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**Report Ref:** EMS-DE-414082\_553270  
**Grid Ref:** 432680, 410113

**Map Name:** National Grid

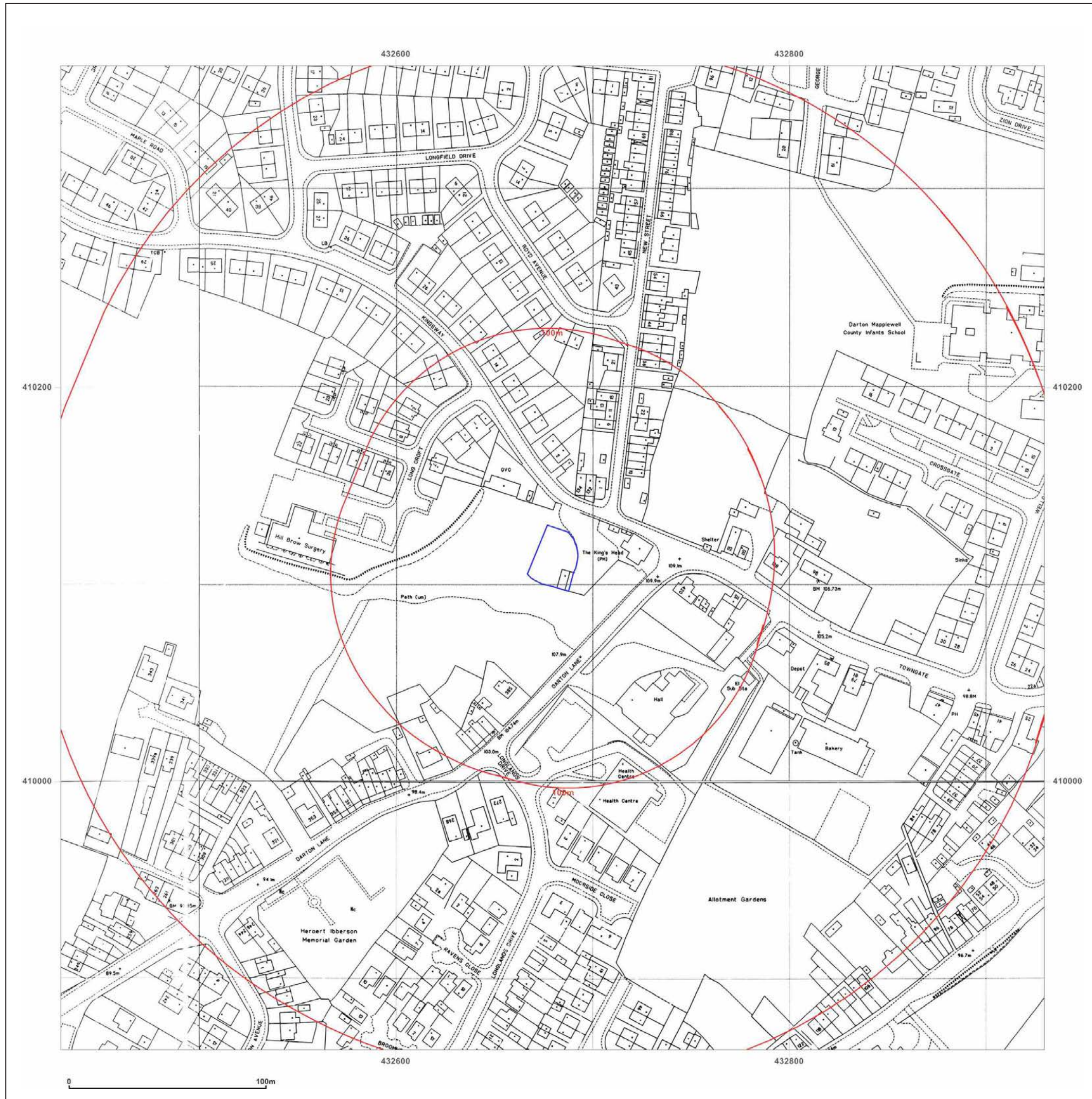
**Map date:** 1993-1994

**Scale:** 1:1,250

**Printed at:** 1:2,000



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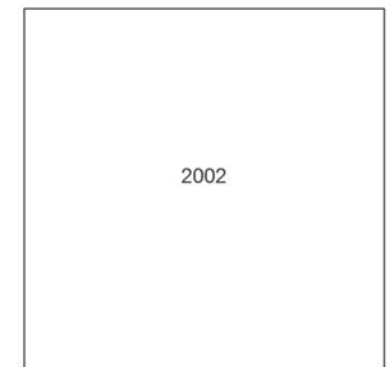
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 Report Ref: EMS-DE-414082\_553270  
 Grid Ref: 432680, 410113

Map Name: 1:10,000 Raster

Map date: 2002

Scale: 1:10,000

Printed at: 1:10,000



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Site Details:

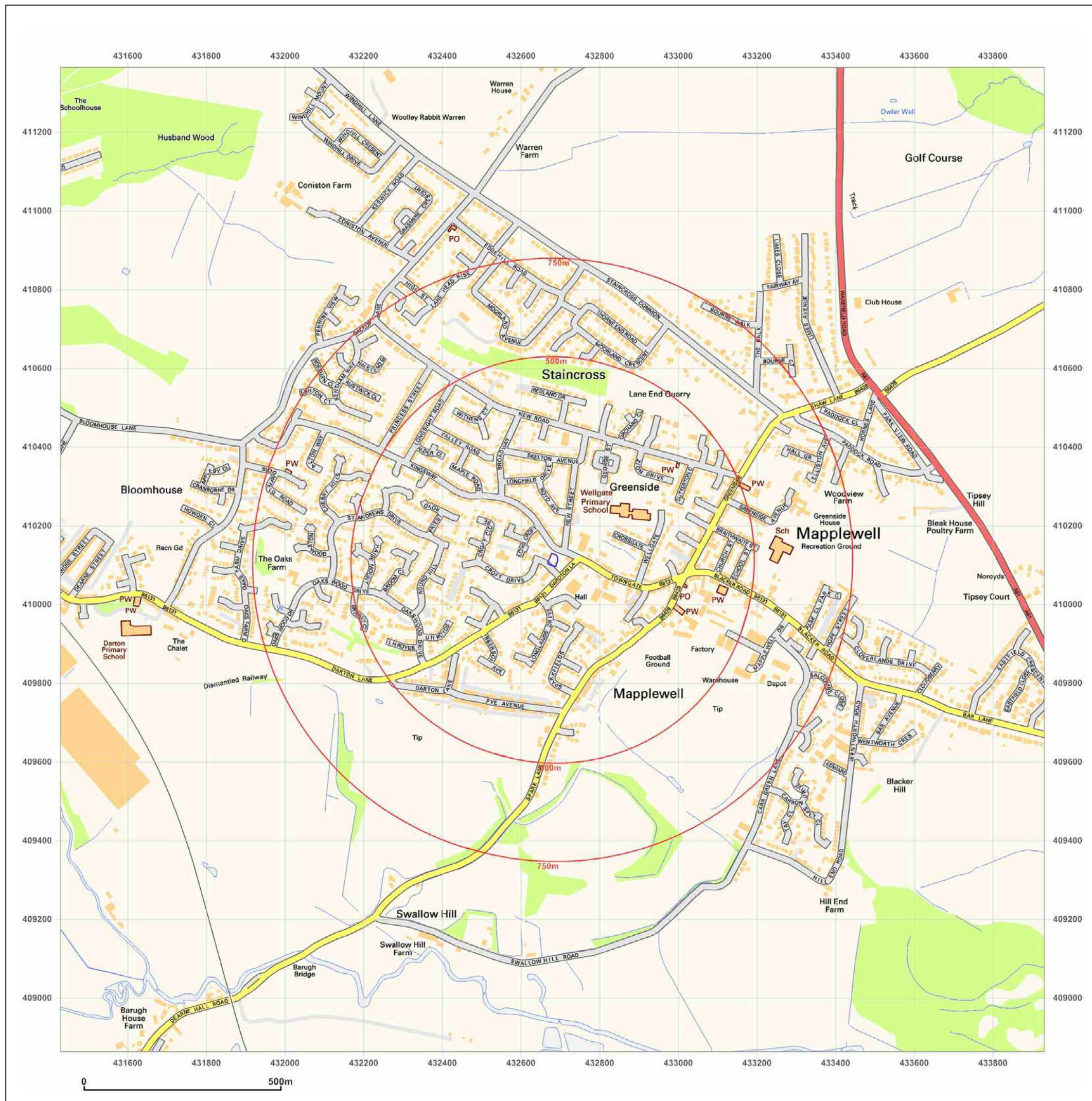
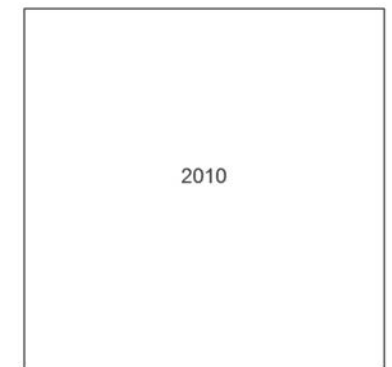
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 Report Ref: EMS-DE-414082\_553270  
 Grid Ref: 432680, 410113

