



Oaktree Environmental  
Unit 5 Oasis Park, Road 1,  
Winsford Industrial Estate, Winsford,  
CW7 3PP

GroundSure Reference: HMD-188-62961  
Your Reference: Barry  
Report Date: Mar 6, 2008  
Report Delivery Method: Email - pdf

## GroundSure Geology & Ground Stability Report

**Address:** WOODHAM ROAD, DOCKS, BARRY, CF62

Dear Sir/Madam,

Thank you for placing your order with GroundSure. Please find enclosed the **GroundSure Geology & Ground Stability Report** as requested.

If you need any further assistance, please do not hesitate to contact our maps and data helpline on 01273 819700 or email [maps&data@groundsure.com](mailto:maps&data@groundsure.com) quoting the above GroundSure reference number.

Yours faithfully,

A handwritten signature in black ink, appearing to read "P. Smith".

Managing Director  
Groundsure Limited

Enc.  
GroundSure Geology & Ground Stability Report

# GroundSure Geology & Ground Stability Report

**Address:** WOODHAM ROAD, DOCKS, BARRY, CF62

**Date:** Mar 6, 2008

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# Aerial Photograph of Study Site



**Site Name:** WOODHAM ROAD, DOCKS, BARRY, CF62  
**Grid Reference:** 312620,167670

Aerial photography supplied by Getmapping PLC.  
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# Overview of Findings

The GroundSure Geology and Ground Stability Report 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 Digital Geological Map of Great Britain, BGS Geosure data; BRITPITS database; Shallow Mining data and Borehole Records, Coal Authority data including brine extraction areas, PBA non-coal mining and natural cavities database 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.

Report Section	Number of records found within (X) m of the study site boundary
<b>1. Geology</b>	
	Description
1.1 Artificial Ground,	
1.1.1 Is there any Artificial Ground /Made Ground present beneath the study site? *	Yes
1.1.2 Are there any records relating to permeability of artificial ground within the study site* boundary?	Yes
1.2 Superficial Geology & Landslips	
1.2.1 Is there any Superficial Ground /Drift Geology present beneath the study site? *	Yes
1.2.2 Are there any records relating to permeability of superficial geology within the study site* boundary?	Yes
1.2.3 Are there any records of landslip within 500m of the study site boundary?	No
1.2.4 Are there any records relating to permeability of landslips within the study site* boundary?	No
1.3 Bedrock, Solid Geology & 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 relating to permeability of bedrock within the study site* boundary?	Yes
1.3.3 Are there any records of faults within 500m of the study site boundary?	Yes
1.3.4 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
1.3.5 Is the property in an area where Radon Protection Measures 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

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

Source:Scale 1:50,000 BGS Sheet No:263

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<b>2. Ground Workings</b>	on-site	0-50	51-250	251-500	501-1000
2.1 Historical Surface Ground Working Features from Small Scale Mapping	3	9	22	-	-
2.2 Historical Underground Workings Features from Small Scale Mapping	0	0	5	0	9
2.3 Current Ground Workings	0	0	1	2	1

<b>3. Mining, Extraction &amp; Natural Cavities</b>	on-site	0-50	51-250	251-500	501-1000
3.1 Historical Mining	0	4	11	10	23
3.2 Coal Mining	0	0	0	0	0
3.3 Shallow Mining*	1	-	-	-	-
3.4 Non – Coal Mining Cavities	0	0	0	0	0
3.5 Natural Cavities	0	0	0	0	0
3.6 Brine Extraction	0	0	0	0	0
3.7 Gypsum Extraction	0	0	0	0	0
3.8 Tin Mining	0	0	0	0	0
3.9 Clay Mining	0	0	0	0	0

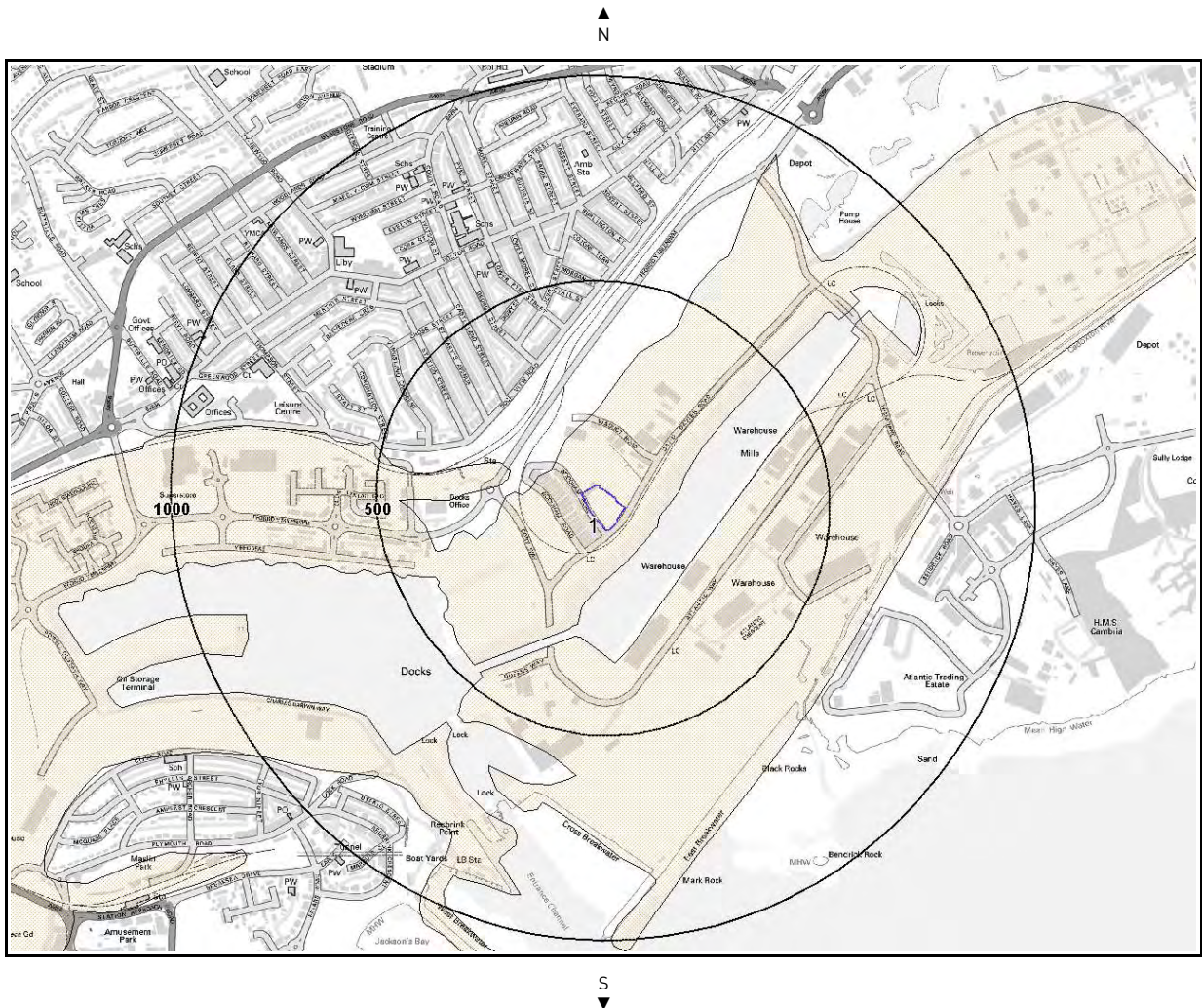
\*This includes an automatically generated 150m buffer zone around the site

<b>4. Natural Ground Subsidence</b>	on-site*	0-50	51-250	251-500	501-1000
4.1 Shrink-Swell Clay	Very Low	-	-	-	-
4.2 Landslides	Very Low	-	-	-	-
4.3 Ground Dissolution of Soluble Rocks	Negligible	-	-	-	-
4.4 Compressible Deposits	Very Low	-	-	-	-
4.5 Collapsible Deposits	Negligible	-	-	-	-
4.6 Running Sand	Very Low	-	-	-	-

