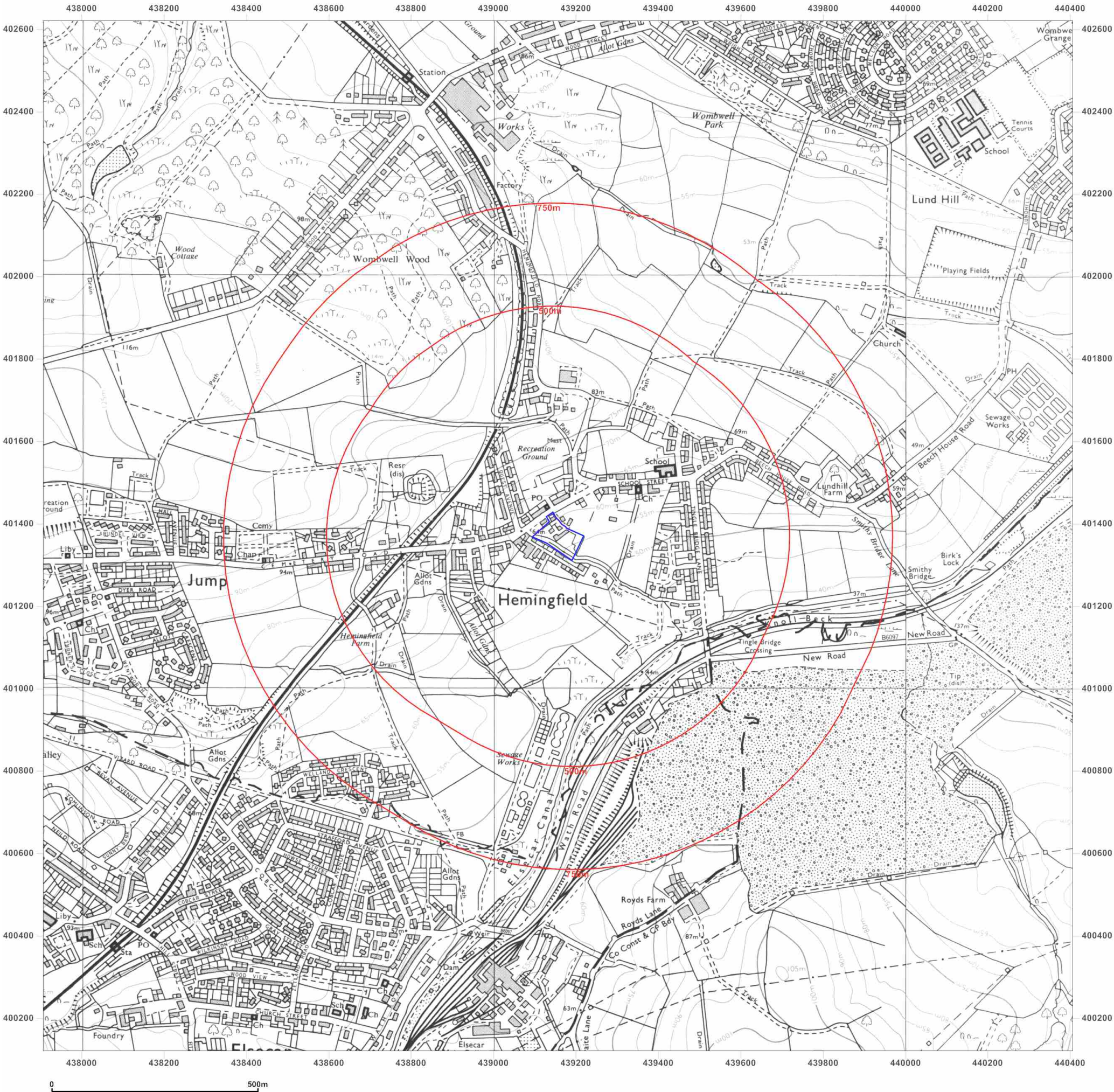


Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 22 May 2017

To view map legend click here [Legend](#)



Site Details:

29A Cemetery
Road,Hemingfield,Barnsley,S73
0PU

Client Ref: EMS_421655_563468
Report Ref: EMS-421655_563468
Grid Ref: 439156, 401370

Map Name: National Grid

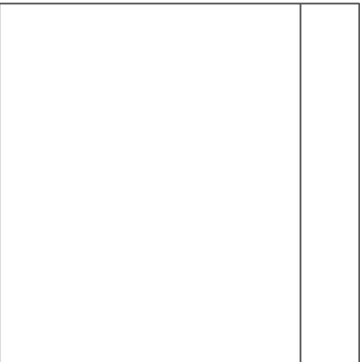
Map date: 1987

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1986
Revised 1987
Edition N/A
Copyright 1988
Levelled 1978



Produced by
Groundsure Insights
www.groundsure.com

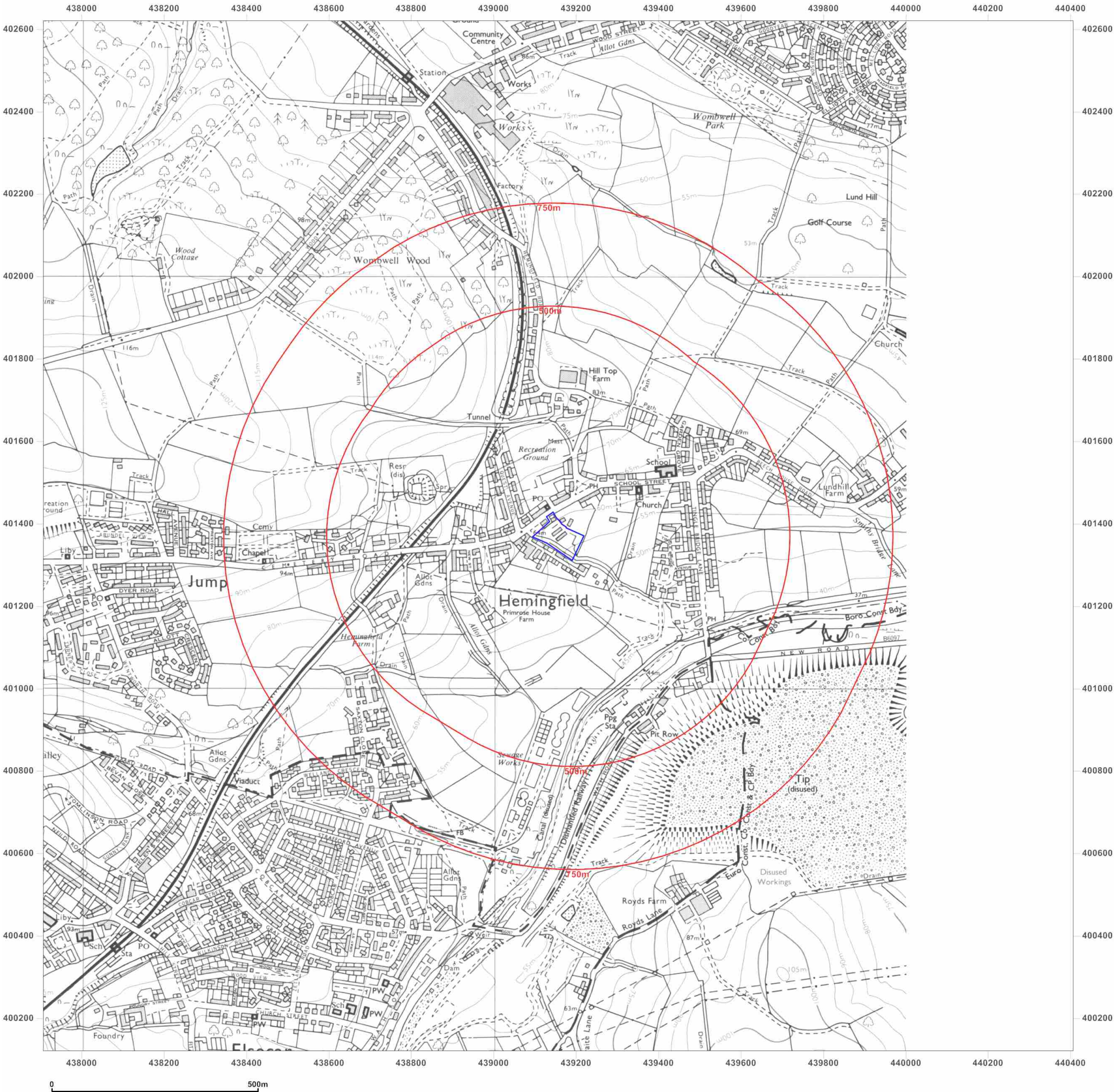


Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 22 May 2017

To view map legend click here [Legend](#)