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

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Site Details:

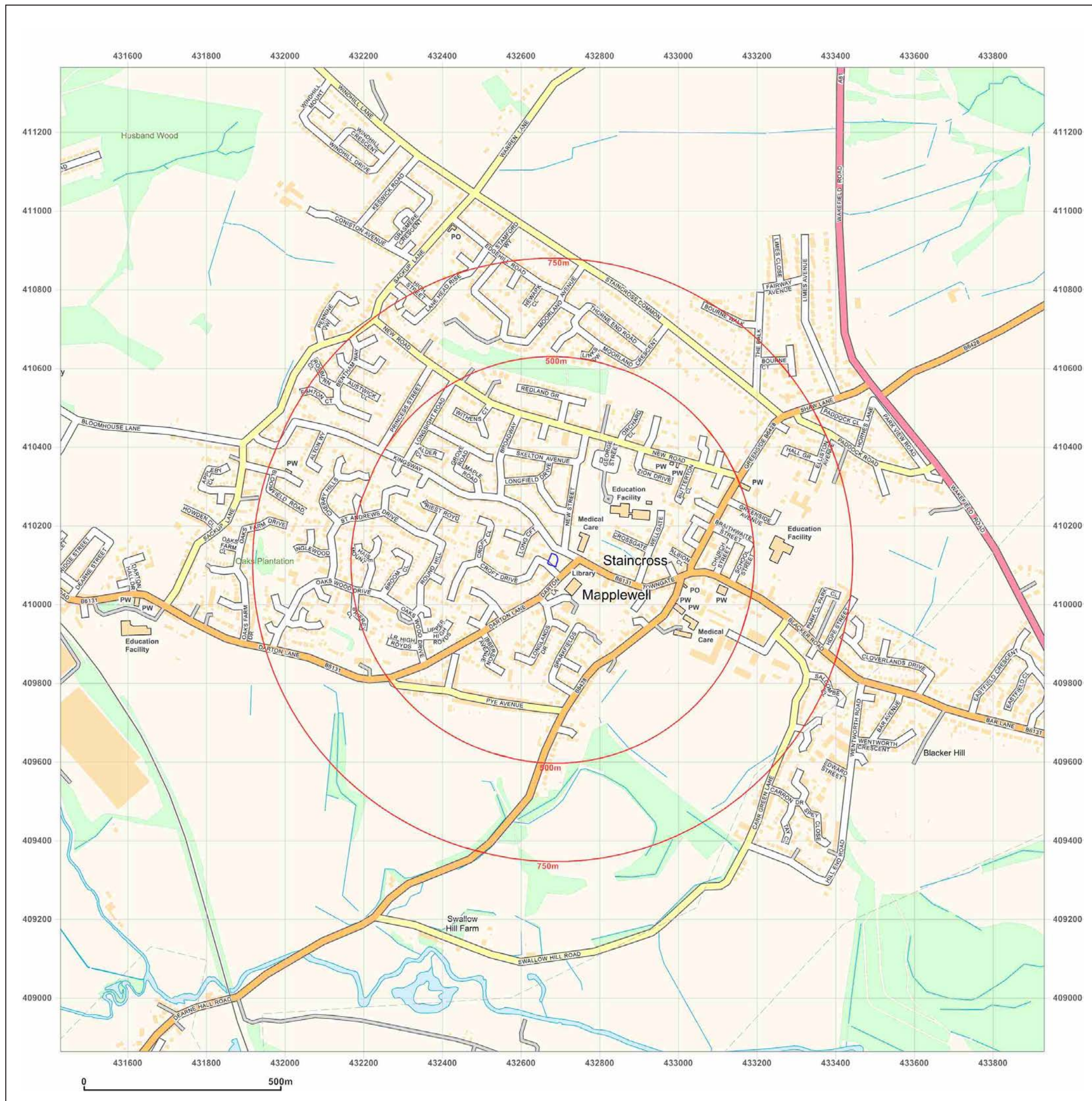
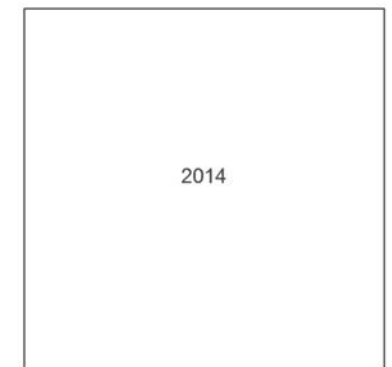
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 Grid Ref: 432680, 410113

Map Name: National Grid

Map date: 2014

Scale: 1:10,000

Printed at: 1:10,000



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## **APPENDIX J: GROUNDSURE REPORTS**

Demeter Environmental Ltd  
Hanover House, Hanover Street,  
Liverpool, L3 3DZ

Report Reference: EMS-DE-414082\_553271

Your Reference: EMS\_414082\_553271

Report Date 30 Mar 2017

Report Delivery Method: Email - pdf

## Groundsure Geo Insight

Address: ,

Dear Sir/ Madam,

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

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159 000 quoting the above Groundsure reference number.

Yours faithfully,

Demeter Environmental ltd

Enc.  
Groundsure Geo Insight



# Groundsure Geo Insight

Address: ,  
Date: 30 Mar 2017  
Reference: EMS-DE-414082\_553271  
Client: Demeter Environmental Ltd

NW N NE



SW S SE

Aerial Photograph Capture date: 26-Mar-2012  
Grid Reference: 432681,410113  
Site Size: 0.06ha



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# Overview of Findings

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

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

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

Section 1: Geology 1:10,000 Scale		
1.1 Artificial Ground	1.1 Is there any Artificial Ground/ Made Ground present beneath the study site at 1:10,000 scale?	No
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site at 1:10,000 scale?*	No
	1.2.2 Are there any records of landslip within 500m of the study site boundary at 1:10,000 scale?	No
1.3 Bedrock, Solid Geology and 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?	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?*	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 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 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 in a Radon Affected Area, as between 3 and 5% of properties are above the Action Level.

3.2 Radon Protection

Basic radon protective measures are necessary.