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

<b>5. Borehole Records</b>	on-site	0-50	51-250	251-500	501-1000
5.1 BGS Recorded Boreholes	0	0	3	-	-

# 1.1 Artificial Ground Map



### Artificial Ground Legend

-  Site Outline
-  50
-  250 Search Buffers



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

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# 1.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No:263

## 1.1.1 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	0.0	On Site	MGR-MGRD	MADE GROUND (UNDIVIDED)	MADE GROUND (COMPOSITION UNSPECIFIED)

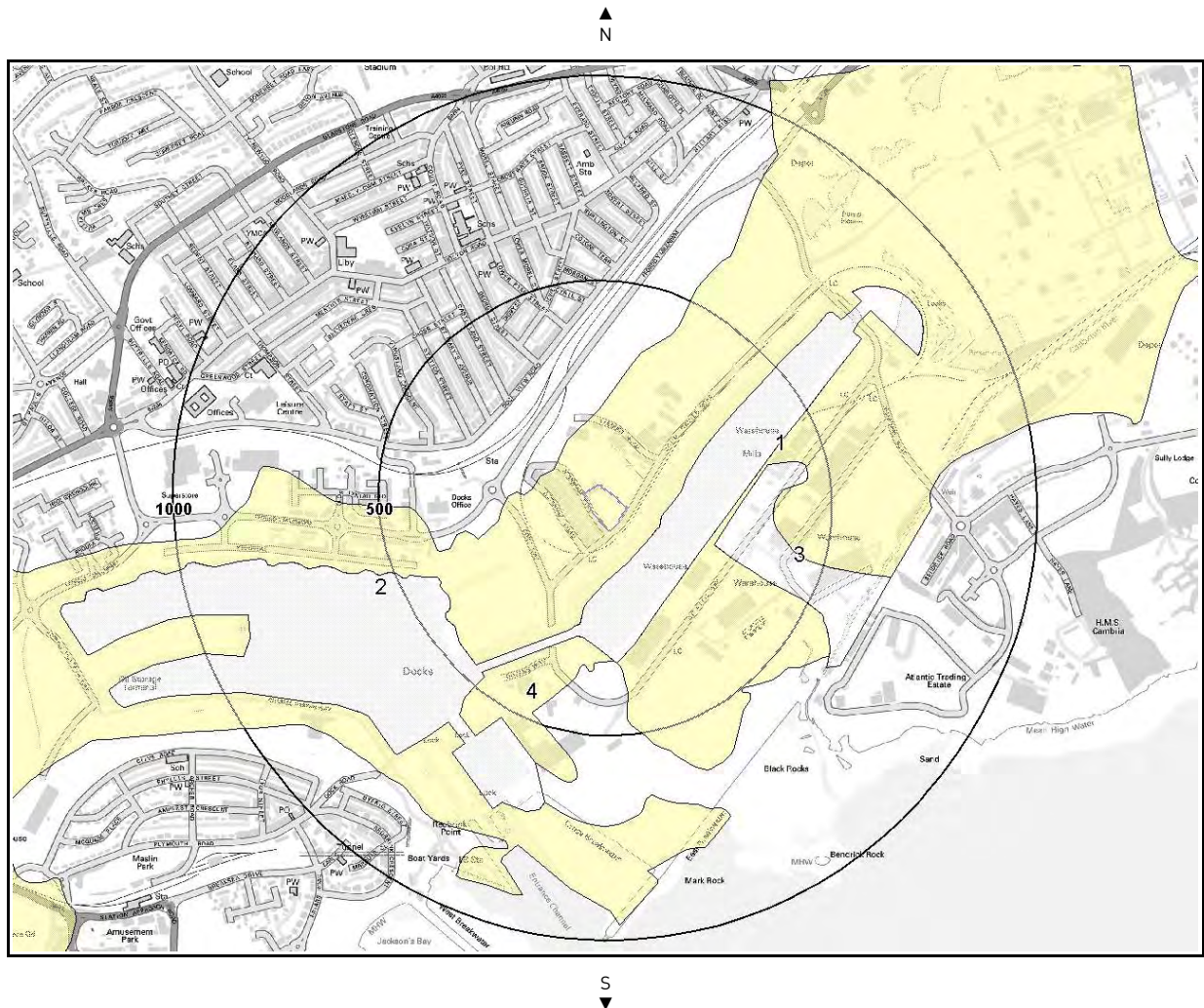
## 1.1.2 Permeability of Artificial Ground

**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
0.0	On Site	Intergranular	Very High	Very Low

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

# 1.2 Superficial Deposits and Landslips Map



### Superficial and Landslips Legend

-  Site Outline
-  50
-  250 Search Buffers



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## 1.2 Superficial Deposits and Landslips

### 1.2.1 Superficial Deposits/Drift Geology

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

ID	Distance (m)	Direction	Lex Code	Description	Rock Description
1	0.0	On Site	TFD-CLSS	Tidal Flat Deposits	Clay, Silt And Sand
2	81.0	SE	SUPNM-UNKN	Superficial Deposits Not Mapped [for Digital Map Use Only]	Unknown Lithology
3	233.0	SE	BSA-SAND	Blown Sand	Sand
4	267.0	S	TFD-CLSS	Tidal Flat Deposits	Clay, Silt And Sand

### 1.2.2 Permeability of Superficial Ground

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

Distance (m)	Direction	Flow type	Maximum Permeability	Minimum Permeability
0.0	On Site	Intergranular	Moderate	Very Low

### 1.2.3 Landslip

Database searched and no data found.

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

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 discreet 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.