Site Details:

29A Cemetery
Road,Hemingfield,Barnsley,S73
0PU

Client Ref: EMS_421655_563468
Report Ref: EMS-421655_563468
Grid Ref: 439156, 401370

Map Name: National Grid

Map date: 1987-1988

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1986
Revised 1987
Edition N/A
Copyright 1988
Levelled 1978

Surveyed 1983
Revised 1988
Edition N/A
Copyright 1989
Levelled 1978



Produced by
Groundsure Insights
www.groundsure.com



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

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 22 May 2017

To view map legend click here [Legend](#)



Site Details:

29A Cemetery
Road,Hemingfield,Barnsley,S73
0PU

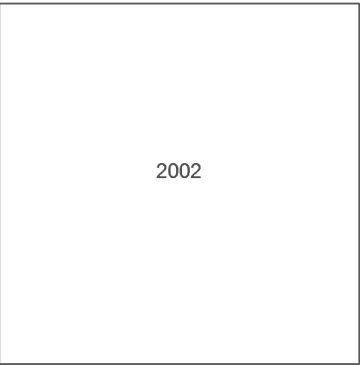
Client Ref: EMS_421655_563468
Report Ref: EMS-421655_563468
Grid Ref: 439156, 401370

Map Name: 1:10,000 Raster

Map date: 2002

Scale: 1:10,000

Printed at: 1:10,000



Produced by
Groundsure Insights
www.groundsure.com

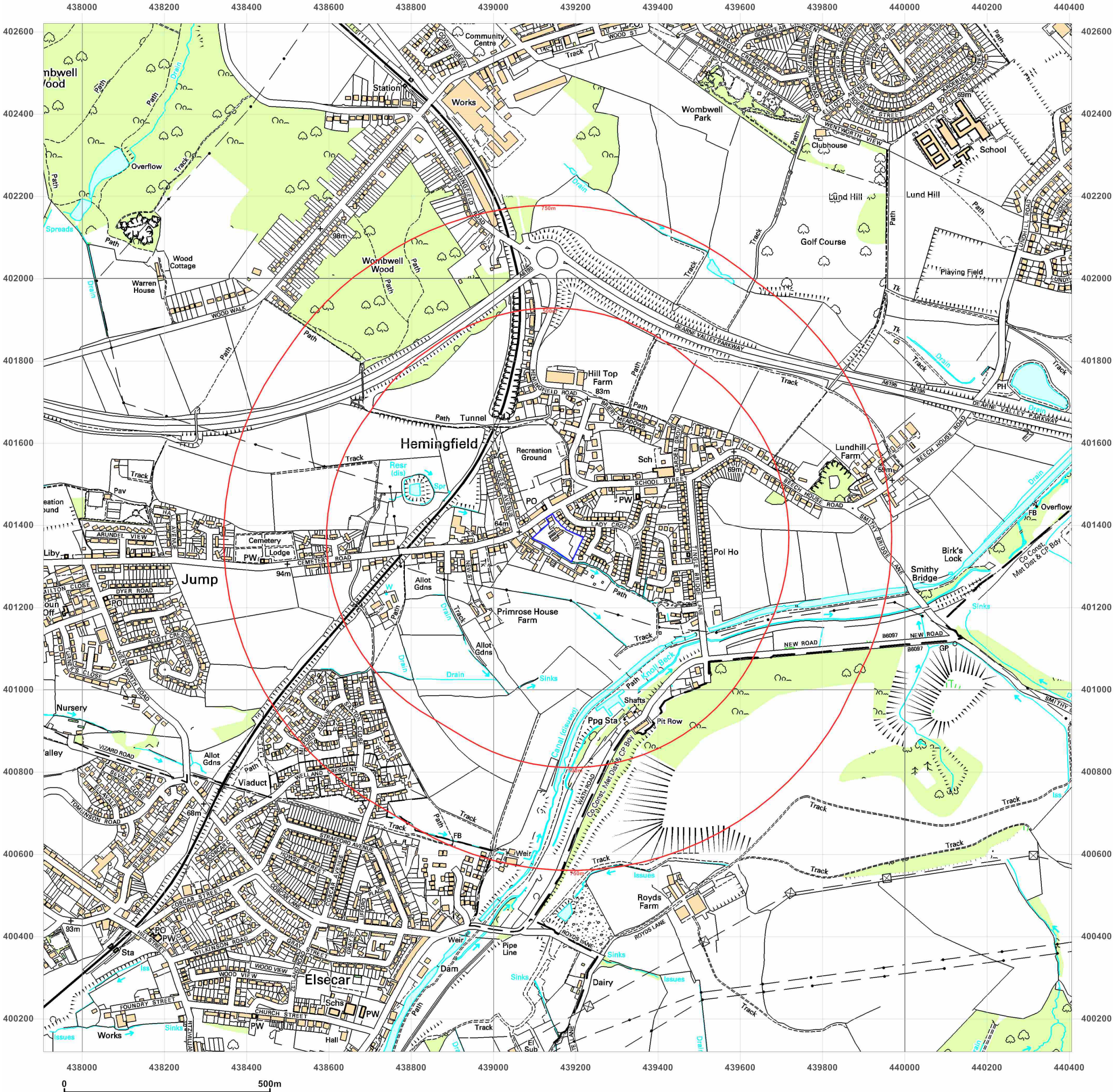


Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 22 May 2017

To view map legend click here [Legend](#)



Site Details:

29A Cemetery
Road,Hemingfield,Barnsley,S73
0PU

Client Ref: EMS_421655_563468
Report Ref: EMS-421655_563468
Grid Ref: 439156, 401370