## Section 4: Ground Workings

	On-site	0-50m	51-250	251-500	501-1000
4.1 Historical Surface Ground Working Features from Small Scale Mapping	0	0	0	Not Searched	Not Searched
4.2 Historical Underground Workings from Small Scale Mapping	0	0	1	18	11
4.3 Current Ground Workings	0	0	0	12	40

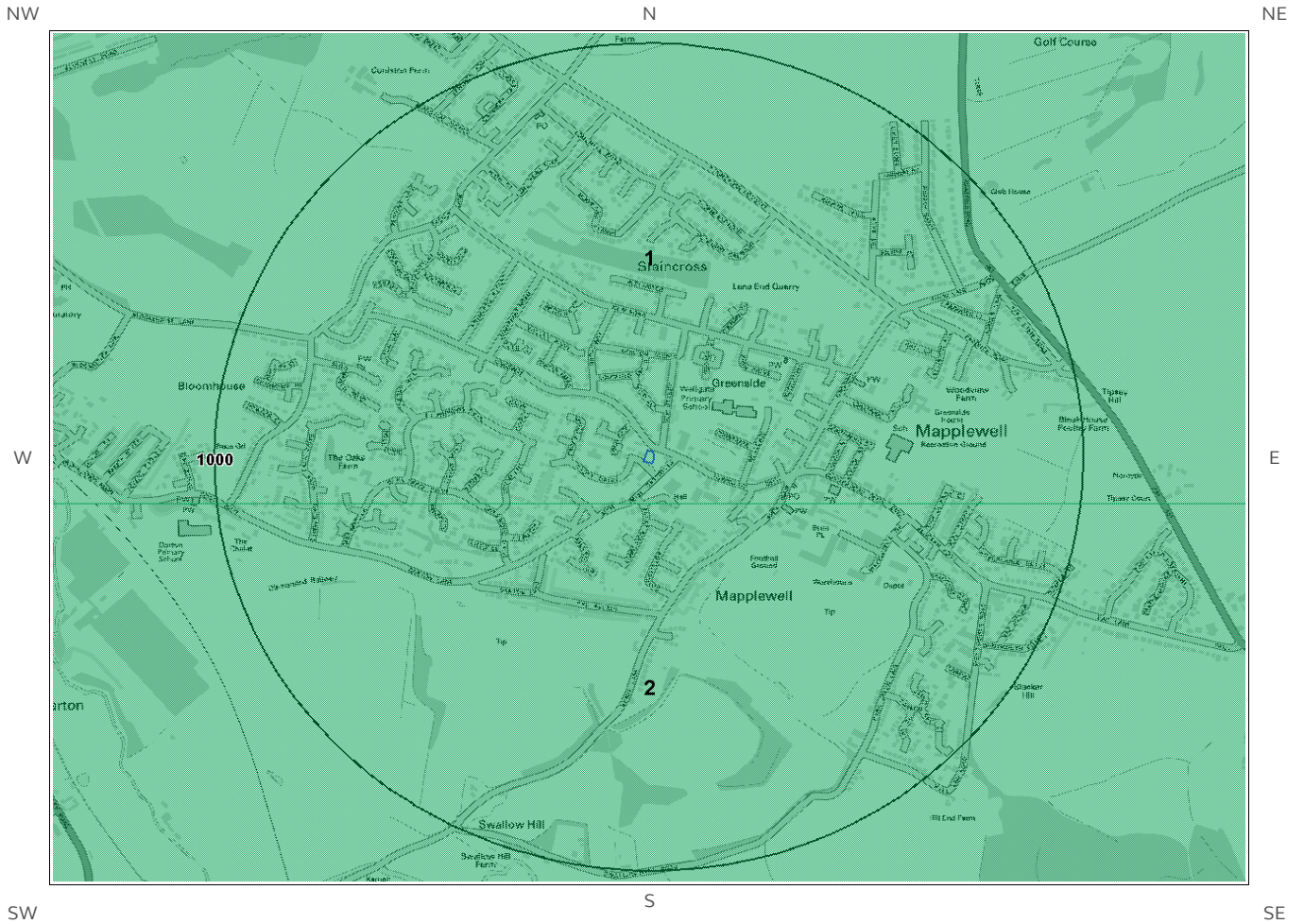
## Section 5: Mining, Extraction & Natural Cavities

	On-site	0-50m	51-250	251-500	501-1000
5.1 Historical Mining	0	0	1	18	11
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*	1	0	1	1	3
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	Negligible				
6.5 Collapsible Deposits	Very Low				
6.5 Running Sand	Low				
Section 7: Borehole Records	On-site	0-50m	51-250		
7 BGS Recorded Boreholes	0	0	37		
Section 8: Estimated Background Soil Chemistry	On-site	0-50m	51-250		
8 Records of Background Soil Chemistry	2	0	0		
Section 9: Railways and Tunnels	On-site	0-50m	51-250	250-500	
9.1 Tunnels	0	0	0	Not Searched	
9.2 Historical Railway and Tunnel Features	0	0	0	Not Searched	
9.3 Historical Railways	0	0	0	Not Searched	
9.4 Active Railways	0	0	0	Not Searched	
9.5 Railway Projects	0	0	0	0	

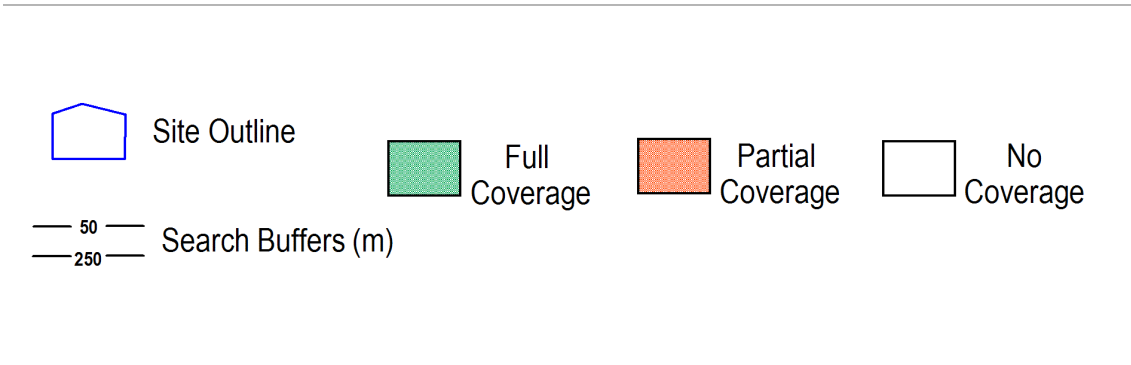


# 1:10,000 Scale Availability



1\_10,000 Availability Legend

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# Availability of 1:10,000 Scale Geology Mapping

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

ID	Distance	Artificial Coverage	Superficial Coverage	Bedrock Coverage	Mass Movement Coverage
1	0.0	Some deposits are mapped	Full	Full	No coverage
2	97.0	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.