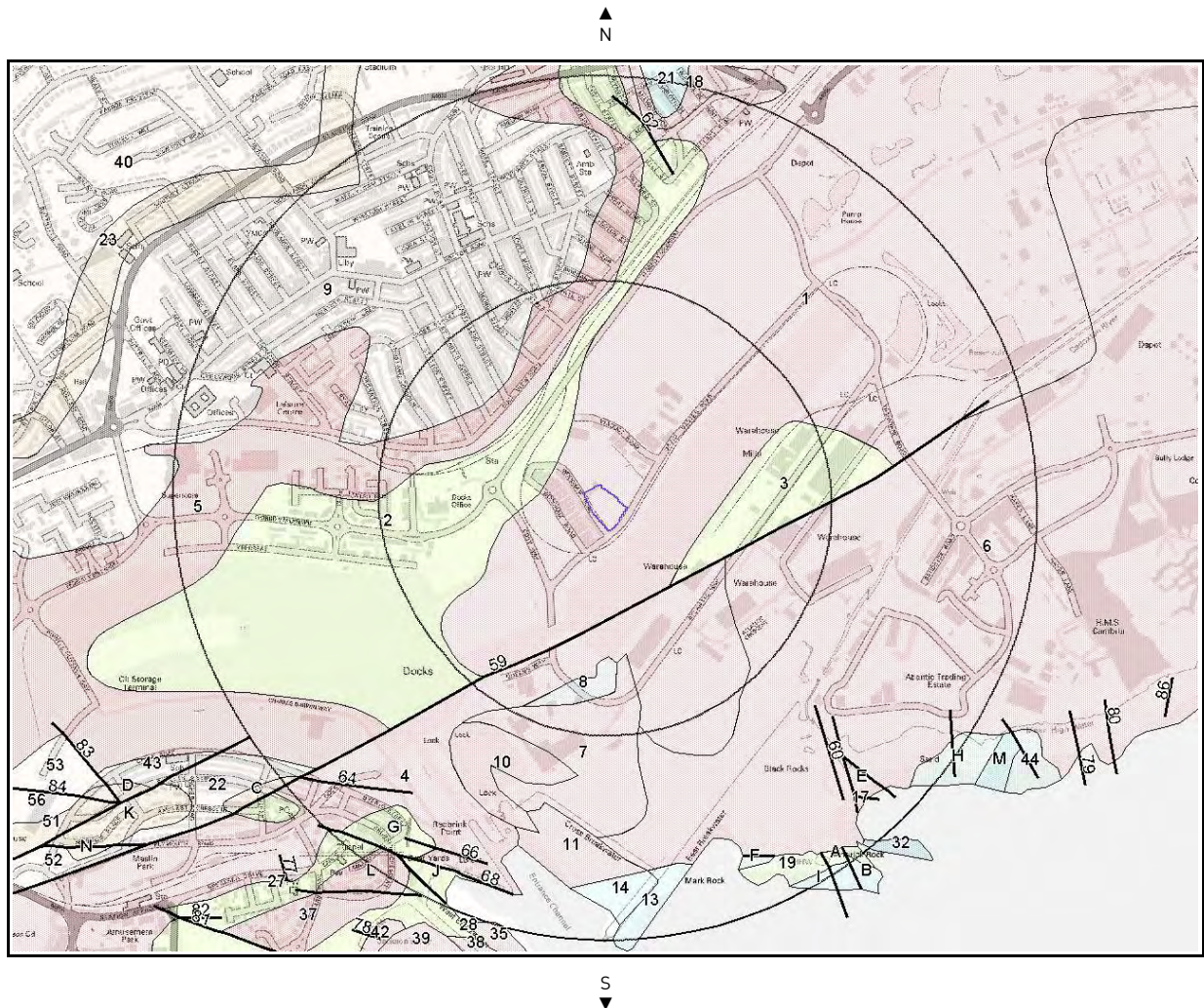
### 1.2.4 Landslip Permeability

**Are there any records relating to permeability of landslips within the study site\* boundary:** **No**

Database searched and no data found.

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

# 1.3 Bedrock and Faults Map



**Bedrock & Faults Deposits Legend**

-  Site Outline
-  50
-  250 Search Buffers



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## 1.3 Bedrock, Solid Geology & Faults

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No:263

### 1.3.1 Bedrock/Solid Geology

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

ID	Distance (m)	Direction	LEX Code	Rock Description	Rock Age
1	0.0	On Site	MMG-MDST	Mercia Mudstone Group - Mudstone	Rhaetian / Scythian
2	93.0	NW	BAN-MDST	Blue Anchor Formation - Mudstone	Rhaetian / Norian
3	182.0	SE	BAN-MDST	Blue Anchor Formation - Mudstone	Rhaetian / Norian
4	189.0	SE	MMG-MDST	Mercia Mudstone Group - Mudstone	Rhaetian / Scythian
5	245.0	NW	PNG-MDLM	Penarth Group - Mudstone And Limestone, Interbedded	Rhaetian
6	269.0	SE	MMMF-CONG	Mercia Mudstone Group (marginal Facies) - Conglomerate	Triassic
7	302.0	S	QCG-SCON	Quartz Conglomerate Group (south Wales) - Sandstone And Conglomerate, Interbedded	Famennian
8	305.0	S	AVO-LSMD	Avon Group - Limestone And Mudstone, Interbedded	Courseyan
9	327.0	NW	STM-LSMD	St Mary's Well Bay Member - Limestone And Mudstone, Interbedded	Hettangian / Rhaetian

### 1.3.2 Permeability of Bedrock Ground

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

Distance (m)	Direction	Flow type	Maximum Permeability	Minimum Permeability
0.0	On Site	Fracture	Low	Low

### 1.3.3 Faults

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

ID	Distance (m)	Direction	Category Description	Feature Description
59	190.0	SE	FAULT	Normal fault, 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 discreet 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.

### 1.3.4 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?**

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

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**Geology & Ground Stability Report** Reference: HMD-188-62961

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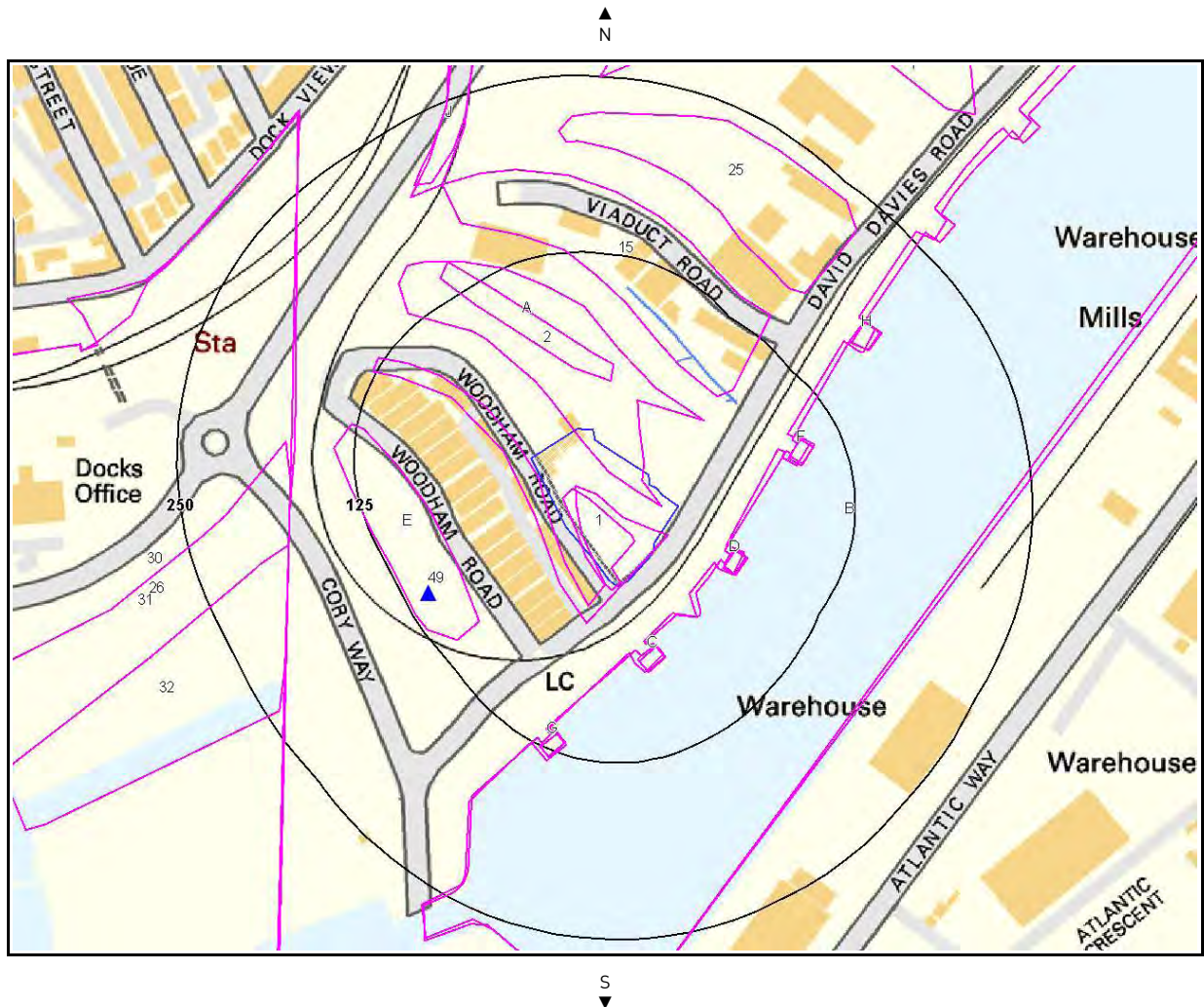
The property is not in a radon Affected Area, as less than 1% of properties are above the Action Level

### **1.3.5 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




# 2 Ground Workings Map






### Ground Workings Legend

Mapping sourced from  Ordnance Survey

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-  Site Outline
-  250 Search Buffers (m)
-  500 Search Buffers (m)

-  Historic Surface Ground Workings
-  Historic Underground Workings
-  Current Ground Workings