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000



2010



Produced by
Groundsure Insights
www.groundsure.com

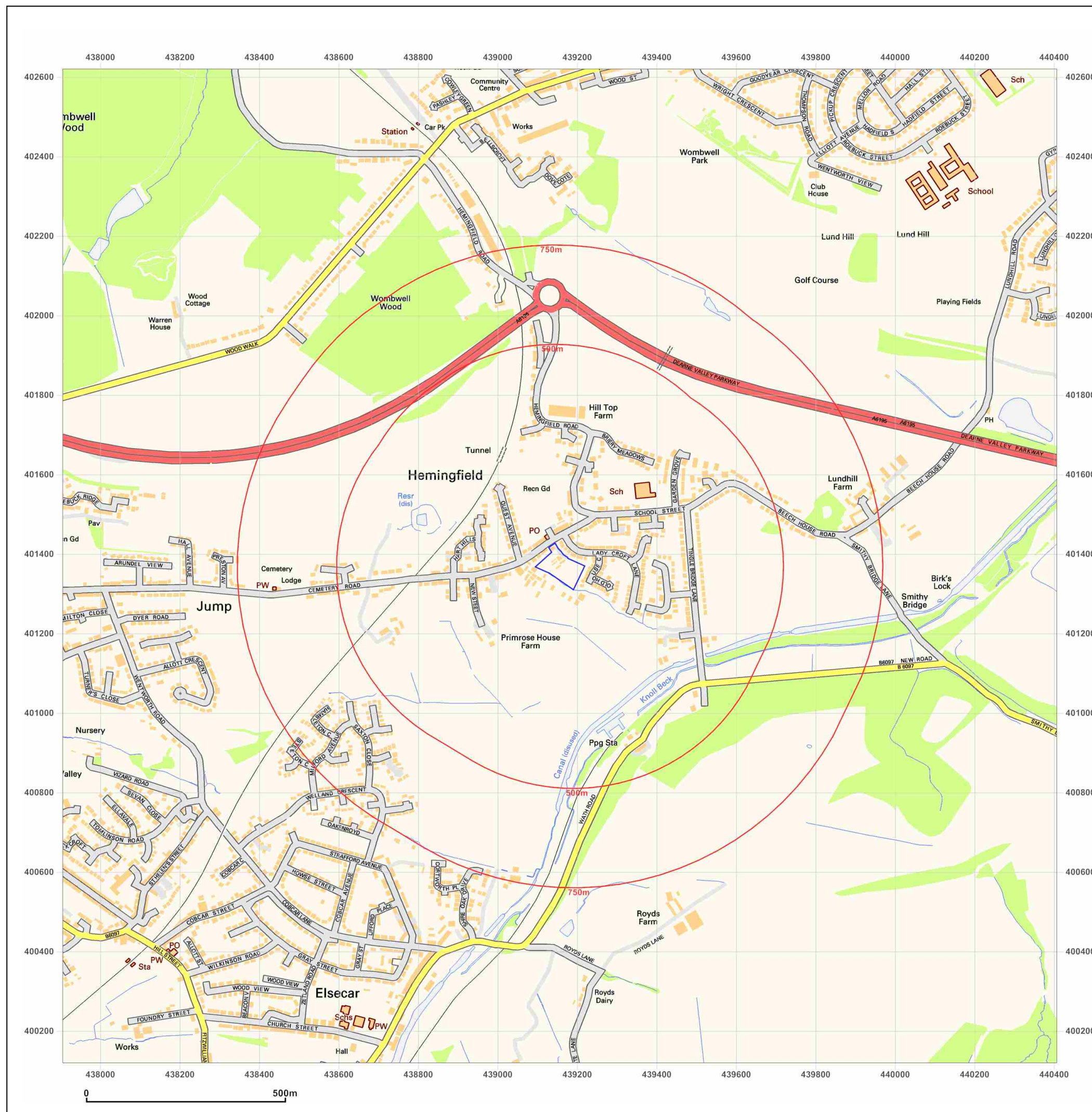


Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 22 May 2017

To view map legend click here [Legend](#)



Site Details:

29A Cemetery
Road,Hemingfield,Barnsley,S73
0PU

Client Ref: EMS_421655_563468
Report Ref: EMS-421655_563468
Grid Ref: 439156, 401370

Map Name: National Grid

Map date: 2014

Scale: 1:10,000

Printed at: 1:10,000



2014



Produced by
Groundsure Insights
www.groundsure.com

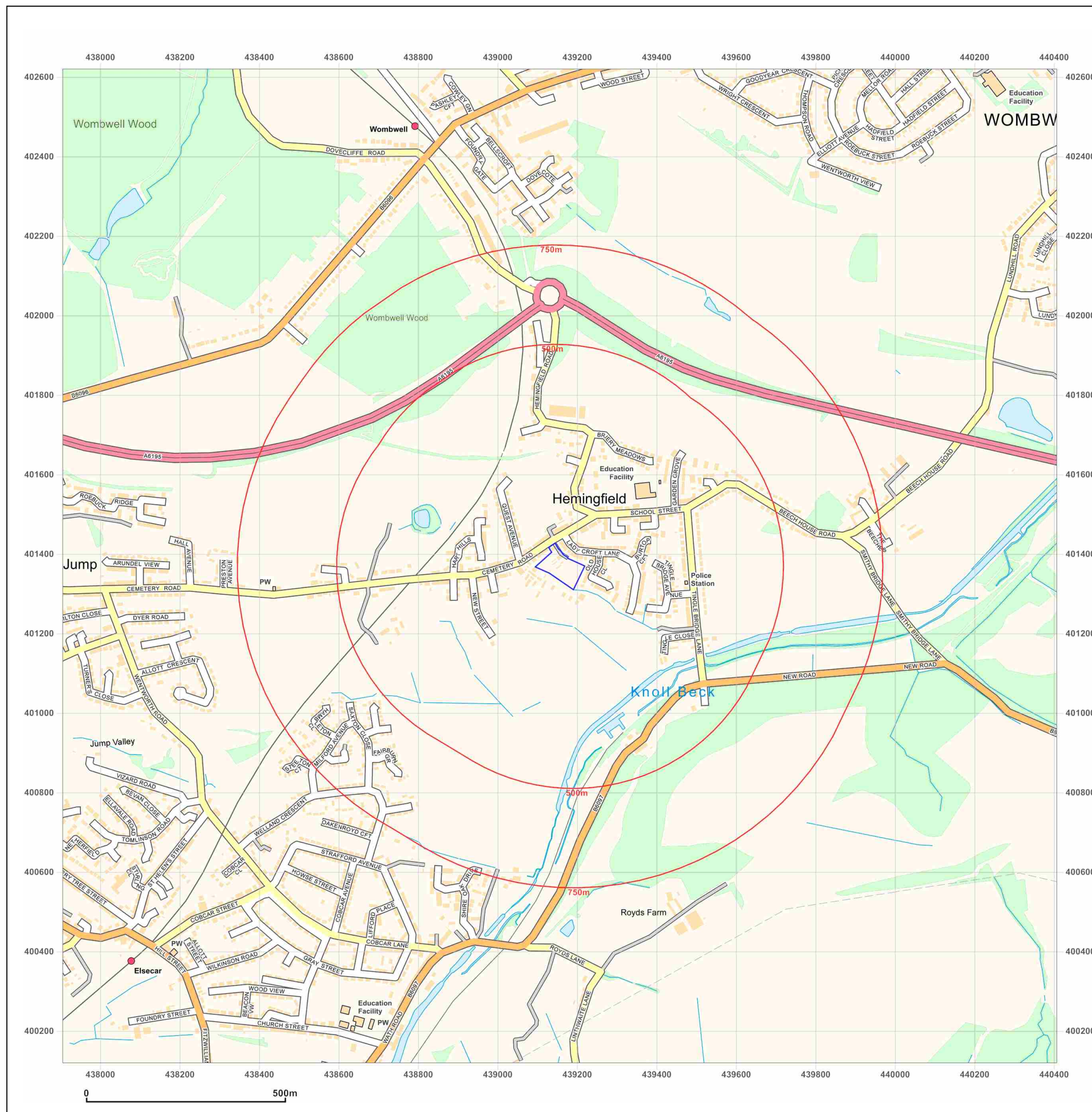


Supplied by:
www.emapsite.com
sales@emapsite.com

© Crown copyright and database rights 2015 Ordnance Survey 100035207

Production date: 22 May 2017

To view map legend click here [Legend](#)



County Series 1:10,560 scale

VEGETATION



Fir Wood



Deciduous Wood



Mixed Wood



Brushwood



Orchard



Reeds



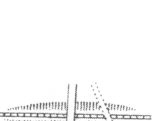
Rough Pasture



Furze

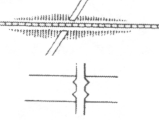


Marsh

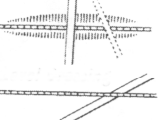


Osiers

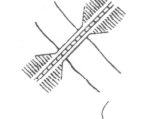
ROADS



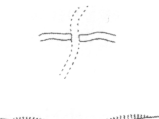
Railway over Road



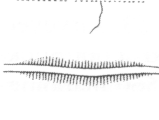
Road over Railway



Road over River or Canal



Level Crossing



Railway over River



Road over Stream

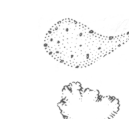


Road over Stream



Sunken Road

RAILWAYS



Double Lines of Railway

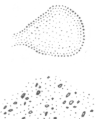


Single Lines of Railway and Tramway

GENERAL FEATURES



Gravel Pit



Sand Pit



Quarry



Shingle



Other Pits



Antiquities, Site of

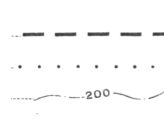


Arrow, showing direction of flow of water



Trigonometrical Station

BOUNDARIES



County Boundary



Parish Boundary



Contours



Parliamentary Division Boundary



Union Boundary



Rural District Boundary

National Grid 1:10,000 scale

HEIGHTS (METRES)

Values are given in metres above mean sea level at Newlyn.

Surface heights determined by ground survey 163m
air survey 164m

Bench marks and their values are shown on large scale maps, and bench mark lists containing fuller and possibly later levelling information are obtainable from the Director General, Ordnance Survey.

Contours are at 5 metres vertical interval.