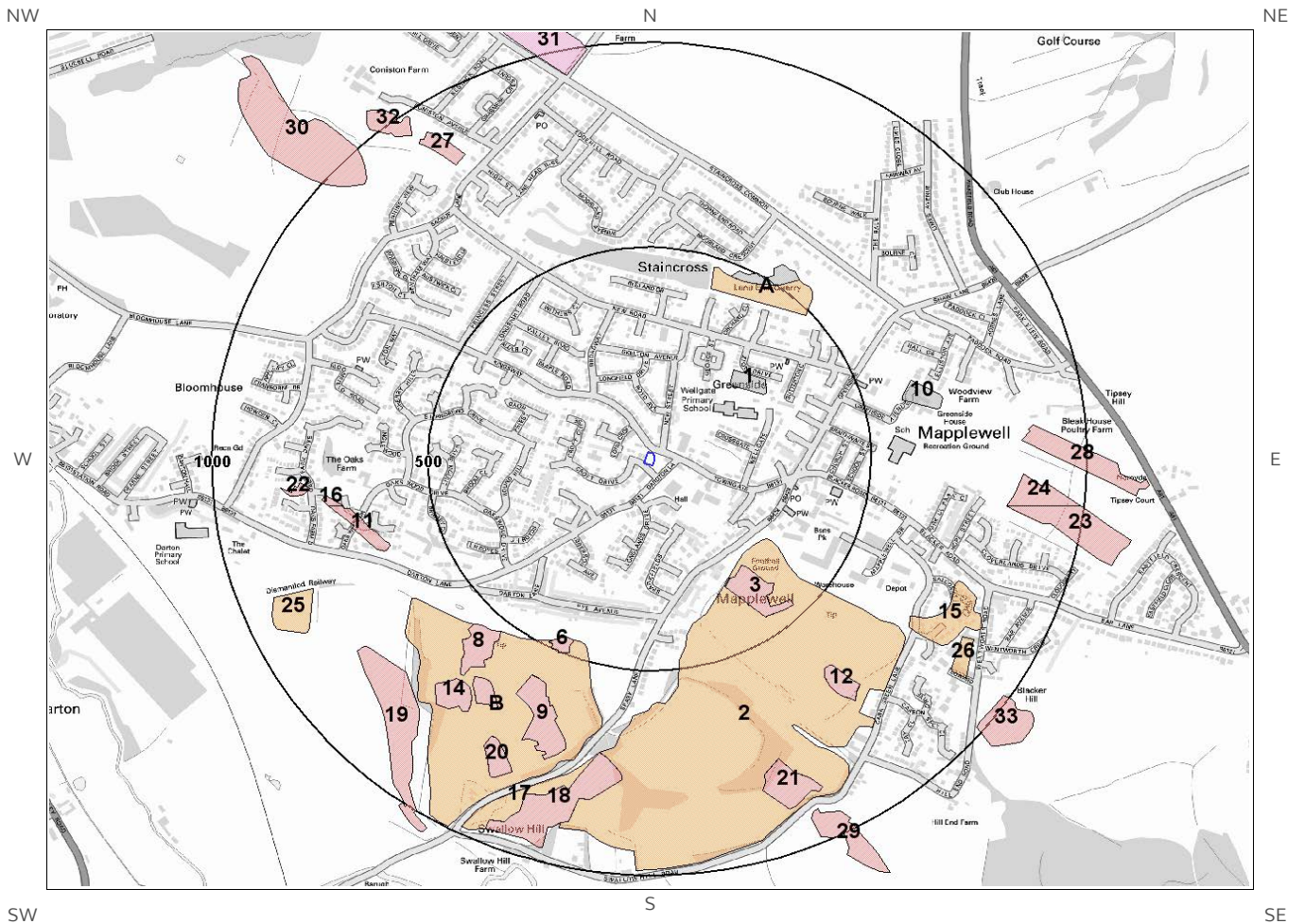
The definitions of coverage are as follows:

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






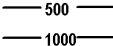




# 1 Geology (1:10,000 scale).

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



**Artificial Ground Legend**

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	Site Outline		Made Ground (undivided)		Disturbed Ground (undivided)
	Search Buffers (m)		Worked Ground (undivided)		Landscaped Ground (undivided)
			Infilled Ground		Reclaimed Ground

# 1. Geology 1:10,000 scale

## 1.1 Artificial Ground

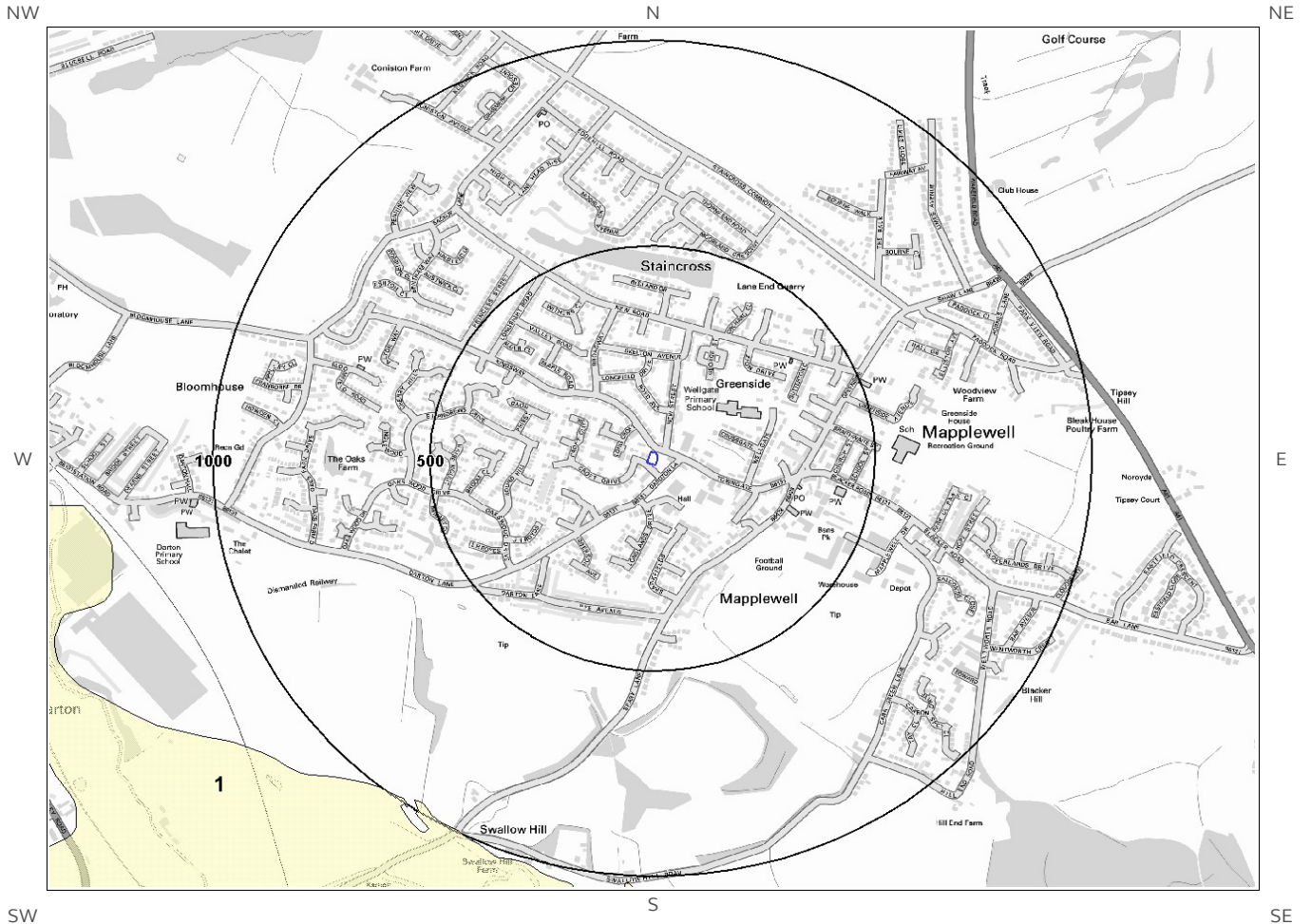
The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping.

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	244.0	NE	WGR-VOID	Worked Ground (Undivided)	Void
2	300.0	SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
3	317.0	SE	WMGR-ARTDP	Infilled Ground	Artificial Deposit
4A	424.0	N	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
5B	459.0	S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
6	460.0	SW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
7A	469.0	NE	WGR-VOID	Worked Ground (Undivided)	Void


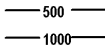


# 1.2 Superficial Deposits and Landslips Map (1:10,000 scale)



Artificial Ground Legend

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-  Site Outline
-  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? No

Database searched and no data found.

---

## 1.2.2 Landslip

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

Database searched and no data found.