## 2 Ground Workings

### 2.1 Historical Surface Ground Working Features derived from the 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**

The following Historical Surface Ground Working Features are provided by GroundSure:

ID	Distance (m)	Direction	NGR	Use	Date
1	0.0	On Site	312621,167639	Unspecified Pit	1947
2	0.0	On Site	312588,167749	Unspecified Pit	1973
3	0.0	On Site	312574,167673	Unspecified Pit	1973
4A	37.0	N	312570,167793	Unspecified Ground Workings	1921
5A	37.0	N	312570,167793	Unspecified Ground Workings	1915
6A	37.0	N	312570,167793	Unspecified Ground Workings	1898
7B	38.0	SE	312815,167738	Dock	1898
8B	40.0	SE	312868,167729	Dock	1915
9C	49.0	SE	312658,167554	Coal Tips	1915
10D	49.0	SE	312717,167622	Coal Tips	1915
11C	50.0	SE	312656,167552	Coal Tips	1921
12C	50.0	SE	312656,167552	Coal Tips	1947
13D	51.0	SE	312716,167620	Coal Tips	1921
14D	51.0	SE	312716,167620	Coal Tips	1947
15	74.0	NE	312626,167820	Unspecified Pit	1973
16E	80.0	SW	312485,167644	Unspecified Heap	1973
17E	80.0	SW	312485,167644	Unspecified Heap	1991
18E	80.0	SW	312485,167644	Unspecified Heap	1982
19F	85.0	NE	312764,167700	Coal Tips	1915
20F	87.0	NE	312762,167701	Coal Tips	1921
21F	87.0	NE	312762,167701	Coal Tips	1947
22G	112.0	SW	312588,167494	Coal Tips	1915
23G	112.0	S	312587,167490	Coal Tips	1921
24G	112.0	S	312587,167490	Coal Tips	1947
25	165.0	NE	312748,167877	Unspecified Pit	1973
26	167.0	W	311610,167338	Docks	1915
27H	168.0	NE	312810,167783	Coal Tips	1921
28H	168.0	NE	312810,167783	Coal Tips	1947
29H	168.0	NE	312809,167782	Coal Tips	1915
30	169.0	W	311732,167331	Dock	1921
31	171.0	W	312285,167590	Graving Dock	1921
32	182.0	W	312300,167534	Graving Dock	1921
33I	249.0	N	312804,168020	Unspecified Ground Workings	1973
34I	249.0	N	312804,168020	Unspecified Ground Workings	1982

### 2.2 Historical Underground Workings Features derived from the 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
35J	197.0	NW	312516,167957	Tunnel	1982

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36J	197.0	NW	312516,167957	Tunnel	1991
37J	197.0	NW	312516,167957	Tunnel	1973
38J	197.0	NW	312516,167957	Tunnel	1947
39J	202.0	NW	312514,167960	Tunnel	1898
Not shown	932.0	SW	312007,166813	Tunnel	1921
Not shown	933.0	SW	312016,166814	Tunnel	1898
Not shown	933.0	SW	312016,166814	Tunnel	1938
Not shown	933.0	SW	312016,166814	Tunnel	1936
Not shown	933.0	SW	312016,166814	Tunnel	1915
Not shown	962.0	SW	311980,166815	Tunnel	1982
Not shown	962.0	SW	311980,166815	Tunnel	1991
Not shown	962.0	SW	311980,166815	Tunnel	1973
Not shown	962.0	SW	311980,166815	Tunnel	1947

## 2.3 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.

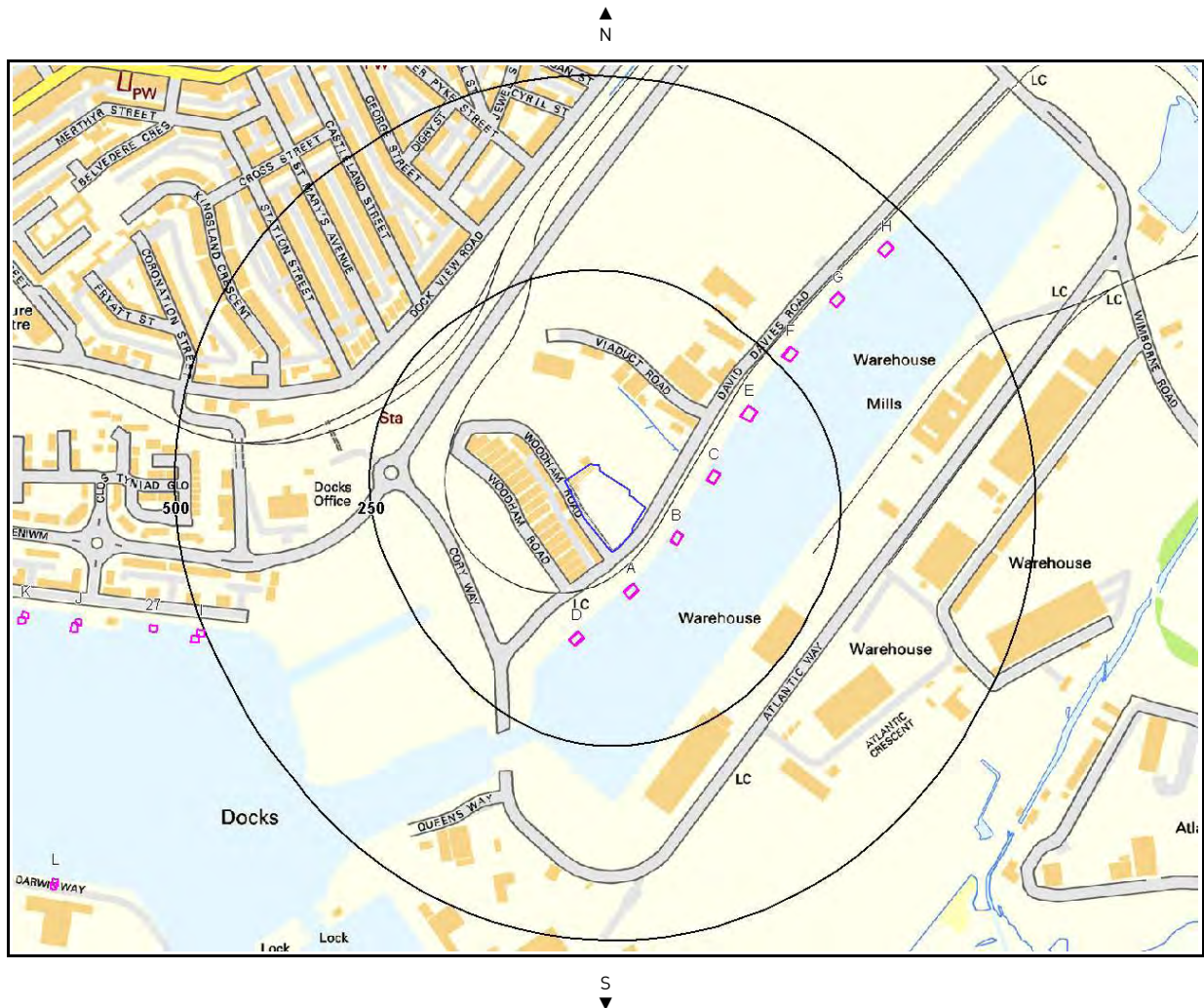
**Are there any BGS Current Ground Workings within 1000m of the study site boundary?**

**Yes**

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

ID	Distance [m]	Direction	NGR	Use	Date Updated
49	109.0	SW	312500.0,167600.0	Secondary	16-Jul-2007
Not shown	326.0	S	312750.0,167300.0	Marine Sand & Gravel	06-Sep-2007
Not shown	326.0	S	312750.0,167300.0	Marine Sand & Gravel	21-Sep-2007
Not shown	847.0	SW	312250.0,166850.0	Marine Sand & Gravel	06-Sep-2007