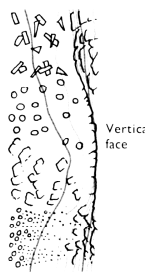
ROCK FEATURES

Loose rock

Boulders

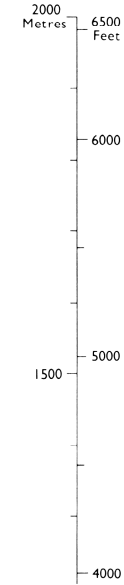
Outcrop

Scree



CONVERSION SCALE

Metres - Feet

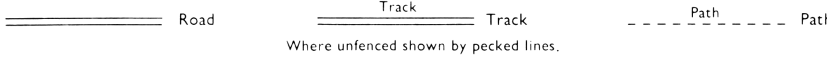


ABBREVIATIONS

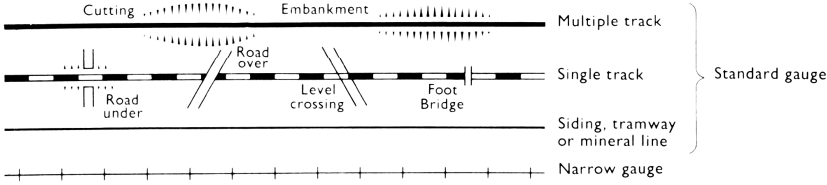
BP,BS Boundary Post or Stone
Ch Church
CH Club House
F Sta Fire Station
FB Foot Bridge
Fn Fountain
GP Guide Post
MP,MS Mile Post or Stone
P Pole or Post
Pol Sta Police Station

PO Post Office
PC Public Convenience
PH Public House
S Stone
Spr Spring
TCB Telephone Call Box
TCP Telephone Call Post
TH Town Hall
W Well
Y Youth hostel

ROADS



RAILWAYS



GENERAL FEATURES

Antiquity, (site of)
Boulders
Building
Pylon
Pole
Electricity transmission line
Glasshouse
Triangulation station

Lake, loch or pond

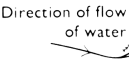
Sloping masonry

= Chalk pit, clay pit or quarry

= Gravel pit

= Sand pit

Refuse or slag heap



Shingle
Sand

VEGETATION

Bracken, rough grassland

Scrub

Heath

Marsh

Saltings

Reeds

Coppice

Orchard

Coniferous trees

Non-coniferous trees

In some areas bracken () and rough grassland () are shown separately.



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



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

GENERAL FEATURES	
	Wood
	Marsh
	Reeds
	Fir
	Mixed Wood
	Brush Wood
	Osiers
	Orchard
	Bush
	Rough Pasture
	Furze
	Ford
	Stepping Stones
	Ferry
	Sloping Masonry
	Flat Rock
	Lock
	Waterfall
	Quarry
	Sand Pit
	Refuse Heap
	Clay Pit
	Shingle
	Gravel Pit
	Trigonometrical Station
	Altitude at Trigonometrical Station
	Bench Mark
	Surface Level
	Permanent Traverse Station
	Antiquities (site of)
	Arrow denotes flow of water
	Sluice
	Trough
	Spring
	Well
	Mooring Ring
	Mooring Post
	Boundary Stone
	Boundary Post

ROADS	
	Road over single stream
	Road crossing railway
	Road over River or Canal
RAILWAYS	
	Railway crossing River or Canal
	Railway crossing Road
	Level Crossing
	Embankment
	Cutting

ABBREVIATIONS	
	Trigonometrical Station
	Altitude at Trigonometrical Station
	Bench Mark
	Surface Level
	Permanent Traverse Station
	Antiquities (site of)
	Arrow denotes flow of water
	Sluice
	Trough
	Spring
	Well
	Mooring Ring
	Mooring Post
	Boundary Stone
	Boundary Post

GENERAL FEATURES	
	Non-coniferous Trees
	Coniferous Trees
	Surveyed Trees
	Orchard Trees
	Copple, Osier
	Scrub
	Bracken
	Heath
	Rough Grassland
	Marsh, Saltings
	Reeds
	Slopes
	Cliff
	Cave Entrance
	Rock
	Boulders
	Sloping Masonry
	Roofed Building
	Glasshouse
	Archway
	Change of boundary marking
	AREA notes
	Antiquity (site of)
	Culvert
	Direction of water flow
	Electricity Pylon
	Electricity Transmission Line
	Triangulation Station
	Traverse Station (permanent)
	Bench Mark
	Surface Level
	Revision Point (instrumentally fixed)
	Revision Point & Bench Mark coincident
	Top
	Slopes
	Quarry
	Refuse Heap
	Sloping Masonry
	Flat Rock
	Sand
	Sand Pit
	Culvert
	Archway
	Shingle
	Boulders
	Gravel Pit
	Cliff Face
	Glazed Roof Building

BOUNDARIES	
England & Wales	
	County Boundary (geographical)
	County & Civil Parish Boundary coterminous
	Admin County or County Borough Boundary
	London Borough Boundary
	County District Boundaries based on civil parish
England, Wales & Scotland	
	Civil Parish Boundary
	Parly & Ward Boundaries based on civil parish
	Parly & Ward Boundaries not based on civil parish
Scotland	
	County Boundary (geographical)
	County Council Boundary
	County of the City Boundary
	Burgh Boundary
	District Council Boundary
	* Not with parish
	† Coincident with parish

ABBREVIATIONS	
	Beer House
	Bench Mark
	Boundary Post
	Boundary Stone
	Crane
	Club House
	Chimney
	Capstan
	Drinking Fountain
	Dock
	Electricity Pillar or Post
	Electricity Transmission Line
	Fire Alarm
	Fire Alarm Pillar
	Filter Bed, Foot Bridge
	Fundamental Bench Mark
	Flagstaff
	Fire Station
	Guide Post
	Gas Valve Compound
	Hydrant or Hydraulic
	Hectares
	Lecter Box
	Lifeboat Station
	Level Crossing
	Loading Gauge
	Lighthouse
	Lighting Tower
	Metres
	Mean High Water
	Mean High Water Springs
	Mean Low Water
	Mean Low Water Springs
	Mile or Mooring Post
	Mail Pick-up
	Mile Stone
	National Trust
	Normal Tidal Limit
	National Trust for Scotland
	Pillar, Pole or Post
	Public Convenience
	Police Call Box
	Public House
	Post Office
	Pump
	Police Telephone Pillar
	Reservoir
	Road House
	Revision Point
	Stone
	Signal Box
	Signal Light
	Sluice
	Signal Post
	Spring
	Signal Station
	Telephone Call Box
	Telephone Call Post
	Tank or Track
	Trough
	Traverse Station
	Well
	Weighbridge
	Wind Pump
	Works
	Water Point
	Water Tap



emapsite

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

Report Reference: EMS-421655_563469

Your Reference: EMS_421655_563469

Report Date 22 May 2017

Report Delivery Method: Email - pdf

Groundsure Geo Insight

Address: 29A Cemetery Road, Hemingfield, Barnsley, S73 0PU,

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

Groundsure Geo Insight

Address: 29A Cemetery Road, Hemingfield, Barnsley, S73 0PU,

Date: 22 May 2017

Reference: EMS-421655_563469

Client: emapsite



Aerial Photograph Capture date: 07-Jun-2013

Grid Reference: 439160,401368

Site Size: 0.63ha

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 Faults Map (1:10,000 scale).....	14
1.3 Bedrock and Faults.....	15
1.3.1 Bedrock/ Solid Geology.....	15
1.3.2 Faults.....	16
2 Geology 1:50,000 Scale.....	18
2.1 Artificial Ground Map.....	18
2. Geology 1:50,000 scale.....	19
2.1 Artificial Ground.....	19
2.1.1 Artificial/ Made Ground	19
2.1.2 Permeability of Artificial Ground.....	19
2.2 Superficial Deposits and Landslips Map (1:50,000 scale).....	20
2.2 Superficial Deposits and Landslips.....	21
2.2.1 Superficial Deposits/ Drift Geology.....	21
2.2.2 Permeability of Superficial Ground	21
2.2.3 Landslip.....	21
2.2.4 Landslip Permeability.....	21
2.3 Bedrock and Faults Map (1:50,000 scale).....	22
2.3 Bedrock, Solid Geology & Faults.....	23
2.3.1 Bedrock/Solid Geology.....	23
2.3.2 Permeability of Bedrock Ground.....	24
2.3.3 Faults.....	24
3 Radon Data.....	26
3.1 Radon Affected Areas.....	26
3.2 Radon Protection.....	26
4 Ground Workings Map.....	27
4 Ground Workings.....	28
4.1 Historical Surface Ground Working Features derived from Historical Mapping.....	28
4.2 Historical Underground Working Features derived from Historical Mapping.....	29
4.3 Current Ground Workings.....	30
5 Mining, Extraction & Natural Cavities.....	32
5.1 Historical Mining.....	32
5.2 Coal Mining.....	32
5.3 Johnson Poole and Bloomer.....	33
5.4 Non-Coal Mining.....	33
5.5 Non-Coal Mining Cavities.....	34
5.6 Natural Cavities.....	34
5.7 Brine Extraction.....	34
5.8 Gypsum Extraction.....	34
5.9 Tin Mining.....	34
5.10 Clay Mining.....	35
6 Natural Ground Subsidence.....	36
6.1 Shrink-Swell Clay Map.....	36
6.2 Landslides Map.....	37
6.3 Ground Dissolution of Soluble Rocks Map.....	38
6.4 Compressible Deposits Map.....	39
6.5 Collapsible Deposits Map.....	40
6.6 Running Sand Map.....	41

6 Natural Ground Subsidence..... 42

 6.1 Shrink-Swell Clays.....42

 6.2 Landslides.....42

 6.3 Ground Dissolution of Soluble Rocks.....43

 6.4 Compressible Deposits.....43

 6.5 Collapsible Deposits.....43

 6.6 Running Sands.....43

7 Borehole Records..... 46

8 Estimated Background Soil Chemistry..... 47

9 Railways and Tunnels Map..... 48

9 Railways and Tunnels..... 49

 9.1 Tunnels 49

 9.2 Historical Railway and Tunnel Features 49

 9.3 Historical Railways.....50

 9.4 Active Railways.....50

 9.5 Railway Projects.....51

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?	Yes
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site at 1:10,000 scale?*	No
	1.2.2 Are there any records of landslide within 500m of the study site boundary at 1:10,000 scale?	No
1.3 Bedrock, Solid Geology and Faults	1.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
	1.3.2 Are there any records of faults 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?	Yes
	2.1.2 Are there any records relating to permeability of artificial ground within the study site*boundary?	Yes
2.2 Superficial Geology and Landslips	2.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?*	No
	2.2.2 Are there any records of permeability of superficial ground within 500m of the study site?	No
	2.2.3 Are there any records of landslide 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 Faults

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 faults within 500m of the study site boundary?

Yes

Section 3: Radon

3. Radon

3.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?

The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

3.2 Radon Protection

No radon protective measures are necessary.

Section 4: Ground Workings

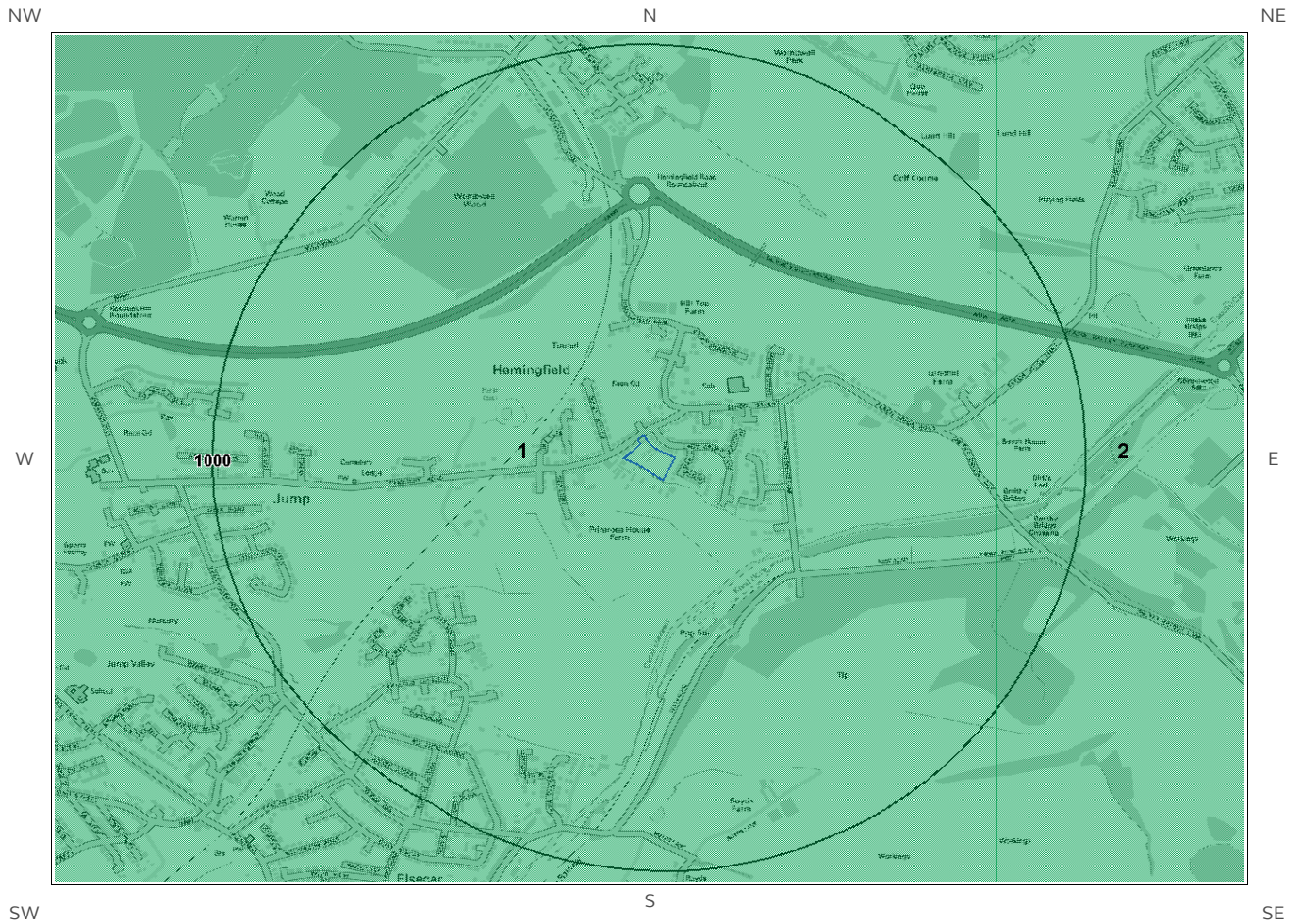
	On-site	0-50m	51-250	251-500	501-1000
4.1 Historical Surface Ground Working Features from Small Scale Mapping	0	0	18	Not Searched	Not Searched
4.2 Historical Underground Workings from Small Scale Mapping	0	0	6	2	6
4.3 Current Ground Workings	0	0	0	3	6

Section 5: Mining, Extraction & Natural Cavities

	On-site	0-50m	51-250	251-500	501-1000
5.1 Historical Mining	0	0	0	2	6
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*	3	1	0	1	9
5.5 Non-Coal Mining Cavities	0	0	0	0	0
5.5 Natural Cavities	0	0	0	0	0

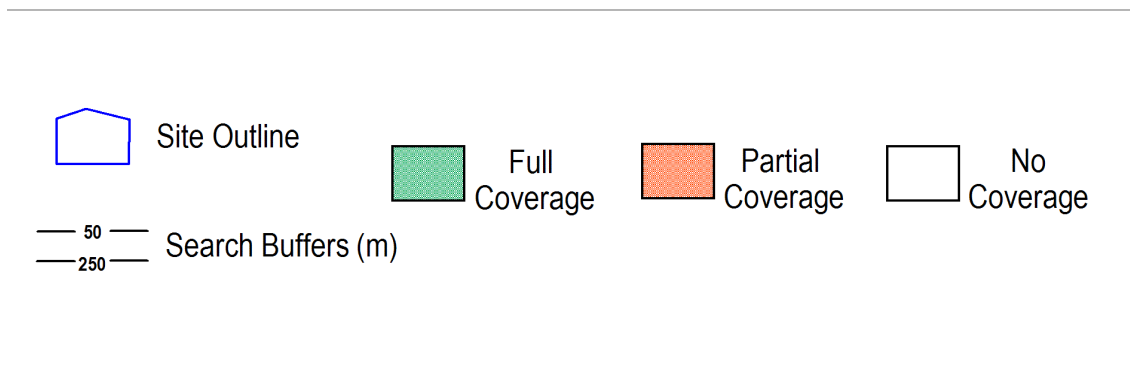
Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.6 Brine Extraction	0	0	0	0	0
5.7 Gypsum Extraction	0	0	0	0	0
5.8 Tin Mining	0	0	0	0	0
5.9 Clay Mining	0	0	0	0	0
Section 6: Natural Ground Subsidence	On-site				
6.1 Shrink-Swell Clay	Very Low				
6.2 Landslides	Very Low				
6.3 Ground Dissolution of Soluble Rocks	Negligible				
6.4 Compressible Deposits	Moderate				
6.5 Collapsible Deposits	Very Low				
6.5 Running Sand	Very Low				
Section 7: Borehole Records	On-site	0-50m	51-250		
7 BGS Recorded Boreholes	0	0	1		
Section 8: Estimated Background Soil Chemistry	On-site	0-50m	51-250		
8 Records of Background Soil Chemistry	3	2	0		
Section 9: Railways and Tunnels	On-site	0-50m	51-250	250-500	
9.1 Tunnels	0	0	1	Not Searched	
9.2 Historical Railway and Tunnel Features	0	0	11	Not Searched	
9.3 Historical Railways	0	0	0	Not Searched	
9.4 Active Railways	0	0	4	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 2017.
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	Some deposits are mapped	Full	Full	Some deposits are mapped
2	782.0	Some deposits are mapped	Full	Full	No coverage
N3	1311.0	Some deposits are mapped	Full	Full	Some deposits are mapped
N4	1542.0	Some deposits are mapped	Full	Full	No coverage

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

The definitions of coverage are as follows:

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

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



Site Outline

Search Buffers (m)

500

1000

Made Ground (undivided)

Worked Ground (undivided)

Infilled Ground

Disturbed Ground (undivided)

Landscaped Ground (undivided)

Reclaimed Ground

1. Geology 1:10,000 scale

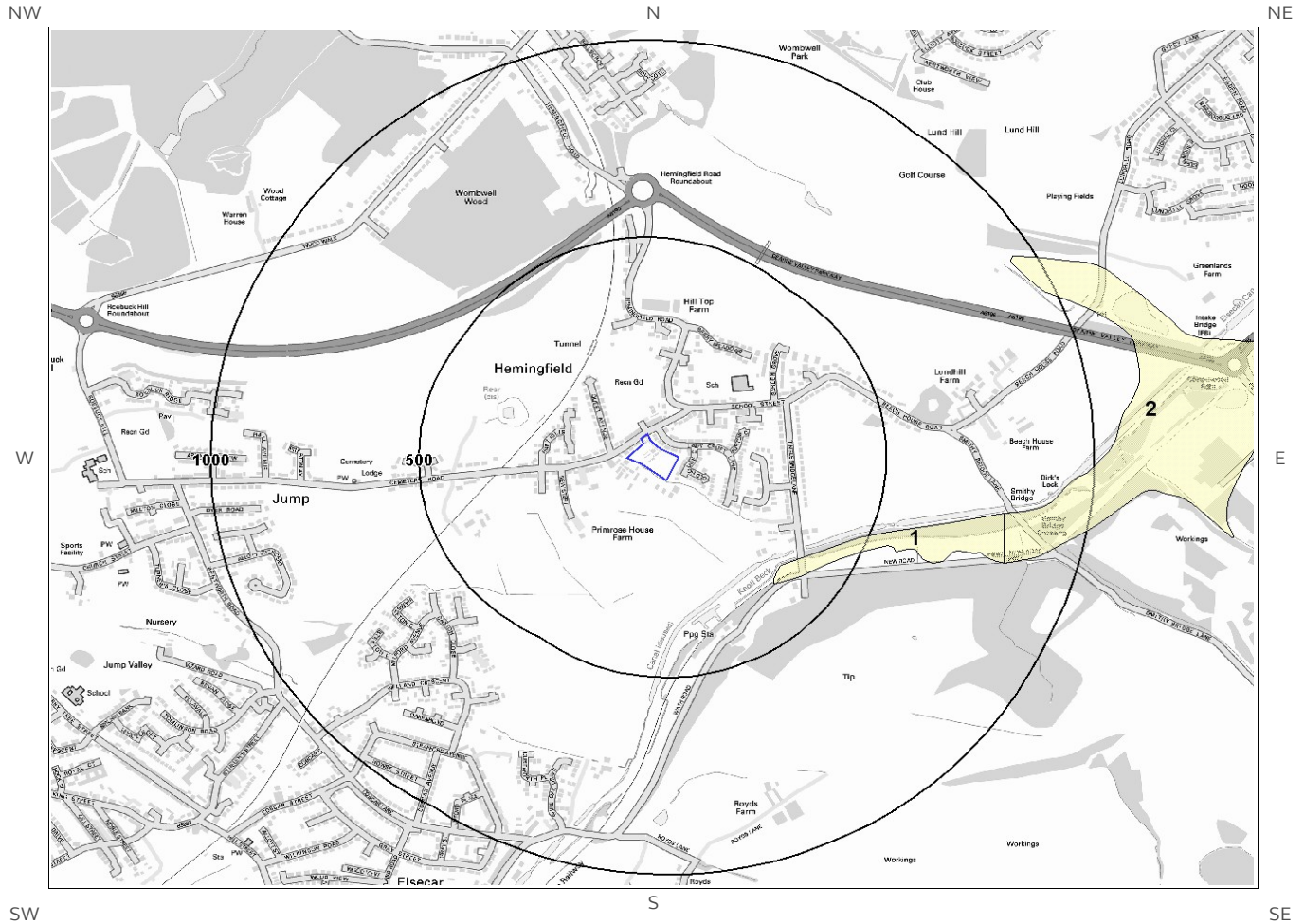
1.1 Artificial Ground

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

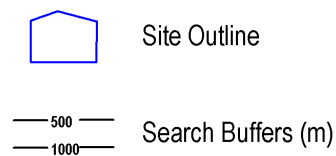
ID	Distance	Direction	LEX Code	Description	Rock Description
1	12.0	E	WMGR-ARTDP	Infilled Ground	Artificial Deposit
2	113.0	N	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
3	141.0	NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
4	150.0	S	WMGR-ARTDP	Infilled Ground	Artificial Deposit
5	197.0	W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
6	232.0	W	WGR-VOID	Worked Ground (Undivided)	Void
7	247.0	NW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
8	253.0	W	WGR-VOID	Worked Ground (Undivided)	Void
9	253.0	NW	WGR-VOID	Worked Ground (Undivided)	Void
10	273.0	SW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
11	335.0	E	WMGR-ARTDP	Infilled Ground	Artificial Deposit
12	424.0	S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
13	425.0	SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
14	429.0	S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
15	477.0	W	WMGR-ARTDP	Infilled Ground	Artificial Deposit

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



Artificial Ground Legend

© Crown copyright and database rights 2017.
Ordnance Survey license 100035207.



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	348.0	SE	ALV-XCZ	Alluvium - Clay And Silt	Clay And Silt

1.2.2 Landslip

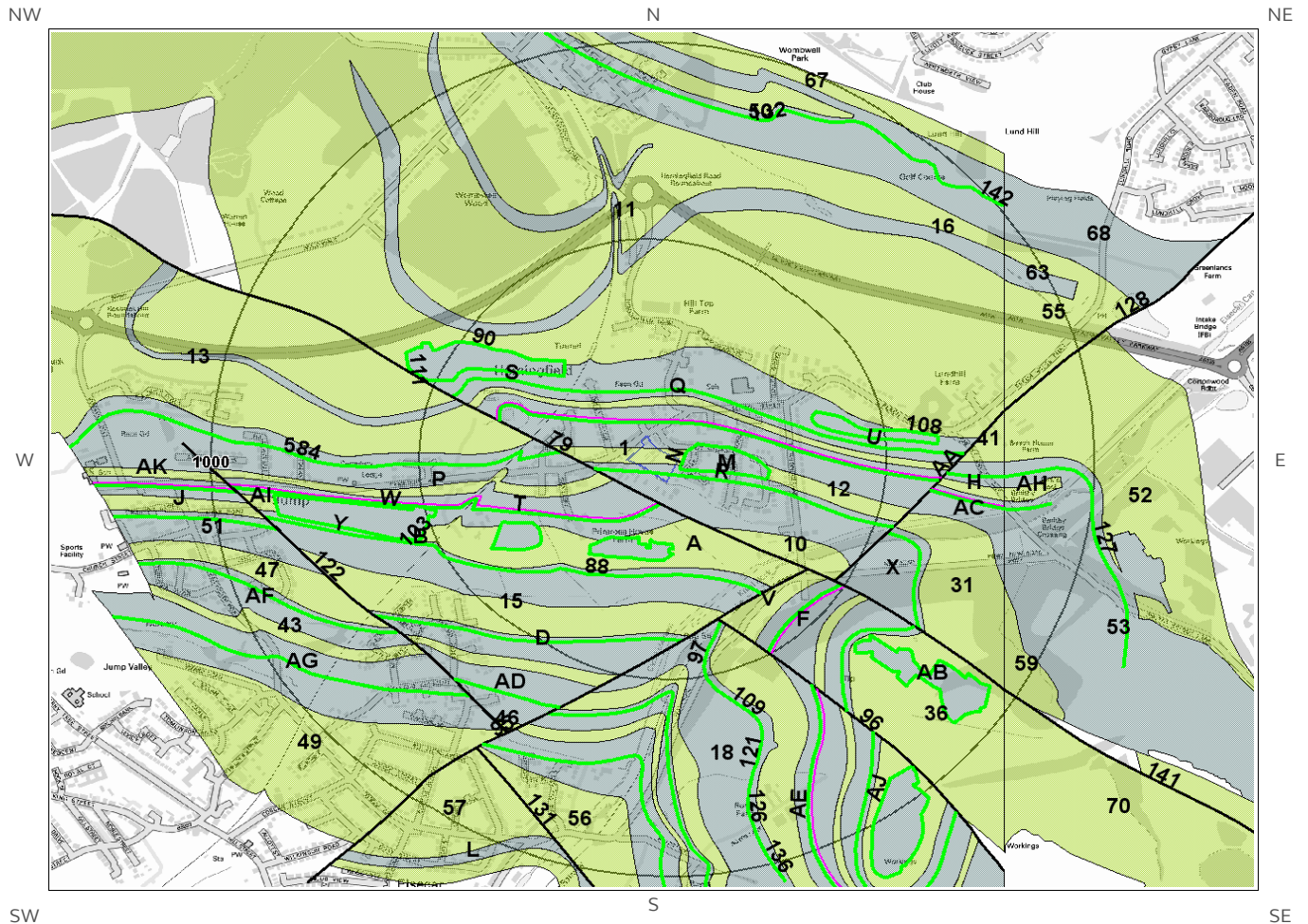
Are there any records of Landslip within 500m of the study site boundary at 1:10,000 scale? No

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 Faults Map (1:10,000 scale)

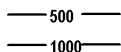


Bedrock and Faults Legend

© Crown copyright and database rights 2017.
Ordnance Survey license 100035207.



Site Outline



Search Buffers (m)

1.3 Bedrock and Faults

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
1	0.0	On Site	ABR-SDST	Abdy Rock - Sandstone	Duckmantian Sub-age
2M	0.0	On Site	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
3B	54.0	SW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
4P	59.0	SW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
5	74.0	SW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
6O	78.0	N	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
7Q	99.0	N	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
8A	101.0	S	ABR-SDST	Abdy Rock - Sandstone	Duckmantian Sub-age
9A	150.0	S	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
10	156.0	SE	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
11	197.0	N	WE-SDST	Woolley Edge Rock - Sandstone	Duckmantian Sub-age
12	199.0	E	ABR-SDST	Abdy Rock - Sandstone	Duckmantian Sub-age
13	228.0	W	WE-SDST	Woolley Edge Rock - Sandstone	Duckmantian Sub-age
14B	273.0	SW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
15	303.0	S	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
16	347.0	NW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
17V	358.0	SE	ABR-SDST	Abdy Rock - Sandstone	Duckmantian Sub-age
18	368.0	S	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
19D	381.0	S	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
20	385.0	S	ABR-SDST	Abdy Rock - Sandstone	Duckmantian Sub-age
21C	415.0	W	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
22F	416.0	SE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
23C	437.0	W	WE-SDST	Woolley Edge Rock - Sandstone	Duckmantian Sub-age

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
24E	463.0	S	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
25X	474.0	SE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
26D	497.0	S	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age

1.3.2 Faults

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

ID	Distance (m)	Direction	Category Description	Feature Description
72R	0.0	On Site	ROCK	Coal seam, inferred
73N	12.0	E	ROCK	Coal seam, observed coincident with both bedrock geology boundary and Artificial geology boundary
74M	13.0	SE	ROCK	Coal seam, observed
75N	25.0	NE	ROCK	Coal seam, observed coincident with both bedrock geology boundary and Artificial geology boundary
76O	35.0	N	ROCK	Coal seam, inferred
77M	38.0	NE	ROCK	Coal seam, observed
78O	42.0	N	FOSSIL_HORIZON	Fossil horizon, marine band
79	54.0	SW	FAULT	Normal fault, inferred
80P	55.0	SW	FOSSIL_HORIZON	Fossil horizon, marine band
81T	56.0	S	ROCK	Coal seam, inferred
82Q	114.0	N	ROCK	Coal seam, inferred
83A	150.0	S	ROCK	Coal seam, observed coincident with both bedrock geology boundary and Artificial geology boundary
84	160.0	W	ROCK	Coal seam, inferred
85S	172.0	NW	ROCK	Coal seam, observed
86A	190.0	SW	ROCK	Coal seam, observed coincident with both bedrock geology boundary and Artificial geology boundary
87R	199.0	E	ROCK	Coal seam, observed coincident with both bedrock geology boundary and Artificial geology boundary
88	235.0	S	ROCK	Coal seam, inferred
89S	247.0	NW	ROCK	Coal seam, observed
90	266.0	NW	ROCK	Coal seam, observed coincident with both bedrock geology boundary and Artificial geology boundary
91B	273.0	SW	ROCK	Coal seam, observed coincident with both bedrock geology boundary and Artificial geology boundary
92T	275.0	SW	ROCK	Coal seam, observed coincident with both bedrock geology boundary and Artificial geology boundary
93U	298.0	E	ROCK	Coal seam, observed
94U	335.0	E	ROCK	Coal seam, observed
95	358.0	SE	FAULT	Normal fault, inferred

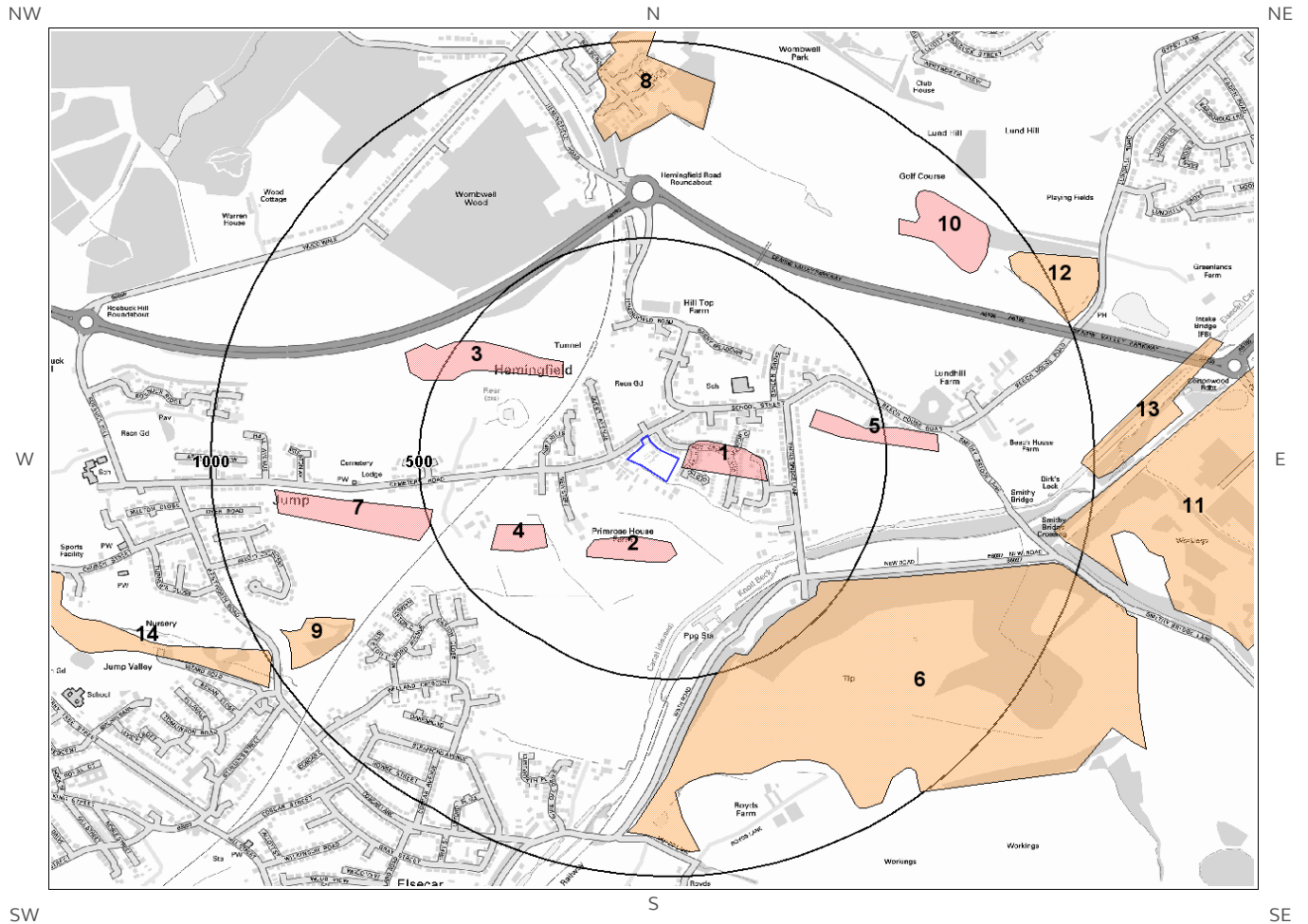
ID	Distance (m)	Direction	Category Description	Feature Description
96	368.0	S	FAULT	Normal fault, inferred
97	375.0	S	ROCK	Coal seam, inferred
98D	397.0	S	ROCK	Coal seam, inferred
99F	457.0	SE	ROCK	Coal seam, inferred
100V	465.0	SE	FOSSIL_HORIZON	Fossil horizon, marine band
101AA	474.0	SE	FAULT	Normal fault, inferred
102W	477.0	W	ROCK	Coal seam, observed

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.

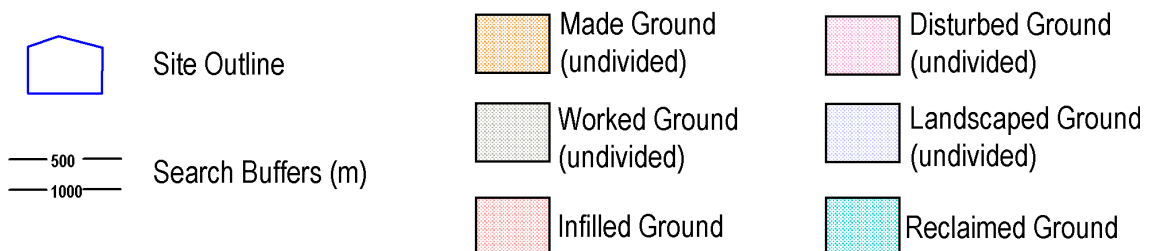
2 Geology 1:50,000 Scale

2.1 Artificial Ground Map



Ground Workings Legend

© Crown copyright and database rights 2017.
Ordnance Survey license 100035207.



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: 087

2.1.1 Artificial/ Made Ground

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

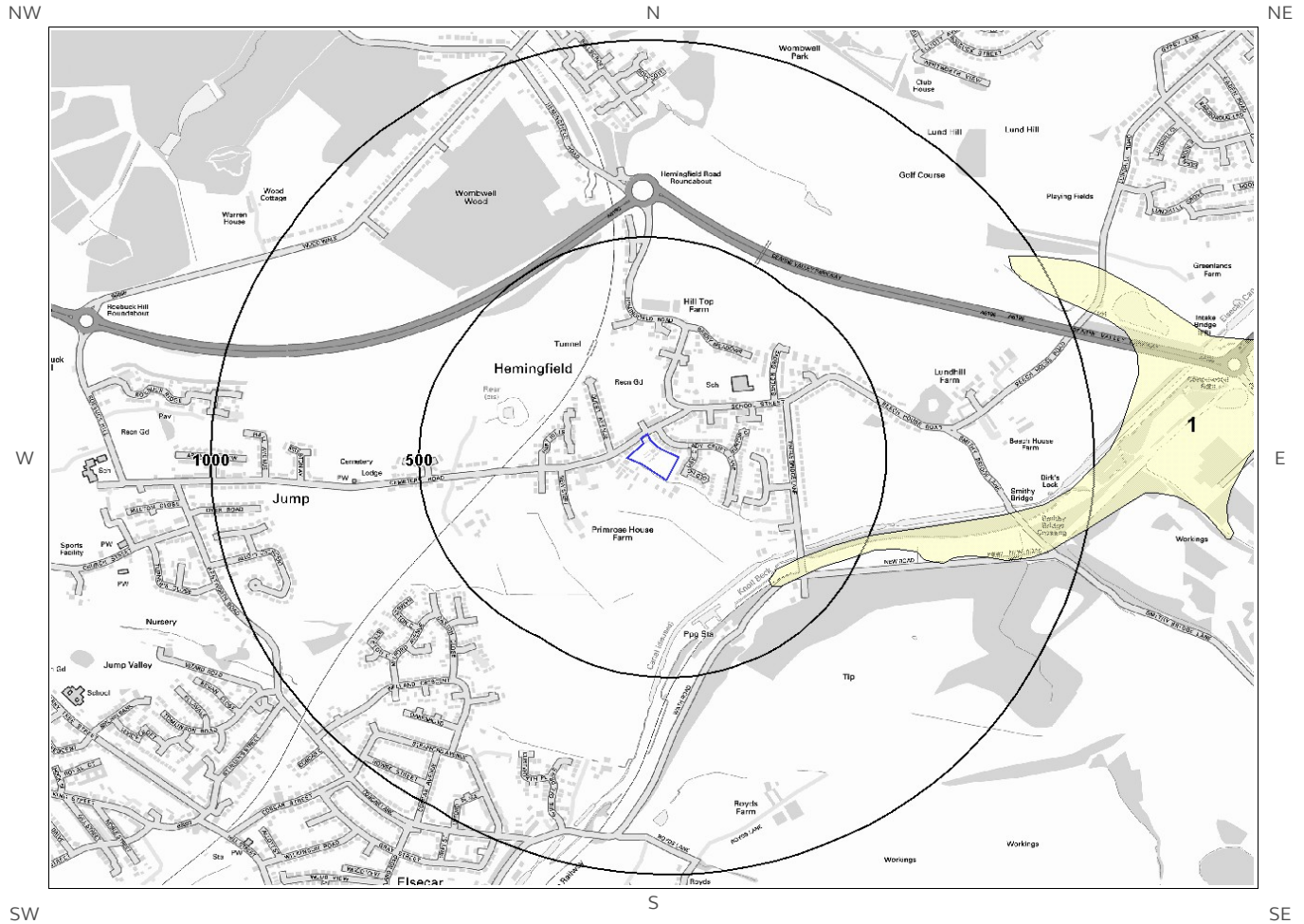
ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	14.0	E	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
2	148.0	S	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
3	245.0	NW	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
4	260.0	SW	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
5	326.0	E	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
6	439.0	SE	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
7	483.0	W	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? Yes

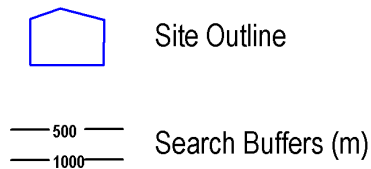
Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
14.0	E	Mixed	Very High	Low

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



Ground Workings Legend

© Crown copyright and database rights 2017.
Ordnance Survey license 100035207.



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	348.0	SE	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL

2.2.2 Permeability of Superficial Ground

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

Database searched and no data found.

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.