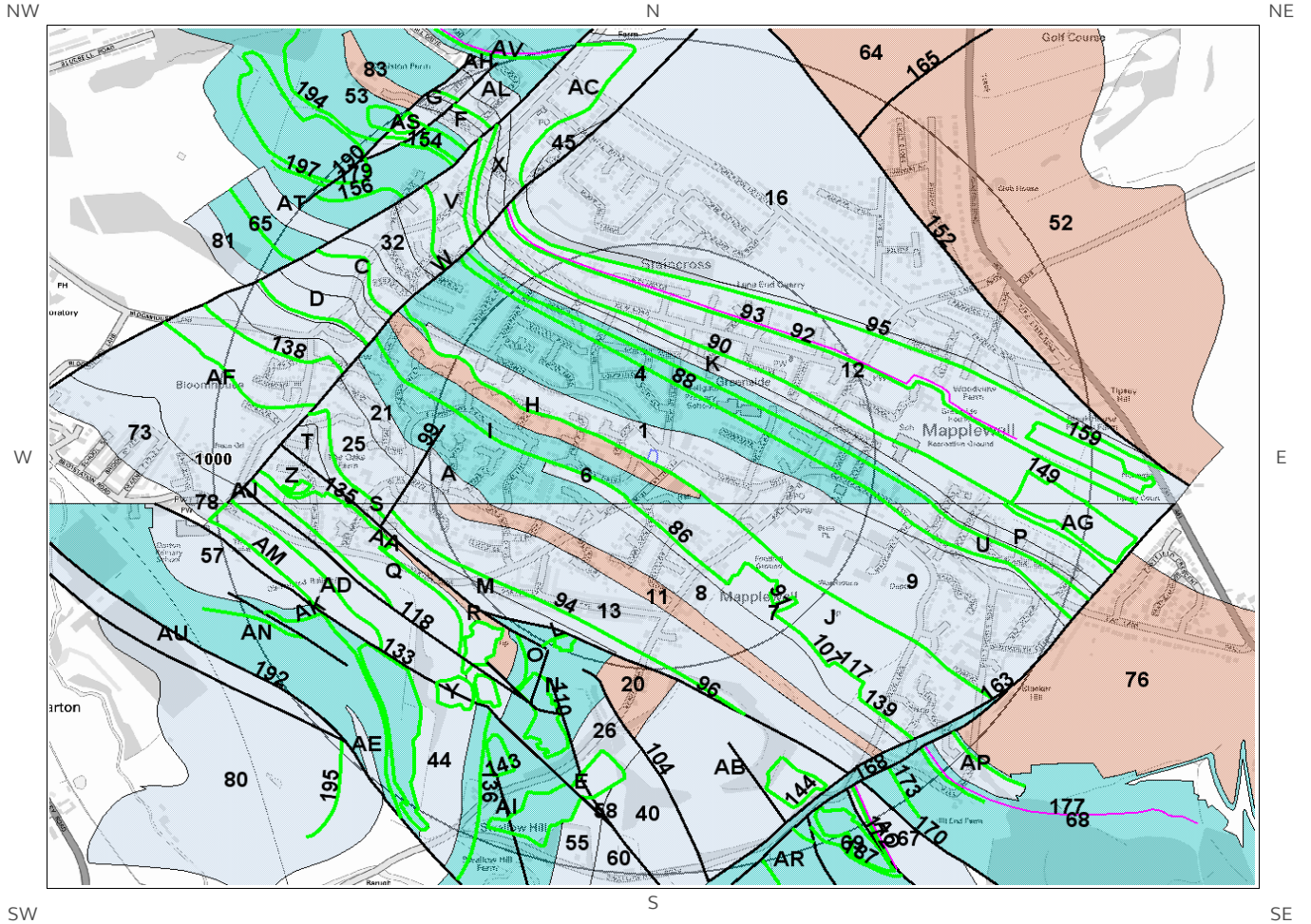
The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:10,000 scale

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

---



# 1.3 Bedrock and Faults Map (1:10,000 scale)

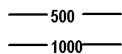


Bedrock and Faults Legend

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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	KNR-SDST	Kent's Rock - Sandstone	Duckmantian Sub-age
2H	0.0	SW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
3I	46.0	SW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
4	56.0	N	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
5J	97.0	S	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
6	100.0	SW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
7	109.0	SW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
8	132.0	SW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
9	162.0	SE	KNR-SDST	Kent's Rock - Sandstone	Duckmantian Sub-age
10K	228.0	NE	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
11	242.0	SW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
12	252.0	NE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
13	285.0	SW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
14A	379.0	W	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
15U	431.0	E	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
16	437.0	N	WE-SDST	Woolley Edge Rock - Sandstone	Duckmantian Sub-age
17M	444.0	SW	BNR-SDST	Barnsley Rock - Sandstone	Duckmantian Sub-age
18N	460.0	SW	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
19A	470.0	W	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
20	475.0	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
84H	0.0	SW	ROCK	Coal seam, inferred
85I	100.0	SW	ROCK	Coal seam, inferred
86	109.0	SW	ROCK	Coal seam, inferred
87J	162.0	SE	ROCK	Coal seam, inferred
88	164.0	NE	ROCK	Coal seam, inferred
89K	205.0	NE	ROCK	Coal seam, inferred
90	275.0	NE	ROCK	Coal seam, inferred
91	317.0	SE	ROCK	Coal seam, observed
92	362.0	N	ROCK	Coal seam, inferred
93	370.0	N	FOSSIL_HORIZON	Fossil horizon, marine band
94	415.0	SW	ROCK	Coal seam, inferred
95	422.0	N	ROCK	Coal seam, inferred
96	460.0	SW	FAULT	Normal fault, inferred
97L	460.0	SW	ROCK	Coal seam, observed
98L	460.0	S	ROCK	Coal seam, observed
99	474.0	W	FAULT	Normal fault, inferred
100L	490.0	SW	ROCK	Coal seam, observed

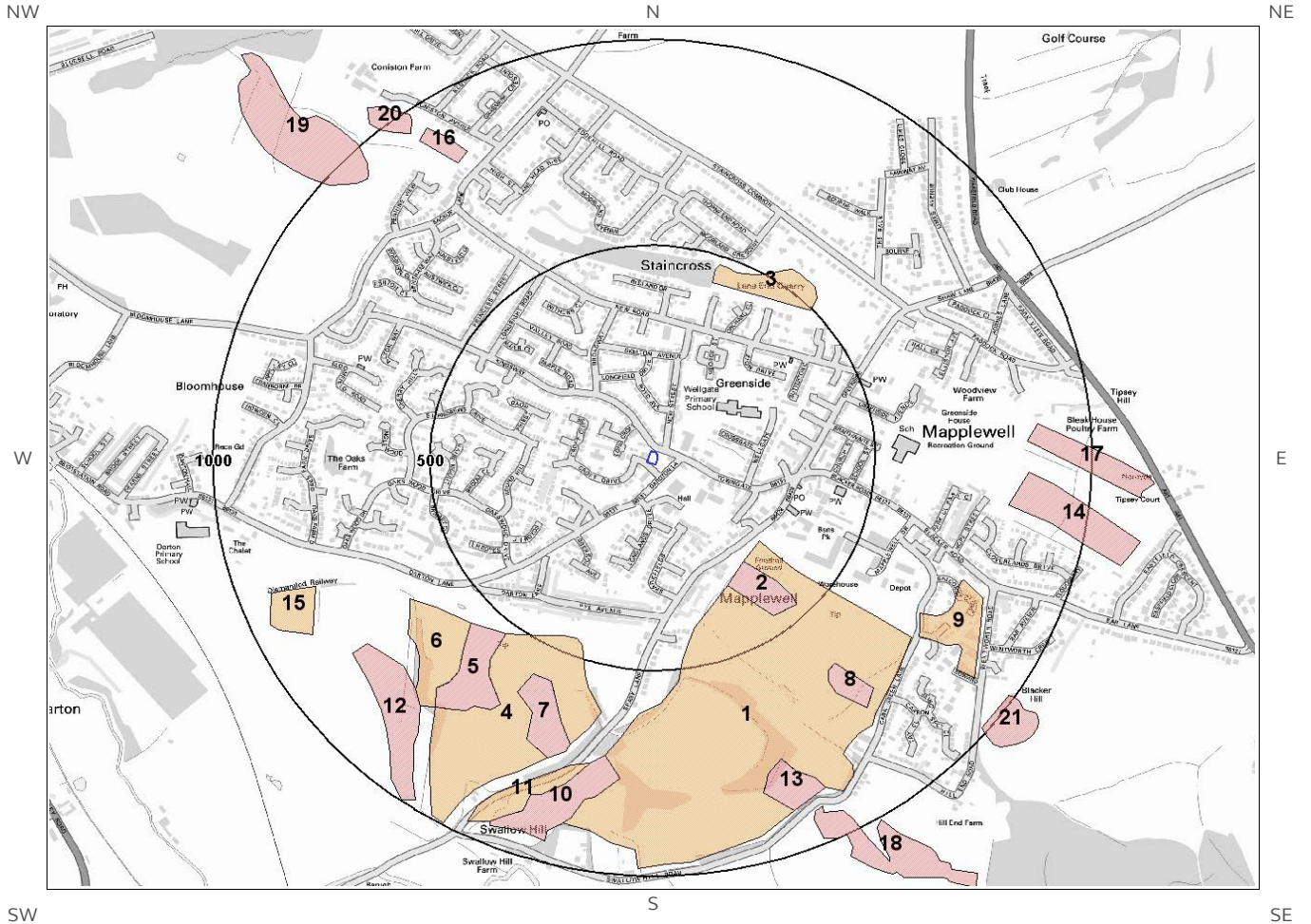
The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of great Britain at 1:10,000 scale.