# 3 Mining, Extraction & Natural Cavities Map



## Mining, Extraction & Natural Cavities Legend

 Mapping sourced from 

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 Site Outline  
 Search Buffers (m)

 Historical Mining  
 Non-Coal Mining Cavities  
 Natural Cavities



# 3 Mining, Extraction & Natural Cavities

## 3.1 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	49.0	SE	312658,167554	Coal Tips	1915
2B	49.0	SE	312717,167622	Coal Tips	1915
3A	50.0	SE	312656,167552	Coal Tips	1921
4A	50.0	SE	312656,167552	Coal Tips	1947
5B	51.0	SE	312716,167620	Coal Tips	1921
6B	51.0	SE	312716,167620	Coal Tips	1947
7C	85.0	NE	312764,167700	Coal Tips	1915
8C	87.0	NE	312762,167701	Coal Tips	1921
9C	87.0	NE	312762,167701	Coal Tips	1947
10D	112.0	SW	312588,167494	Coal Tips	1915
11D	112.0	S	312587,167490	Coal Tips	1921
12D	112.0	S	312587,167490	Coal Tips	1947
13E	168.0	NE	312810,167783	Coal Tips	1921
14E	168.0	NE	312810,167783	Coal Tips	1947
15E	168.0	NE	312809,167782	Coal Tips	1915
16F	260.0	NE	312862,167859	Coal Tips	1915
17F	262.0	NE	312862,167856	Coal Tips	1947
18F	262.0	NE	312862,167856	Coal Tips	1921
19G	353.0	NE	312923,167927	Coal Tips	1947
20G	353.0	NE	312923,167927	Coal Tips	1921
21G	354.0	NE	312923,167929	Coal Tips	1915
22H	443.0	NE	312984,167994	Coal Tips	1921
23H	443.0	NE	312984,167994	Coal Tips	1947
24H	444.0	NE	312984,167995	Coal Tips	1915
25I	500.0	SW	312107,167500	Coal Tips	1915
26I	509.0	SW	312099,167493	Coal Tips	1921
27	554.0	W	312046,167506	Coal Tips	1915
28J	644.0	W	311950,167514	Coal Tips	1915
29J	650.0	W	311945,167508	Coal Tips	1921
30K	707.0	W	311882,167524	Coal Tips	1915
31K	713.0	W	311878,167516	Coal Tips	1921
Not shown	796.0	W	311789,167534	Coal Tips	1915
Not shown	802.0	W	311784,167527	Coal Tips	1921
34L	818.0	SW	311920,167180	Coal Tips	1915
35L	823.0	SW	311918,167175	Coal Tips	1921
Not shown	880.0	W	311702,167538	Coal Tips	1915
Not shown	886.0	W	311696,167531	Coal Tips	1921
Not shown	890.0	W	311733,167367	Coal Tips	1915
Not shown	896.0	W	311736,167364	Coal Tips	1921
Not shown	906.0	SW	311806,167198	Coal Tips	1915
Not shown	915.0	SW	311797,167195	Coal Tips	1921
Not shown	945.0	W	311667,167405	Coal Tips	1915
Not shown	951.0	W	311661,167409	Coal Tips	1921
Not shown	960.0	SW	311679,167312	Coal Tips	1915
Not shown	970.0	W	311613,167532	Coal Tips	1915

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Not shown	974.0	SW	311674,167307	Coal Tips	1921
Not shown	976.0	W	311607,167525	Coal Tips	1921
Not shown	997.0	SW	311696,167213	Coal Tips	1915

### 3.2 Coal Mining

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

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

Database searched and no data found.

### 3.3 Shallow Mining

This dataset refers to the (largely very old) extraction of mineral deposits by means of near surface underground workings.

**What is the maximum hazard rating of subsidence relating to shallow mining within the study site\* boundary? Negligible**

\*This includes an automatically generated 150m buffer zone around the study site boundary

The following Shallow Mining information provided by the British Geological Survey is not represented on Mapping:

Distance (m)	Direction	Hazard Rating	Details
0.0	On Site	Negligible	Where negligible potential is indicated, this means that the rocks underlying the area are not likely to have been mined at shallow depth. However, you should still find out whether or not a Coal Authority mining search is required in the area, for example, to check for deeper mining.

### 3.4 Non – Coal Mining Cavities

This dataset provides information from the Peter Brett Associates (PBA)/DEFRA 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.

### 3.5 Natural Cavities

This dataset provides information based on Peter Brett Associates/ DEFRA natural cavities database.

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

Database searched and no data found.

### 3.6 Brine Extraction

This dataset provides information from the Brine compensation board which has been discontinued and is now covered by the Coal Authority.

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

Database searched and no data found.

### 3.7 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.

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### 3.8 Tin Mining

This dataset provides information on tin mining areas and is derived from tin mining records.

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

**No**

Database searched and no data found.

---

### 3.9 Clay Mining

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

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

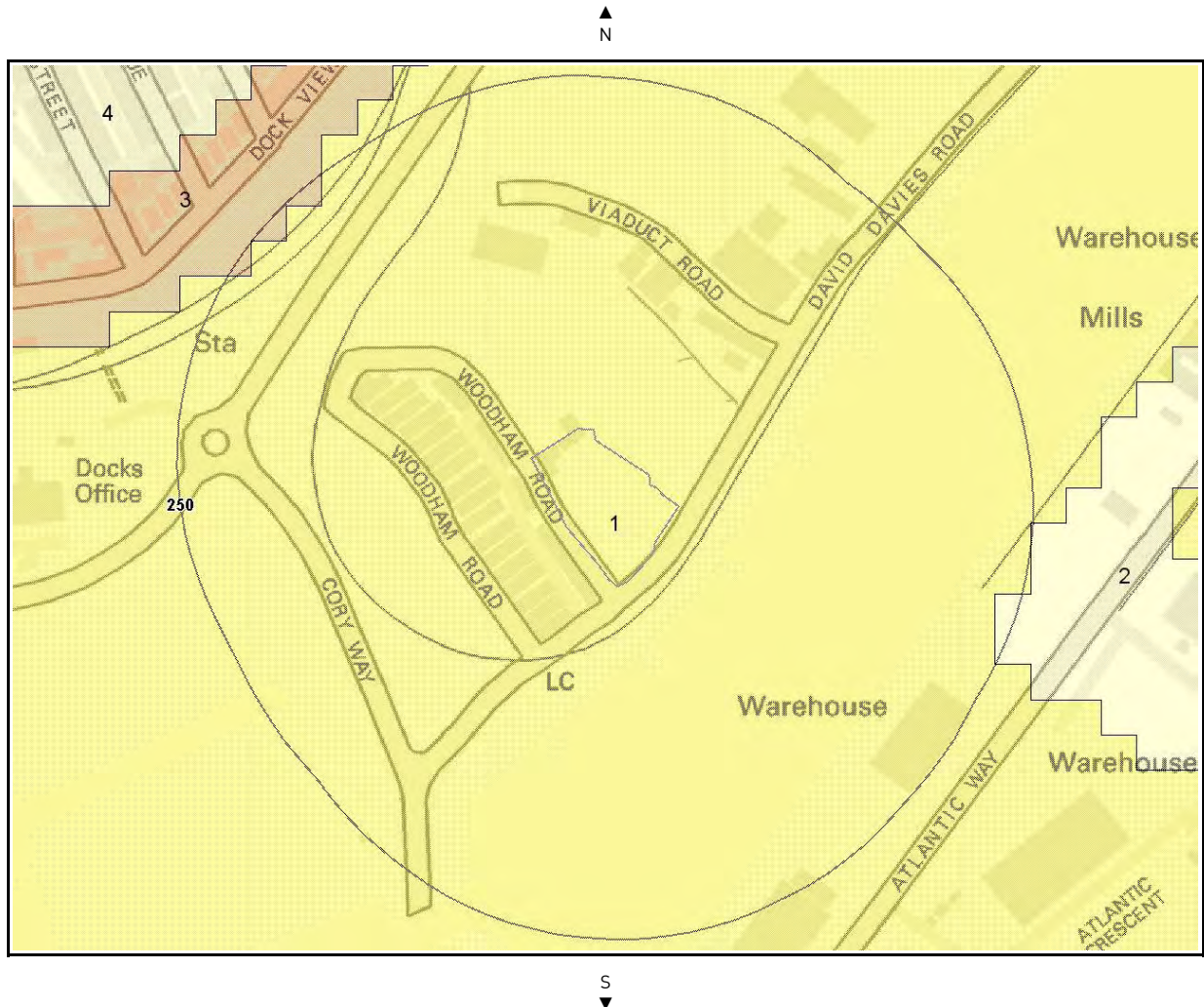
**No**

Database searched and no data found.