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.



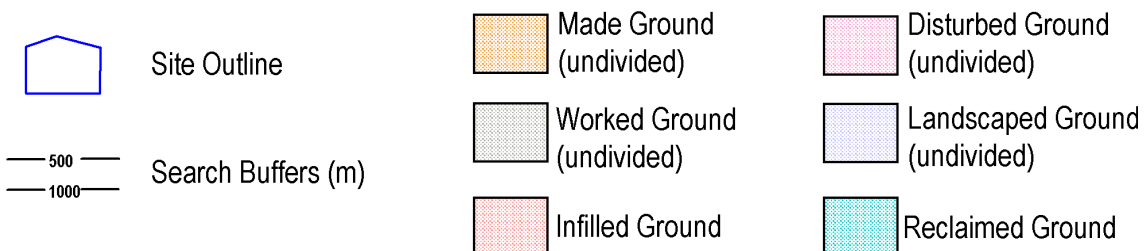
# 2 Geology 1:50,000 Scale

## 2.1 Artificial Ground Map



Ground Workings Legend

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## 2. Geology 1:50,000 scale

### 2.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 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	302.0	SE	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
2	308.0	SE	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
3	432.0	N	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
4	457.0	S	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

---

#### 2.1.2 Permeability of Artificial Ground

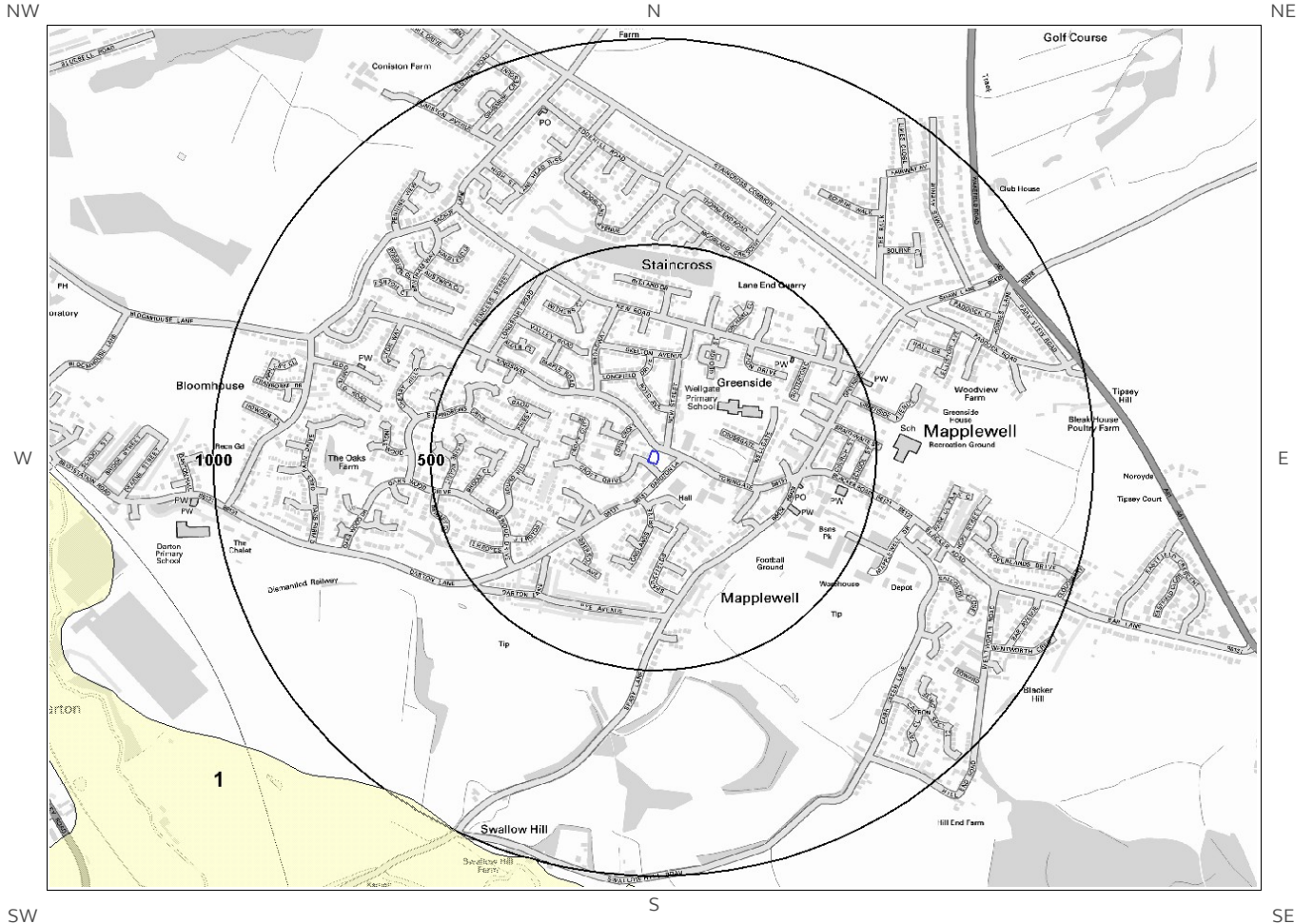
Are there any records relating to permeability of artificial ground within the study site boundary? No

Database searched and no data found.

---






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



Ground Workings Legend

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-  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? No

Database searched and no data found.

---

## 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.

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## 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.

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## 2.2.4 Landslip Permeability