---

# 4 Natural Ground Subsidence

## 4.1 Shrink-Swell Clay Map



**Shrink-Swell Clay Legend**



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




# 4.2 Landslides Map



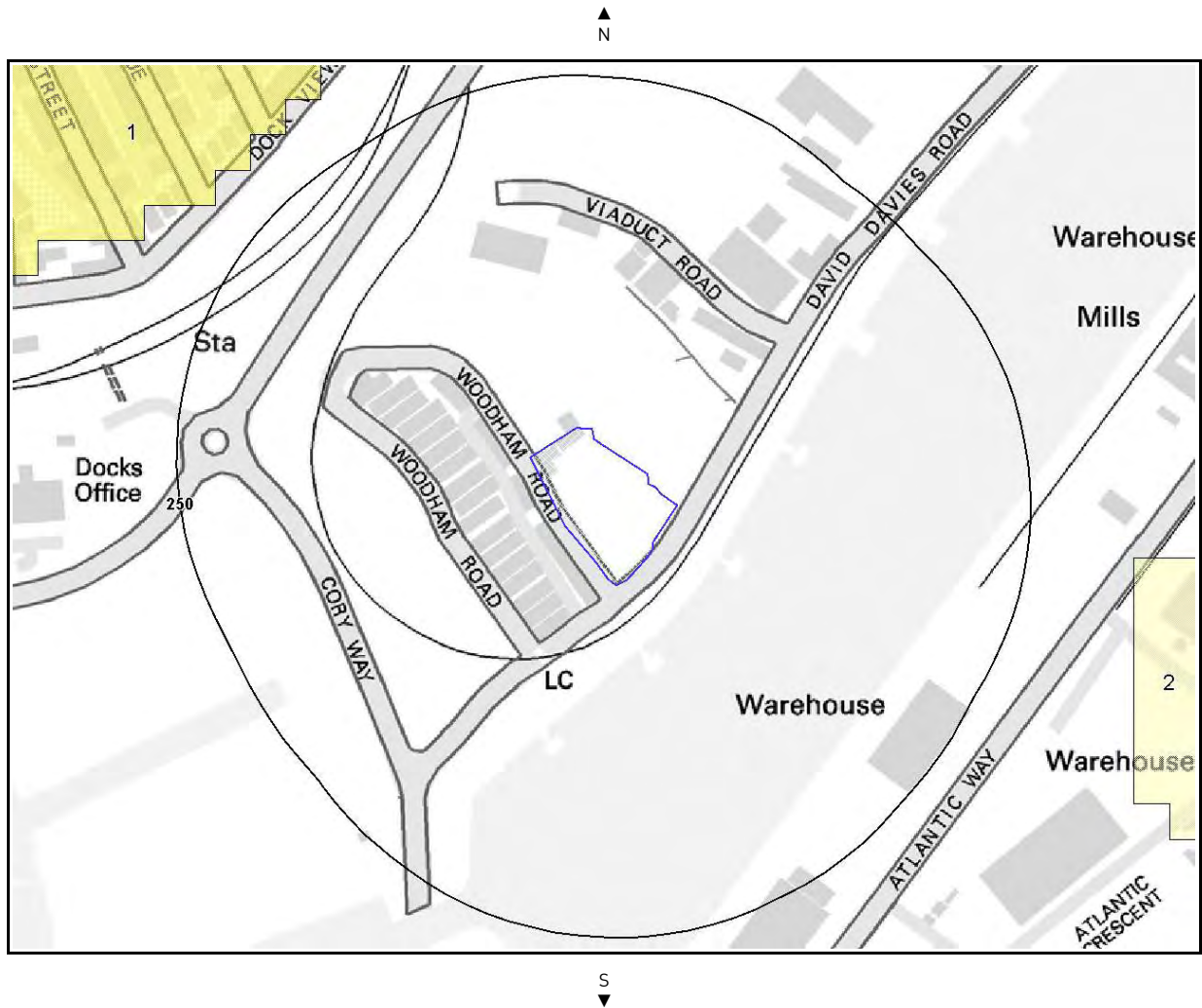
**Landslides Legend**

Mapping sourced from  Ordnance Survey

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-  Site Outline
-  No Data / Null
-  Low
-  Search Buffers (m)
-  Negligible
-  Moderate
-  Very Low
-  High

# 4.3 Ground Dissolution Soluble Rocks Map



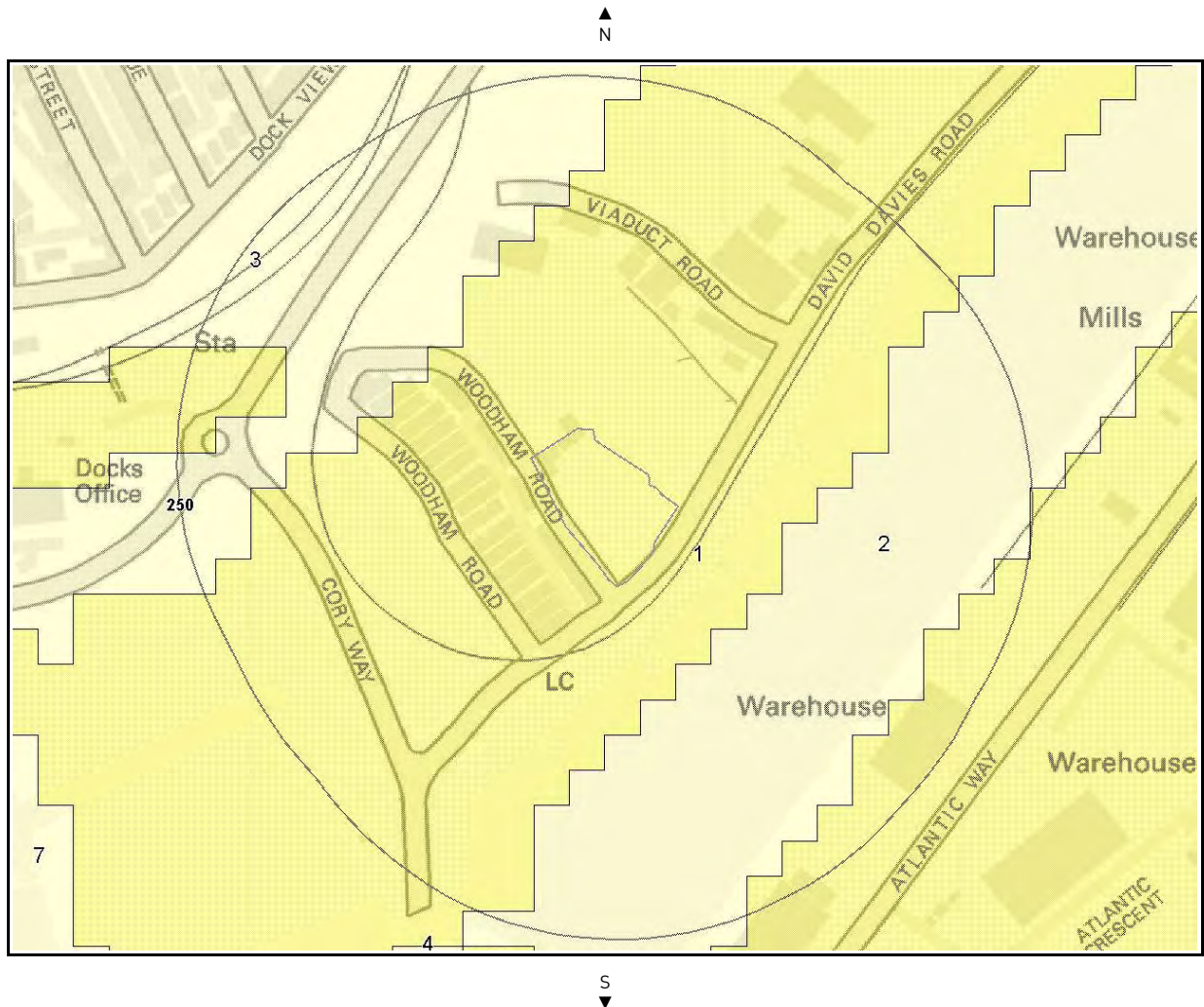
**Ground Dissolution Soluble Rocks Legend**

Mapping sourced from  Ordnance Survey

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- |  |  |   |
|--|--|---|
|  Site Outline       |  No Data / Null |  Low      |
|  Search Buffers (m) |  Negligible     |  Moderate |
|  |  Very Low       |  High     |

# 4.4 Compressible Deposits Map



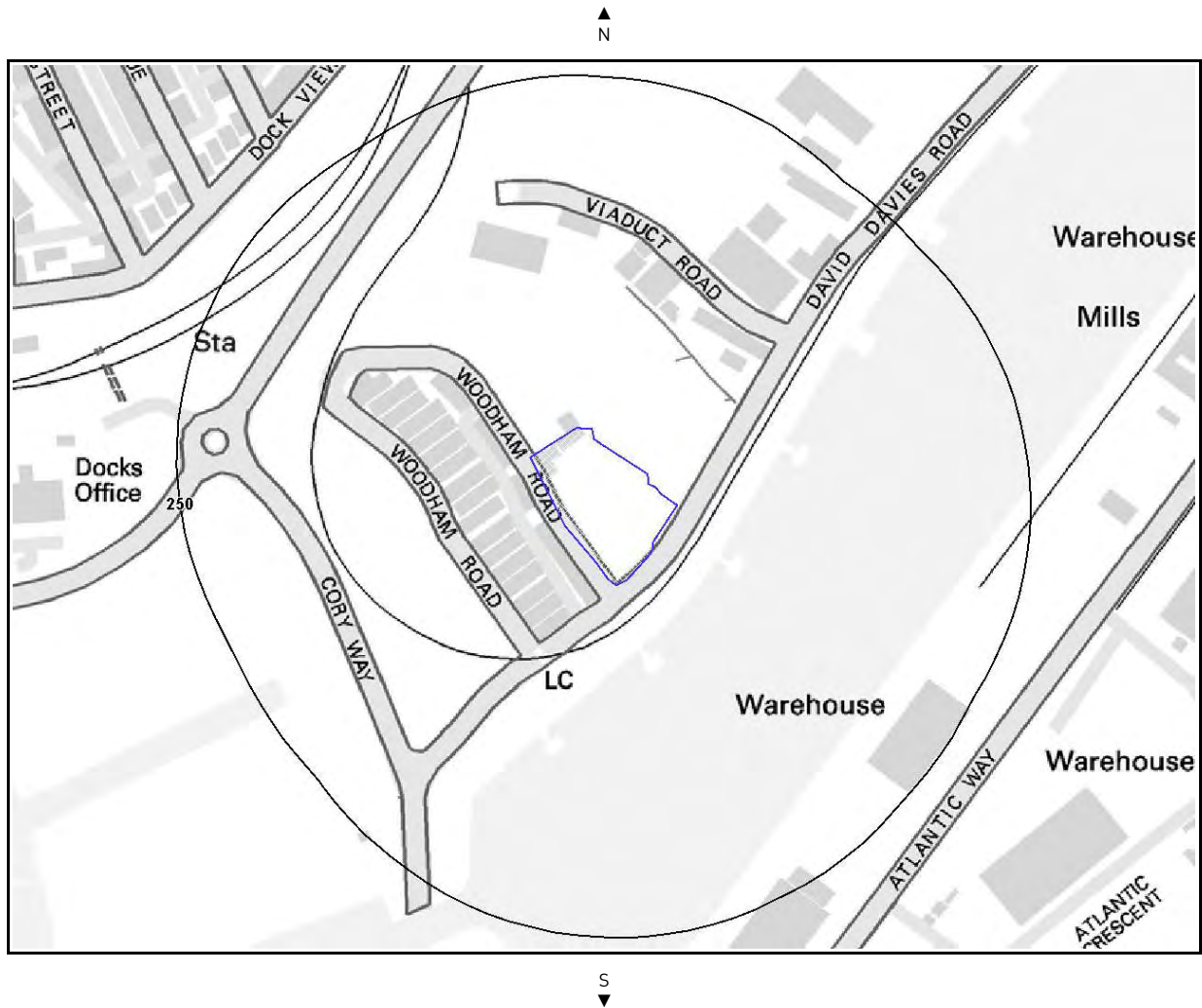
### Compressible Deposits Legend

Mapping sourced from 

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




# 4.5 Collapsible Deposits Map



### Collapsible Deposits Legend

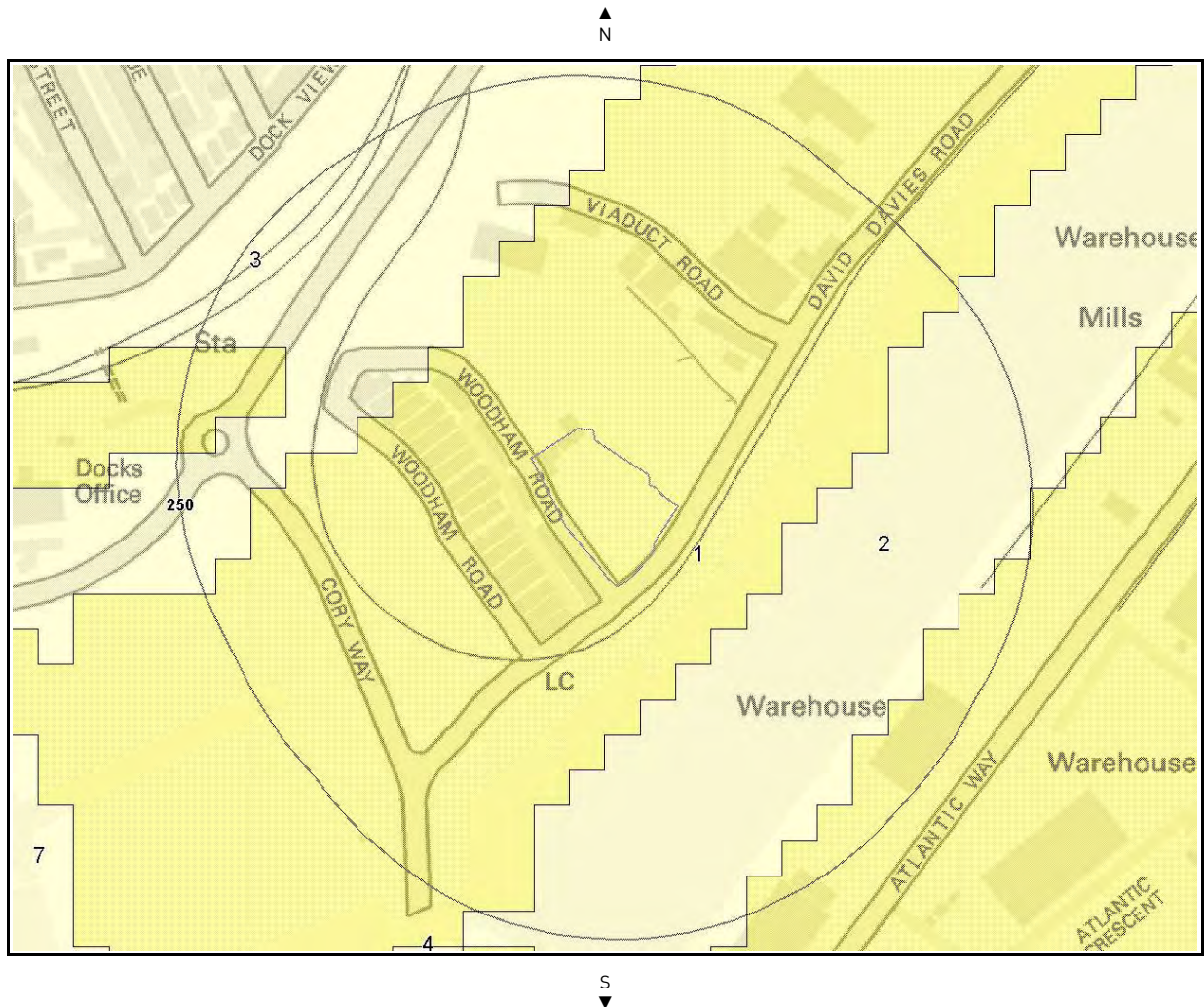


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-  Site Outline
-  Search Buffers (m)
  -  250
  -  500
-  No Data / Null
-  Significant



# 4.6 Running Sand Map



**Running Sand Legend**



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## 4. 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?**

**Very Low**

\*This includes an automatically generated 50m buffer zone around the study site boundary.

### 4.1 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.

### 4.2 Landslides

The following Landslides information provided by the British Geological Survey:

ID	Distance (m)*	Direction	Hazard Rating	Details
1	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.

### 4.3 Ground Dissolution of Soluble Rocks

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

Distance (m)*	Direction	Hazard Rating	Details
0	On site	Null-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.

### 4.4 Compressible Deposits

The following Compressible Ground 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 compressible deposits to be present. 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.

### 4.5 Collapsible Deposits

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**Geology & Ground Stability Report** Reference: HMD-188-62961

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

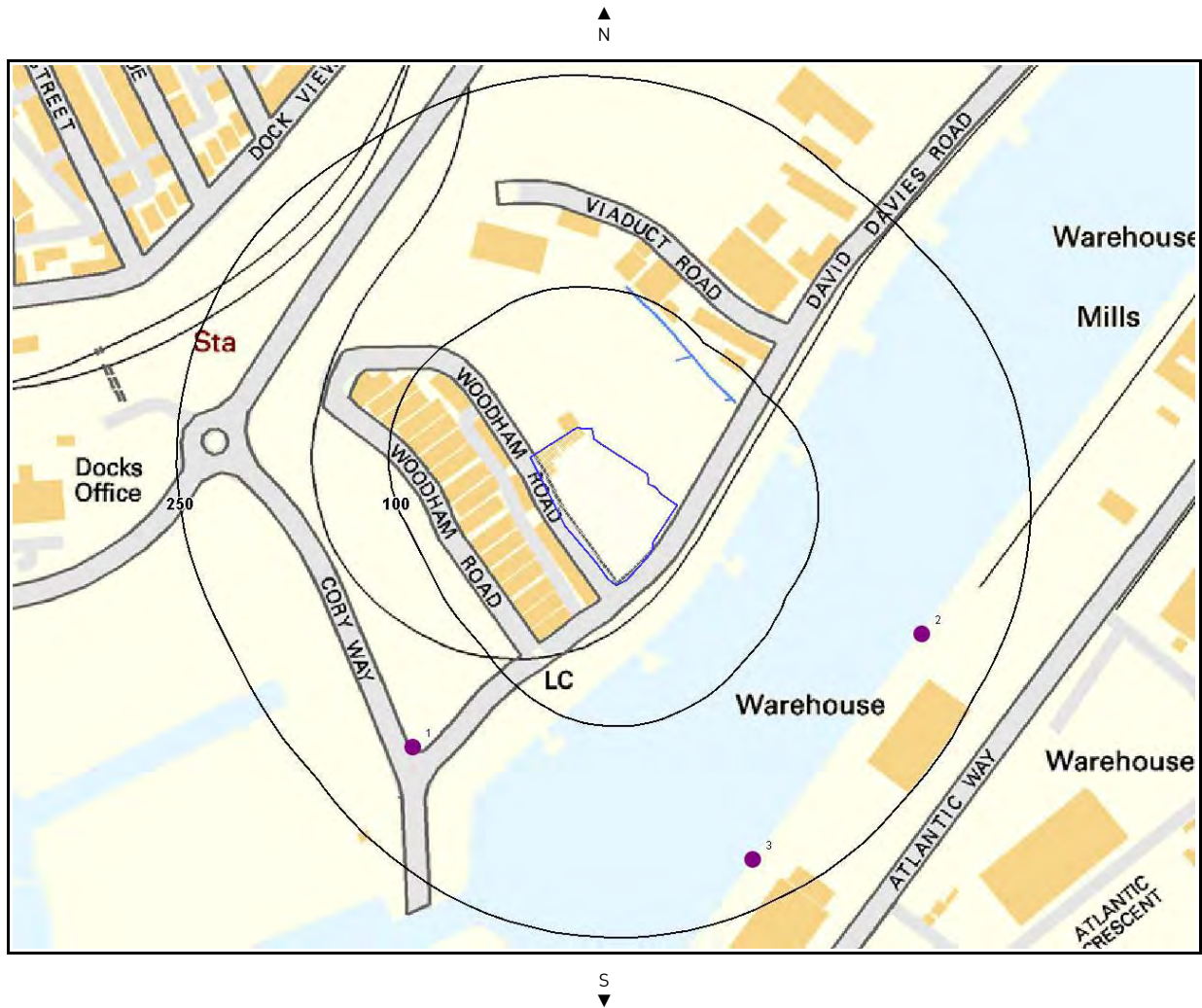
Distance (m)*	Direction	Hazard Rating	Details
0	On site	Null-Negligible	No Indicators for collapsible deposits identified. No Special actions required to avoid problems due to collapsible deposit.

## 4.6 Running Sands

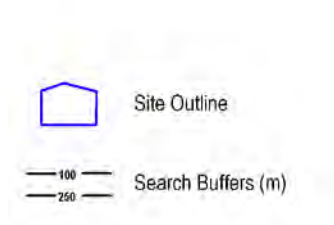
The following Running Sands information is provided by the British Geological Survey:

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.

# 5. Borehole Records Map



### Borehole Records Legend



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## 5. 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 (m)	Borehole Name
1	183.0	SW	312490,167490	ST16NW109	1.8	BARRY DUCK CUSTOMS & EXICISE BLDG
2	196.0	SE	312850,167570	ST16NW157	14.0	CRANE BEAM, BARRY DOCKS, NO.2
3	217.0	SE	312730,167410	ST16NW158	12.7	CRANE BEAM, BARRY DOCKS, NO.3

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# Contacts

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Kingsley Dunham Centre

Keyworth, Nottingham NG12 5GG

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Leicestershire, LE12 6HXTel: [www.british-gypsum.bpb.com](http://www.british-gypsum.bpb.com)**The Coal Authority**

200 Lichfield Lane, Mansfield, Notts NG18 4RG

Tel: 0845 762 6848

DX 716176 Mansfield 5 [www.coal-authority.co.uk](http://www.coal-authority.co.uk)**Ordnance Survey**

Romsey Road, Southampton SO16 4GU

Tel: 08456 050505

**Getmapping PLC**Virginia Villas, High Street, Hartley Witney,  
Hampshire RG27 8NW

Tel: 01252 845444

**Peter Brett Associates**Caversham Bridge House, Waterman Place, Reading  
Berkshire RG1 8DNTel: +44 (0)118 950 0761 E-mail: [reading@pba.co.uk](mailto:reading@pba.co.uk)**Acknowledgements**

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