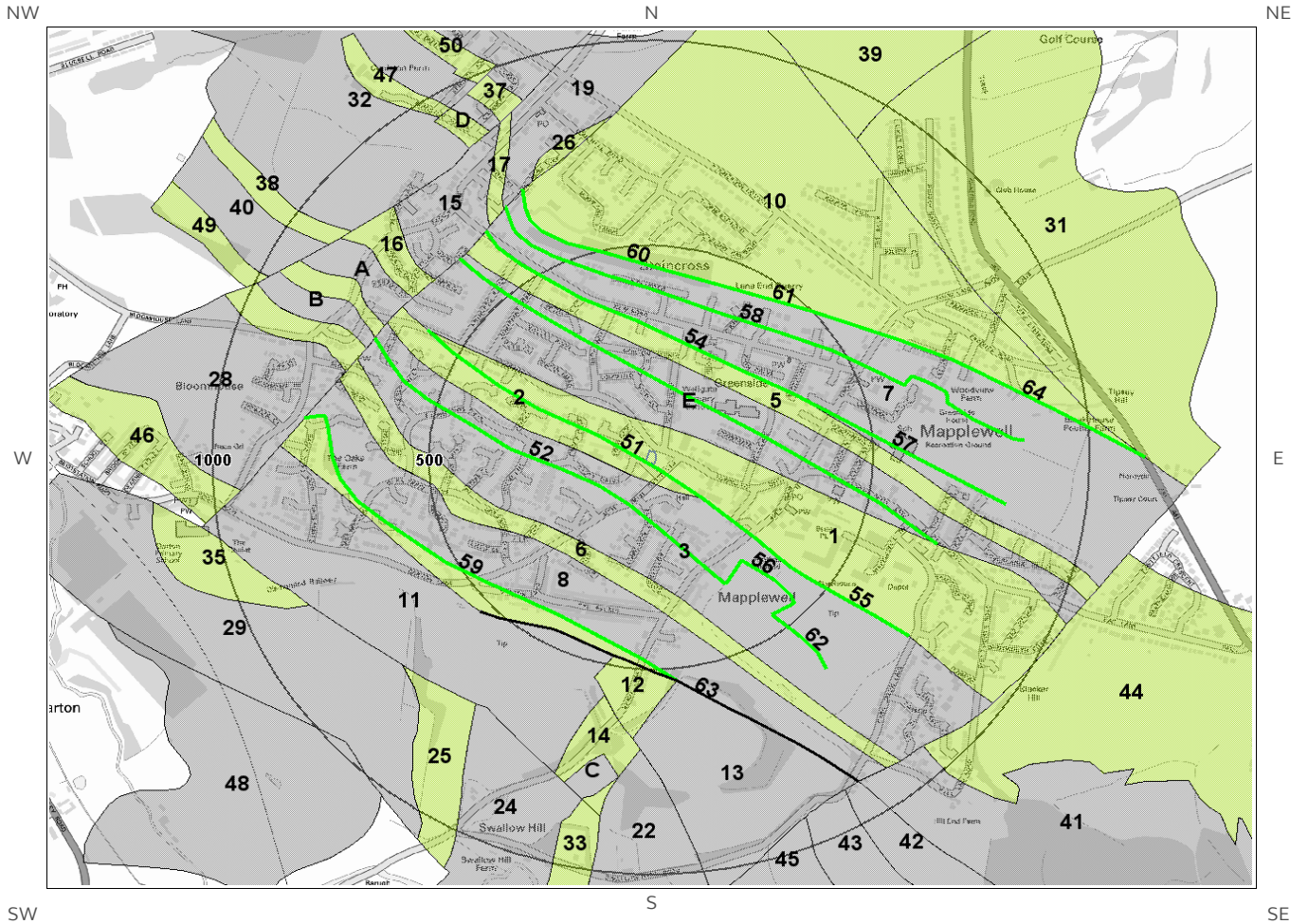
Are there any records relating to permeability of landslips within the study site boundary? No

Database searched and no data found.

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# 2.3 Bedrock and Faults Map (1:50,000 scale)

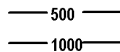


Ground Workings Legend

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Site Outline



Search Buffers (m)

## 2.3 Bedrock, Solid Geology & Faults

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 087

### 2.3.1 Bedrock/Solid Geology

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

ID	Distance	Direction	LEX Code	Rock Description	Rock Age
1	0.0	On Site	KNR-SDST	KENT'S ROCK - SANDSTONE	WESTPHALIAN
2	1.0	SW	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
3	42.0	SW	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
4E	67.0	N	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
5	217.0	NE	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
6	243.0	SW	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
7	268.0	NE	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
8	289.0	SW	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
9	424.0	SW	BNR-SDST	BARNSLEY ROCK - SANDSTONE	WESTPHALIAN
10	432.0	N	WE-SDST	WOOLLEY EDGE ROCK - SANDSTONE	WESTPHALIAN
11	460.0	SW	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
12	476.0	S	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	High	Moderate
1.0	SW	Fracture	High	Moderate
42.0	SW	Fracture	Moderate	Low

### 2.3.3 Faults

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

Yes

ID	Distance	Direction	Category Description	Feature Description
51	1.0	SW	ROCK	Coal seam, inferred
52	110.0	SW	ROCK	Coal seam, inferred
53E	156.0	NE	ROCK	Coal seam, inferred
54	268.0	NE	ROCK	Coal seam, inferred
55	302.0	SE	ROCK	Coal seam, inferred
56	308.0	SE	ROCK	Coal seam, inferred
57	350.0	NE	ROCK	Coal seam, inferred
58	370.0	N	ROCK	Coal seam, inferred
59	424.0	SW	ROCK	Coal seam, inferred
60	432.0	N	ROCK	Coal seam, inferred
61	432.0	N	ROCK	Coal seam, inferred
62	455.0	SE	ROCK	Coal seam, inferred
63	460.0	SW	FAULT	Fault, inferred, displacement unknown
64	496.0	NE	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 in a Radon Affected Area, as between 3 and 5% of properties are above the Action Level.

---

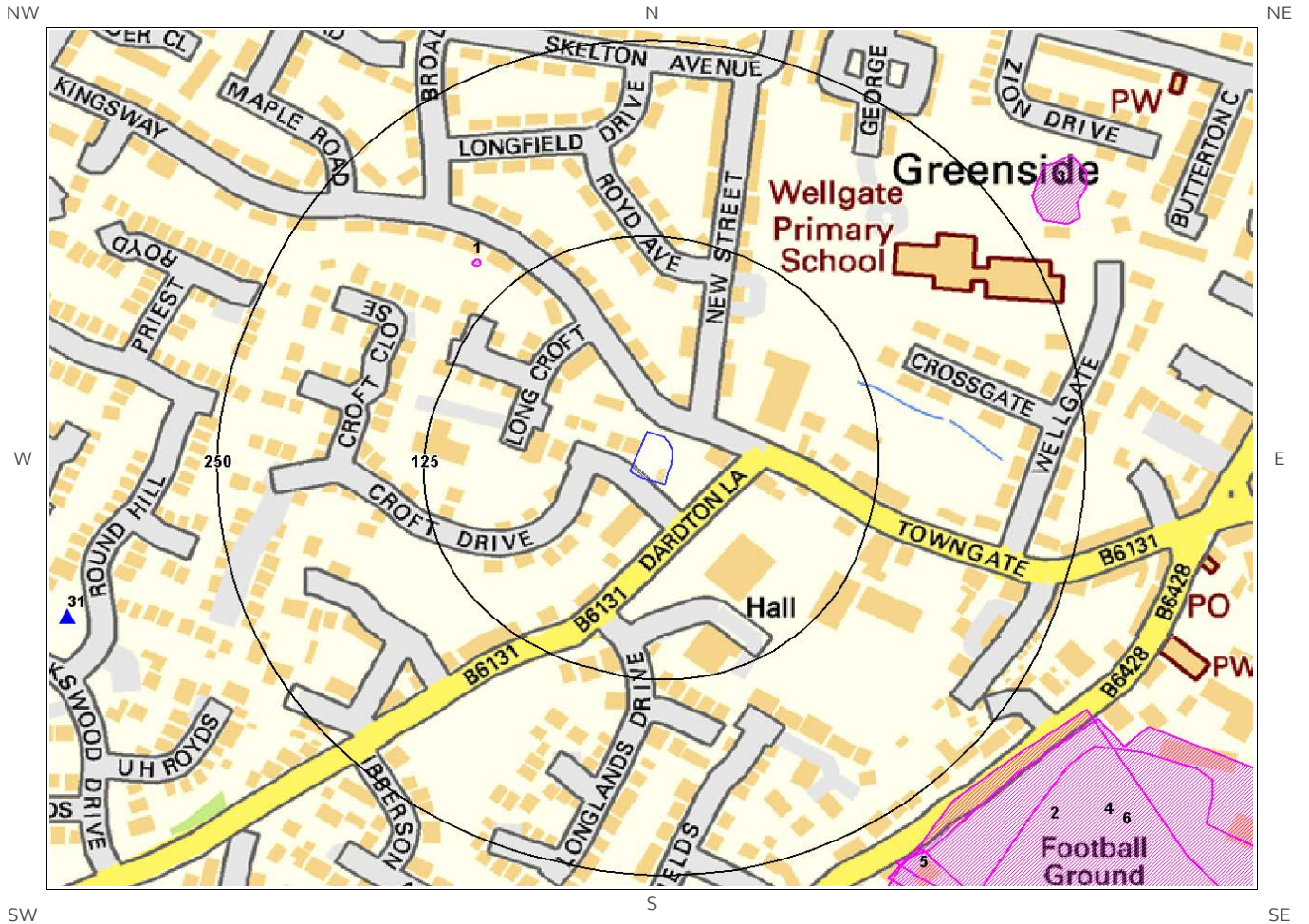
## 3.2 Radon Protection

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? Basic radon protective measures are necessary.

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



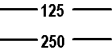


# 4 Ground Workings Map



Ground Workings Legend

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

# 4 Ground Workings

## 4.1 Historical Surface Ground Working Features derived from Historical Mapping

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

Are there any Historical Surface Ground Working Features within 250m of the study site boundary? No

Database searched and no data found.

## 4.2 Historical Underground Working Features derived from Historical Mapping

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

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

The following Historical Underground Working Features are provided by Groundsure:

ID	Distance (m)	Direction	NGR	Use	Date
1	147.0	NW	432574 410238	Unspecified Old Shaft	1948
2	267.0	SE	433045 409764	Colliery	1951
3	267.0	NE	432927 410285	Old Coal Pit	1904
4	279.0	SE	433072 409770	Unspecified Mine	1973
5	280.0	SE	433106 409763	Colliery	1948
6	304.0	SE	433089 409690	Colliery	1982
Not shown	392.0	SE	433145 409753	Colliery	1904
Not shown	393.0	SE	433115 409695	Colliery	1891
Not shown	404.0	NW	432432 410473	Old Coal Pit	1904
Not shown	444.0	E	433207 409865	Unspecified Mine	1966
Not shown	447.0	W	432232 410223	Unspecified Levels	1951
Not shown	450.0	W	432226 410220	Unspecified Levels	1948
Not shown	462.0	W	432239 410289	Unspecified Levels	1948

ID	Distance (m)	Direction	NGR	Use	Date
Not shown	476.0	SE	433098 409852	Unspecified Shaft	1951
Not shown	485.0	S	432642 409611	Air Shaft	1951
Not shown	490.0	S	432640 409606	Air Shaft	1904
Not shown	490.0	S	432640 409606	Air Shaft	1948
Not shown	497.0	W	432194 410267	Unspecified Levels	1951
Not shown	500.0	W	432190 410265	Unspecified Levels	1948
Not shown	502.0	SE	433139 409867	Unspecified Shaft	1948
Not shown	554.0	SW	432209 409473	Disused Colliery	1951
Not shown	564.0	SW	432182 409633	Colliery	1948
Not shown	607.0	SW	432373 409569	Air Shaft	1951
Not shown	611.0	SW	432370 409566	Air Shaft	1904
Not shown	611.0	SW	432370 409566	Air Shaft	1948
Not shown	650.0	SW	432205 409595	Colliery	1904
Not shown	735.0	W	431929 410083	Unspecified Levels	1951
Not shown	841.0	W	431826 410208	Unspecified Level	1951
Not shown	844.0	W	431823 410205	Unspecified Level	1948
Not shown	851.0	W	431805 410121	Unspecified Levels	1951

### 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
31	353.0	W	432326 410012	Coal, Deep	Speedwell Colliery	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	389.0	SW	432514 409746	Coal, Deep	New Speedwell Colliery	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	403.0	S	432533 409723	Coal, Deep	New Speedwell Colliery	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	428.0	W	432270 409946	Coal, Deep	Sutcliffe & Shipley Colliery	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	428.0	SW	432426 409751	Coal, Deep	Belle Vue Colliery	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	470.0	SE	432971 409722	Coal, Deep	Mapplewell Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	477.0	W	432219 409941	Coal, Deep	Sutcliffe & Shipley Colliery	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	478.0	NW	432245 410336	Sandstone	Oakfield Road	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	480.0	N	432806 410593	Sandstone	Staincross Plantation	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	481.0	SW	432476 409662	Coal, Surface Mined	Darton OCCS	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	481.0	S	432646 409617	Coal, Deep	Spark Lane Air Shaft	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	499.0	SE	432995 409704	Coal, Deep	Mapplewell Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	502.0	E	433180 409992	Coal, Deep	Silly Row Pit	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	503.0	NE	432949 410556	Sandstone	Lane End	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	515.0	SE	433127 409827	Coal, Deep	North Gawber Colliery, No. 2 Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	534.0	SW	432376 409657	Coal, Deep	Belle Vue Colliery Pit	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	547.0	SE	433171 409841	Coal, Deep	North Gawber Colliery, Lidgett Shaft	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	574.0	SW	432365 409616	Clay & Shale	Mapplewell Brick Works	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	576.0	S	432552 409537	Coal, Deep	Spark Lane Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	577.0	SW	432286 409671	Coal, Surface Mined	Darton OCCS	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	580.0	E	433253 409962	Coal, Deep	Blacker Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	585.0	SE	433200 409814	Coal, Deep	North Gawber Colliery, Barnsley Shaft	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	592.0	E	433240 409883	Coal, Deep	North Gawber Colliery, No. 1 Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	607.0	SW	432374 409573	Coal, Deep	Belle Vue Colliery Pit	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	607.0	E	433274 409939	Coal, Deep	Blacker Mine	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	612.0	SW	432297 409617	Coal, Deep	Belle Vue Colliery Pit	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	614.0	SE	433073 409618	Coal, Deep	North Gawber Colliery Air Shaft	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	627.0	W	432077 409892	Coal, Deep	Sutcliffe & Shipley Colliery	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	635.0	SE	433222 409753	Coal, Deep	North Gawber Colliery	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	644.0	NW	432402 410713	Sandstone	Staincross Hill	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	646.0	W	432029 410209	Sandstone	Bloomhouse Green	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	665.0	SE	433301 409839	Coal, Deep	North Gawber Colliery	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	666.0	S	432433 409479	Coal, Surface Mined	Darton OCCS	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	667.0	SE	433280 409790	Coal, Deep	North Gawber Colliery	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	667.0	SW	432235 409596	Coal, Deep	Darton Colliery	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	668.0	SW	432292 409552	Coal, Surface Mined	Darton OCCS	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	680.0	W	432006 409947	Coal, Surface Mined	Oates OCCS	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	681.0	SE	433119 409569	Coal, Surface Mined	Hill End OCCS	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	699.0	SW	432208 409578	Coal, Deep	Darton Colliery	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	713.0	SW	432221 409548	Coal, Surface Mined	Darton OCCS	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	794.0	SW	432318 409391	Coal, Surface Mined	Darton OCCS	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	807.0	W	431863 410036	Coal, Surface Mined	Oates OCCS	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	837.0	SE	433387 409636	Coal, Deep	Wentworth Road Shaft	Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots)	Ceased
Not shown	839.0	S	432999 409318	Coal, Surface Mined	Hill End OCCS	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	842.0	S	432481 409280	Coal, Surface Mined	Darton OCCS	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	853.0	SW	432101 409466	Coal, Surface Mined	Darton OCCS	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	901.0	SW	431845 409737	Coal, Surface Mined	Darton Coal Crop Workings	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	937.0	E	433620 409981	Coal, Surface Mined	Tipsey Hill OCCS	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	968.0	E	433660 410120	Coal, Surface Mined	Tipsey Hill OCCS	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	986.0	S	432518 409125	Coal, Surface Mined	Swallow Hill Colliery	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	996.0	SE	433137 409208	Coal, Surface Mined	Tipsey Hill OCCS	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased
Not shown	996.0	W	431737 409748	Coal, Surface Mined	Darton Coal Crop Workings	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased