

APPENDICES



APPENDIX 1 – FIGURES



JOMAS ASSOCIATES LTD T: 0843 289 2187

Project Name	Kingfield Road, Woking	Client	Woking Football Club
Project No.	P1381J1460	Date	16/08/2018
Title	Site Location Plan	Prepared By	AM



SW

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JOMAS ASSOCIATES LTD T: 0843 289 2187



Slight downward slope within car park

Tennis court at south western corner no longer present

Jomas Report P1381J1460 - Proposed Ground Floor Plan (Figure 3)



LeachRhodesWalker



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— Y

STUDIO APARTMENT

- 1 BEDROOM APARTMENT
- 1 BEDROOM DUPLEX / TOWNHOUSE
 - 2 BEDROOM APARTMENT
- 2 BEDROOM TOWNHOUSE
- 2 BEDROOM UPPER DUPLEX
 - 2 BEDROOM LOWER DUPLEX
- 3 BEDROOM APARTMENT / TOWNHOUSE
- COMMUNITY CONCIERGE
- COMMERCIAL AREA



STADIUM

0 10 2

40m

SCALE @ 1:500

Jomas Report P1381J1460 - Proposed Lower Ground Floor Plan (Figure 4)



LeachRhodesWalker





PARKING SPACES

107 (incl. 14 Visitor Spaces)
121 (incl. 15 Visitor Spaces)
129 (incl. 11 Visitor Spaces)
119-LG / 141-B
(incl. 13 Visitor Spaces)
106-LG / 114-B
(incl. 11 Visitor Spaces)

Plus 3 Community Concierge Spaces, and 20 possible tandem spaces in basement 5

TOTAL:	855 SPACES (791 Resi & 64 Visitor)

(INCLUDING 5% ACCESSIBLE PARKING SPAC_S)



SCALE @ 1:500

Jomas Report P1381J1460 - Proposed Baement Plan (Figure 5)



LeachRhodesWalker





PARKING SPACES

BLOCK 1: BLOCK 2: BLOCK 3: BLOCK 4: BLOCK 5:	107 (incl. 14 Visitor Spaces) 121 (incl. 15 Visitor Spaces) 129 (incl. 11 Visitor Spaces) 119-LG / 141-B (incl. 13 Visitor Spaces) 106-LG / 114-B
	(incl. 11 Visitor Spaces)

Plus 3 Community Concierge Spaces, and 20 possible tandem spaces in basement 5

TOTAL:	855 SPACES (791 Resi & 64 Visitor)

(INCLUDING 5% ACCESSIBLE PARKING SPACES)



SCALE @ 1:500



Project Name	Kingfield Road, Woking	Client	Woking Football Club
ïtle	Site Photo Plan	Project	P1381J1460
Photo 1: Main foo	otball ground on site with viewing st	tands.	
		a	- See
	and the second		
Marine /	<u> Andhudl (MC Samellins</u>) (MC Manus) (M		
		1	NUMERANG HOVED WE ING MOVETO WOKING AND
Photo 2: David L	loyd club on site with car parking a	reas.	
and and a		20	





Project Name	Kingfield Road, Woking	Client	Woking Football Club
Title	Site Photo Plan	Project	P1381J1460

Photo 3: Alternative David Lloyd building.



Photo 4: Car parking area for site.





Project Name	Kingfield Road, Woking	Client	Woking Football Club
Title	Site Photo Plan	Project	P1381J1460
Photo 5: Bar unit lo	ocated next to football ground.		



Photo 6: Woking snooker centre.





Project Name	Kingfield Road, Woking	Client	Woking Football Club
Title	Site Photo Plan	Project	P1381J1460

Photo 7: Woking gymnastics club.



Photo 8: Area between large gymnasium and football ground.





Project Name	Kingfield Road, Woking	Client	Woking Football Club
Title	Site Photo Plan	Project	P1381J1460
Photo 9: Overgrown area between football ground and gymnasium.			



Photo 10: Access point to David Lloyd part of site.





ojeci Nume	Kingfield Road, Woking	Client	Woking Football Club
lle	Site Photo Plan	Project	P1381J1460
hoto 11: Typical	soft landscaping area on site.		
hoto 12: Newly J	planted soft landscaping on site.		



APPENDIX 2 – GROUNDSURE REPORTS



Jomas Associates Ltd

Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD Report Reference: HMD-377-5286262

Your Reference: P1381J1460-1

Report Date 1 Aug 2018

Report Delivery Email - pdf Method:

Geo Insight

Address: WOKING FOOTBALL CLUB, LAITHWAITE COMMUNITY STADIUM, KINGFIELD ROAD, KINGFIELD, WOKING, GU22 9AA

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 +44843 289 2187 quoting the above report reference number.

Yours faithfully,

Jomas Associates Ltd

Enc. Groundsure Geo Insight



WOKING FOOTBALL CLUB, LAITHWAITE COMMUNITY STADIUM, KINGFIELD ROAD, KINGFIELD, WOKING, GU22 9AA
1 Aug 2018
HMD-377-5286262

Jomas Associates Ltd

Client:

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Aerial Photograph Capture date:20-Apr-2013Grid Reference:500569,157301Site Size:4.95ha

SE





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Overview of Findings

The Groundsure Geo Insight provides high quality geo-environmental information that allows geoenvironmental 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	No	
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site at 1:10,000 scale?*	Yes
	1.2.2 Are there any records of landslip within 500m of the study site boundary at 1:10,000 scale?	No
1.3 Bedrock, Solid Geology and linear	1.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
features	1.3.2 Are there any records of linear features within 500m of the study site boundary at 1:10,000 scale?	No
Section 2: Geolo	gy 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	2.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?*	Yes
Landslips	2.2.2 Are there any records of permeability of superficial ground within 500m of the study site?	Yes
	2.2.3 Are there any records of landslip within 500m of the study site boundary?	No
	2.2.4 Are there any records relating to permeability of landslips within the study site* boundary?	No





Section 2: Geolo	gy 1:50,000 Scale							
2.3 Bedrock, Solid Geology and linear features	2.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.							
	2.3.2 Are there any records relating to perm ground within the study site boundary?	eability of bec	drock		Yes			
	2.3.3 Are there any records of linear feature study site boundary?	s within 500m	of the		No			
Caption 2: Dada	-							
3. Radon	3.11s the property in a Radon Affected Area a Protection Agency (HPA) and if so what perc above the Action Level?	as defined by entage of hor	the Health nes are	The property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.				
	3.2Radon Protection			No radon	protective me necessary.	easures are		
Section 4: Grour	nd Workings	On-site	0-50m	51-250	251-500	501-1000		
4.1 Historical Surface Scale Mapping	e Ground Working Features from Small	1	7	0	Not Searched	Not Searched		
4.2 Historical Under	ground Workings from Small Scale Mapping	0	0	0	0	0		
4.3 Current Ground	Workings	0	0	0	0	2		
Section 5: Minin	g, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000		
5.1 Historical Mining	3	0	0	0	0	0		
5.2 Coal Mining		0	0	0	0	0		
5.3 Johnson Poole a	nd Bloomer Mining Area	0	0	0	0	0		
5.4 Non-Coal Mining)*	0	0	0	0	0		
5.5 Non-Coal Minin	g Cavities	0	0	0	0	0		
5.5 Natural Cavities		0	0	0	0	0		

Report Reference: HMD-377-5286262 Client Reference: P1381J1460-1





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-sit	e			
6.1 Shrink-Swell Clay	Low				
6.2 Landslides	Very Lo	w			
6.3 Ground Dissolution of Soluble Rocks	Negligik	ole			
6.4 Compressible Deposits	Modera	te			
6.5 Collapsible Deposits	Very Lo	w			
6.5 Running Sand	Low				
Section 7: Borehole Records	On-si	te	0-50m	5	1-250
7 BGS Recorded Boreholes	0		0		0
Section 8: Estimated Background Soil Chemistry	On-si	te	0-50m	5	1-250
8 Records of Background Soil Chemistry	5		2		0
Section 9: Railways and Tunnels	On-site	0-50m	51-250	250-500	
9.1 Tunnels	0	0	0	Not Searchec	I
9.2 Historical Railway and Tunnel Features	0	0	0	Not Searchec	I
9.3 Historical Railways	0	0	0	Not Searchec	I
9.4 Active Railways	0	0	0	Not Searchec	I
9.5 Railway Projects	0	0	0	0	





1:10,000 Scale Availability



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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	Full	Full	No coverage
		mapped			
2	461.0	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 Geology (1:10,000 scale). 1.1 Artificial Ground map (1:10,000 scale)



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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	8.0	E	WGR-VOID	Worked Ground (Undivided)	Void
2	324.0	S	WMGR-ARTDP	Infilled Ground	Artificial Deposit
3	395.0	Ν	WGR-VOID	Worked Ground (Undivided)	Void
4	407.0	S	WMGR-ARTDP	Infilled Ground	Artificial Deposit
5	448.0	NE	WGR-VOID	Worked Ground (Undivided)	Void
6	498.0	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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1.2 Superficial Deposits and Landslips

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

1.2.1 Superficial Deposits/ Drift Geology

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

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	KPGR-XSV	Kempton Park Gravel Formation - Sand And Gravel	Sand And Gravel
 2	0.0	On Site	ALV-XSV	Alluvium - Sand And Gravel	Sand And Gravel
3	291.0	Ν	KPGR-XSV	Kempton Park Gravel Formation - Sand And Gravel	Sand And Gravel

1.2.2 Landslip

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

No

Database searched and no data found.

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

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





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

NW Ν NE armo C Heath 4 W Ε 5**Ó**A Old Waking 2 S SE

SW

Bedrock and linear features Legend

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1000

Search Buffers (m)

Report Reference: HMD-377-5286262 Client Reference: P1381J1460-1





1.3 Bedrock and linear features

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

1.3.1 Bedrock/ Solid Geology

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

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
1	0.0	On Site	BGS-SANDU	Bagshot Formation - Sand	Eocene Epoch
 2	0.0	On Site	LC-CLSISA	London Clay Formation - Clay, Silt And Sand	Eocene Epoch
3	461.0	W	BGS-SANDU	Bagshot Formation - Sand	Eocene Epoch

1.3.2 Linear features

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

Database searched and no data found at this scale.

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



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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: 285

2.1.1 Artificial/ Made Ground

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

No

Database searched and no data found.

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)



SW

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2.2 Superficial Deposits and Landslips

2.2.1 Superficial Deposits/ Drift Geology

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

ID	Distance	Direction	LEX Code	Description	Rock Description
 1	0.0	On Site	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
 2	0.0	On Site	KPGR-XSV	KEMPTON PARK GRAVEL MEMBER	SAND AND GRAVEL
3	290.0	Ν	KPGR-XSV	KEMPTON PARK GRAVEL MEMBER	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? Yes

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Intergranular	High	Very Low
0.0	On Site	Intergranular	Very High	High

2.2.3 Landslip

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

No

Database searched and no data found.

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

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

2.2.4 Landslip Permeability

Are there any records relating to permeability of landslips within the study site boundary?

No

Database searched and no data found.





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



SW

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2.3 Bedrock, Solid Geology & linear features

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 285

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	LC-XCZS	LONDON CLAY FORMATION - CLAY, SILT AND SAND	YPRESIAN
_	2	0.0	On Site	BGS-S	BAGSHOT FORMATION - SAND	YPRESIAN

2.3.2 Permeability of Bedrock Ground

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

Distanc e	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Intergranular	High	High
0.0	On Site	Mixed	Moderate	Very Low

2.3.3 Linear features

Are there any records of linear features 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, 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.





3.1 Radon Affected Areas

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

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

3.2 Radon Protection

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


4 Ground Workings map

Groundsure







4 Ground Workings

4.1 Historical Surface Ground Working Features derived from Historical Mapping

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

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

_	ID	Distance (m)	Direction	NGR	Use	Date
	1	0.0	On Site	500557 157400	Unspecified Pit	1955
	2A	4.0	E	500752 157365	Pond	1895
	3A	4.0	E	500752 157362	Pond	1870
	4A	9.0	NE	500753 157361	Pond	1938
	5A	9.0	NE	500753 157361	Pond	1912
	6A	15.0	E	500752 157358	Pond	1982
_	7A	15.0	E	500752 157358	Pond	1992
	8A	15.0	E	500752 157358	Pond	1974

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? No





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	Distanc e (m) Direction		NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	925.0	Ν	500210 158350	Crushed Rock	Downside Goods Yard	A site where mineral commodities are unloaded from rail trucks and stored	Active
Not shown	925.0	Ν	500210 158350	Slag	Downside Goods Yard	A site where mineral commodities are unloaded from rail trucks and stored	Active



5 Mining, Extraction & Natural Cavities map

Groundsure



(polygon data)





5 Mining, Extraction & Natural Cavities

5.1 Historical Mining

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

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

No

Database searched and no data found.

5.2 Coal Mining

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

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

No

Database searched and no data found.

5.3 Johnson Poole and Bloomer

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

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

No

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

5.4 Non-Coal Mining

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

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

No





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

Are there any Non-Coal Mining cavities within 1000m of the study site boundary?

No

No

No

No

Database searched and no data found.

5.6 Natural Cavities

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

Are there any Natural Cavities within 1000m of the study site boundary?

Database searched and no data found.

5.7 Brine Extraction

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

Are there any Brine Extraction areas within 1000m of the study site boundary?

Database searched and no data found.

5.8 Gypsum Extraction

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

Are there any Gypsum Extraction areas within 1000m of the study site boundary?

5.9 Tin Mining

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

Database searched and no data found.

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

No





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

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

No





6 Natural Ground Subsidence 6.1 Shrink-Swell Clay map







6.2 Landslides map







6.3 Ground Dissolution of Soluble Rocks map

NW Ν NE QUEEN ELIZABETH WA SALISBURY AD DAVO Turnoak Rbt Pavilion Elm LMBRIDGE Bridge OAK AVEN LAN Football Club 1 RN ROAD W Е 250 Kingfield CENT **Recreation Ground** Scho Pavilion PW PO T GENT MAPL SW SE S © Crown copyright and database rights 2018. Ordnance Survey licence 100035207. **Ground Dissolution** Soluble Rocks Legend No Data / Null Low Site Outline Negligible Moderate Search Buffers (m) Very Low High 250





6.4 Compressible Deposits map







6.5 Collapsible Deposits map







6.6 Running Sand map







6 Natural Ground Subsidence

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

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

What is the maximum hazard rating of natural subsidence within the study site** boundary? Moderate

6.1 Shrink-Swell Clays

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.
2	0.0	On Site	Very Low	Ground conditions predominantly low plasticity. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with shrink-swell clays.
3	0.0	On Site	Low	Ground conditions predominantly medium plasticity. Do not plant trees with high soil moisture demands near to buildings. For new build, consideration should be given to advice published by the National House Building Council (NHBC) and the Building Research Establishment (BRE). There is a possible increase in construction cost to reduce potential shrink-swell problems. For existing property, there is a possible increase in insurance risk, especially during droughts or where vegetation with high moisture demands is present.

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

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





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.

6.3 Ground Dissolution of Soluble Rocks

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

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

6.4 Compressible Deposits

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

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.
2	0.0	On Site	Moderate	Significant potential for compressibility problems. Avoid large differential loadings of ground. Do not drain or de-water ground near the property without technical advice. For new build - consider possibility of compressible ground in ground investigation, construction and building design. Consider effects of groundwater changes. Extra construction costs are likely. For existing property - possible increase in insurance risk from compressibility, especially if water conditions or loading of the ground change significantly.





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

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

6.6 Running Sands

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

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Very low potential for running sand problems if water table rises or if sandy strata are exposed to water. No special actions required, to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.
2	0.0	On Site	Low	Possibility of running sand problems after major changes in ground conditions. Normal maintenance to avoid leakage of water-bearing services or water bodies (ponds, swimming pools) should reduce likelihood of problems due to running sand. For new build - consider possibility of running sand into trenches or excavations if water table is high or sandy strata are exposed to water. Avoid concentrated water inputs to site. Unlikely to be an increase in construction costs due to potential for running sand. For existing property - no significant increase in insurance risk due to running sand problems is likely.



7 Borehole Records map

Groundsure







7 Borehole Records

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

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

0





8 Estimated Background Soil Chemistry

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

7

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

Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
0.0	On Site	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
0.0	On Site	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
0.0	On Site	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
0.0	On Site	Sediment	15 - 25 mg/kg	<1.8 mg/kg	90 - 120 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg
22.0	Ν	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	200 - 300 mg/kg
28.0	Ν	Sediment	15 - 25 mg/kg	<1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	100 - 200 mg/kg

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



9 Railways and Tunnels map

Groundsure







9 Railways and Tunnels

9.1 Tunnels

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

Have any underground railway lines been identified within the study site boundary?	No
Have any underground railway lines been identified within 250m of the study site boundary?	No
Database searched and no data found.	
Any records that have been identified are represented on the Railways and Tunnels map.	

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

Have any c	Have any other railway tunnels been identified within the site boundary?											No				
									<i>.</i> .							

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

Database searched and no data found.

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

9.2 Historical Railway and Tunnel Features

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

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

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

Database searched and no data found.

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





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

Have any historical railway lines been identified within the study site boundary?	No							
Have any historical railway lines been identified within 250m of the study site boundary?								
Database searched and no data found.								
Multiple sections of the same track may be listed in the detail above Any records that have been identified are represented on the Railways and Tunnels map.								
9.4 Active Railways								
These datasets are derived from Ordnance Survey mapping and OpenStreetMap and provide inform on the possible locations of active railway lines in proximity to the study site.	nation							
Have any active railway lines been identified within the study site boundary?	No							
Have any active railway lines been identified within 250m of the study site boundary?	No							
Database searched and no data found.								
Multiple sections of the same track may be listed in the detail above Any records that have been identified are represented on the Railways and Tunnels map.								

9.5 Railway Projects

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

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

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

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

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





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Standard Terms and Conditions

Groundsure's Terms and Conditions can be viewed online at this link: <u>https://www.groundsure.com/terms-and-conditions-may25-2018</u>



Jomas Associates Ltd	Groundsure	HMD-377-5286261
Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD	Reference: Your Reference:	P1381J1460-1
	Report Date	1 Aug 2018
	Report Delivery	Email - pdf

Enviro Insight

Address: WOKING FOOTBALL CLUB, LAITHWAITE COMMUNITY STADIUM, KINGFIELD ROAD, KINGFIELD, WOKING, GU22 9AA

Method:

Dear Sir/ Madam,

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

If you need any further assistance, please do not hesitate to contact our helpline on +44843 289 2187 quoting the above report reference number.

Yours faithfully,

Jomas Associates Ltd

Enc. Groundsure Enviroinsight

Groundsure LOCATION INTELLIGENCE ENVIRONMENT

Address:	WOKING FOOTBALL CLUB, LAITHWAITE COMMUNITY STADIUM, KINGFIELD ROAD, KINGFIELD, WOKING, GU22 9AA
Date:	1 Aug 2018
Reference:	HMD-377-5286261
Client:	Jomas Associates Ltd

NW

NE

Е



SW

Aerial Photograph Capture date:20-Apr-2013Grid Reference:500569,157301Site Size:4.95haReport Reference: HMD-377-52862614.95haClient Reference: P1381J1460-14.95ha

SE





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Overview of Findings

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

Section 1: Historical Industrial Sites	On-site	0-50	51-250	251-500
1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	1	0	2	11
1.2 Additional Information - Historical Tank Database	2	0	0	0
1.3 Additional Information – Historical Energy Features Database	0	2	6	21
1.4 Additional Information – Historical Petrol and Fuel Site Database	0	0	0	0
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	0	0	0	3
1.6 Historical military sites	0	0	0	0
1.7 Potentially Infilled Land	1	7	0	12
Section 2: Environmental Permits, Incidents and Registers	On-site	0-50m	51-250	251-500
2.1 Industrial Sites Holding Environmental Permits and/or Authorisations				
2.1.1 Records of historic IPC Authorisations	0	0	0	0
2.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	0	0
2.1.3 Records of Red List Discharge Consents	0	0	0	0
2.1.4 Records of List 1 Dangerous Substances Inventory sites	0	0	0	0
2.1.5 Records of List 2 Dangerous Substances Inventory sites	0	0	0	0
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	0	0	0
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
2.1.8 Records of Licensed Discharge Consents	0	1	0	2
2.1.9 Records of Water Industry Referrals	0	0	0	0
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	0	0	0
2.2 Records of COMAH and NIHHS sites	0	0	0	0
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	0	0	0	1
2.3.2 National Incidents Recording System, List 1	0	0	0	0
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0





Section 3: Landfill and Other Waste Sites	On-site	0-50m	51-250	251-500	501-1000	1000-
3.1 Landfill Sites						1500
3.1.1 Environment Agency/Natural Resources Wales Registered Landfill Sites	0	0	0	0	0	Not searched
3.1.2 Environment Agency/Natural Resources Wales Historic Landfill Sites	0	1	0	0	0	0
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	0
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	0	0	0	0	0
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	0	Not searched	Not searched
3.2.2 Environment Agency/Natural Resources Wales Licensed Waste Sites	0	0	0	0	0	0
Section 4. Current Land Lise	On-site	e	0-50m	51-25	0 2	51-500
		-				
4.1 Current Industrial Sites Data	0		2	5	N	ot searched
4.2 National Grid Linderground Electricity Cables	0		0	0		0
44 National Grid Gas Transmission Pipelines	0		0	0		0
Section 5: Geology 5.1 Records of Artificial Ground and Made Ground present beneath the study site 5.2 Records of Superficial Ground and Drift Geology present			None ic	lentified		
beneath the study site			lden	tified		
site see the detailed findings section.						
Section 6: Hydrogeology and Hydrology			0-50	00m		
6.1 Records of Strata Classification in the Superficial Geology within 500m of the study site			Iden	tified		
6.2 Records of Strata Classification in the Bedrock Geology within 500m of the study site			Iden	tified		
	On-site	0-50m	51-250	251-500	501-1000	1000- 2000
6.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	2
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	10
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.6 Source Protection Zones (within 500m of the study site)	0	0	0	0	Not searched	Not searched
6.7 Source Protection Zones within Confined Aquifer	0	0	0	0	Not searched	Not searched
6.8 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site)	1	0	#250GWV #	#500GWV #	Not searched	Not searched





Section 6: Hydrogeology and Hydrology 0-500m 1000-251-500 501-1000 On-site 0-50m 51-250 1500 6.9 Environment Agency/Natural Resources Wales information on No No No No No No river quality within 1500m of the study site 6.10 Ordnance Survey MasterMap Water Network entries within 0 2 18 22 Not searched Not searched 500m of the site 6.11 Surface water features within 250m of the study site No Yes Yes Not searched Not searched Not searched

Section 7: Flooding

7.1 Enviroment Agency Zone 2 floodplains within 250m of the study site	Identified
7.2 Environment Agency/Natural Resources Wales Zone 3 floodplains within 250m of the study site	Identified
7.3 Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site	Very Low
7.4 Flood Defences within 250m of the study site	Identified
7.5 Areas benefiting from Flood Defences within 250m of the study site	Identified
7.6 Areas used for Flood Storage within 250m of the study site	None identified
7.7 Maximum BGS Groundwater Flooding susceptibility within 50m of the study site	Potential at Surface
7.8 BGS confidence rating for the Groundwater Flooding susceptibility areas	Moderate

Section 8: Designated Environmentally Sensitive Sites	On-site	0-50m	51-250	251-500	501-1000	1000- 2000
8.1 Records of Sites of Special Scientific Interest (SSSI)	0	0	0	0	0	1
8.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
8.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	0
8.4 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
8.5 Records of Ramsar sites	0	0	0	0	0	0
8.6 Records of Ancient Woodlands	0	0	0	0	0	3
8.7 Records of Local Nature Reserves (LNR)	0	0	0	0	3	0
8.8 Records of World Heritage Sites	0	0	0	0	0	0
8.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0

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Section 8: Designated Environmentally Sensitive Sites	On-site	0-50m	51-250	251-500	501-1000	1000- 2000
8.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	0	0
8.11 Records of National Parks	0	0	0	0	0	0
8.12 Records of Nitrate Sensitive Areas	0	0	0	0	0	0
8.13 Records of Nitrate Vulnerable Zones	0	0	0	0	0	1
8.14 Records of Green Belt land	0	0	1	1	0	2
Section 9: Natural Hazards						
9.1 Maximum risk of natural ground subsidence			Mod	erate		
9.1.1 Maximum Shrink-Swell hazard rating identified on the study site			Lo	0W		
9.1.2 Maximum Landslides hazard rating identified on the study site	Very Low					
9.1.3 Maximum Soluble Rocks hazard rating identified on the study site	Negligible					
9.1.4 Maximum Compressible Ground hazard rating identified on the study site	Moderate					
9.1.5 Maximum Collapsible Rocks hazard rating identified on the study site	Very Low					
9.1.6 Maximum Running Sand hazard rating identified on the study site	Low					
9.2 Radon						
9.2.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The site is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.					properties
9.2.2 Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	No radon protective measures are necessary.					
Section 10: Mining						
10.1 Coal mining areas within 75m of the study site			None ic	lentified		
10.2 Non-Coal Mining areas within 50m of the study site boundary			None io	lentified		

10.3 Brine affected areas within 75m of the study site

None identified





Using this report

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

1. Historical Industrial Sites

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

2. Environmental Permits, Incidents and Registers

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

3. Landfills and Other Waste Sites

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

4. Current Land Uses

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

5. Geology

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

6. Hydrogeology and Hydrology

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

7. Flooding

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

8. Designated Environmentally Sensitive Sites

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

9. Natural Hazards

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

10. Mining

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

11. Contacts

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

Note: Maps

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

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

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





1. Historical Land Use






1. Historical Industrial Sites

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

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

Records of sites with a potentially contaminative past land use within 500m of the search boundary: 14

Distance [m]	Direction	Use	Date
0	On Site	Unspecified Pit	1955
116	E	Nursery	1938
133	E	Nursery	1938
263	E	Smithy	1912
264	Ν	Nursery	1895
283	NE	Nursery	1912
356	SW	Nurseries	1938
359	SW	Nurseries	1938
359	SW	Nursery	1913
459	W	Nursery	1938
460	W	Nursery	1913
460	W	Nursery	1895
460	W	Nursery	1938
465	NE	Nursery	1912
	0 116 133 263 264 283 356 359 359 459 460 460 460 465	Direction 0 On Site 116 E 133 E 263 E 264 N 283 NE 356 SW 359 SW 459 W 460 W 460 W 465 NE	Distance (m)DirectionOse0On SiteUnspecified Pit116ENursery133ENursery263ESmithy264NNursery283NENursery356SWNurseries359SWNursery460WNursery460WNursery460WNursery460WNursery460WNursery460WNursery460WNursery460WNursery460WNursery460WNursery460WNursery460WNursery460WNursery460WNursery465NENursery

1.2 Additional Information – Historical Tank Database

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

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

2

ID	Distance (m)	Direction	Use	Date
15E	0	On Site	Unspecified Tank	1993
16E	0	On Site	Unspecified Tank	1988

1.3 Additional Information – Historical Energy Features Database

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





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

ID	Distance (m)	Direction	Use	Date
17F	38	NE	Electricity Substation	1993
18F	38	NE	Electricity Substation	1988
19G	53	W	Electricity Substation	1992
20G	53	W	Electricity Substation	1992
21	120	SW	Electricity Substation	1988
22H	209	E	Electricity Substation	1993
23H	210	E	Electricity Substation	1994
24	213	Ν	Electricity Substation	1992
25	266	W	Electricity Substation	1993
261	316	NE	Electricity Substation	1971
271	316	NE	Electricity Substation	1993
28J	333	E	Electricity Substation	1993
29J	333	E	Electricity Substation	1972
30	382	S	Electricity Substation	1994
31K	389	Ν	Electricity Substation	1972
32K	391	Ν	Electricity Substation	1994
33L	408	NW	Electricity Substation	1992
34L	409	NW	Electricity Substation	1987
35	410	W	Electricity Substation	1992
36M	415	NE	Electricity Substation	1993
37M	415	NE	Electricity Substation	1995
38M	415	NE	Electricity Substation	1972
39N	461	S	Electricity Substation	1994
40N	461	S	Electricity Substation	1971
41N	461	S	Electricity Substation	1993
420	467	Ν	Electricity Substation	
430	467	Ν	Electricity Substation	
44P	482	E	Electricity Substation	
45P	483	E	Electricity Substation	

1.4 Additional Information – Historical Petrol and Fuel Site Database

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

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

0





1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database

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

Records of historical garage and motor vehicle repair sites within 500m of the search boundary: 3

ID	Distance (m)	Direction	Use	Date
46Q	368	E	Garage	1967
47Q	368	E	Garage	1971
48Q	369	E	Garage	1966

1.6 Historical military sites

Certain military installations were not noted on historic mapping for security reasons. Whilst not all military land is necessarily of concern, Groundsure has researched and digitised a number of Ordnance Factories and other military industrial features (e.g. Ordnance Depots, Munitions Testing Grounds) which may be of contaminative concern. This research was drawn from a number of different sources, and should not be regarded as a definitive or exhaustive database of potentially contaminative military installations. The boundaries of sites within this database have been estimated from the best evidence available to Groundsure at the time of compilation.

Records of historical military sites within 500m of the search boundary:

0

Database searched and no data found.

1.7 Potentially Infilled Land

Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 20

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

ID	Distance(m)	Direction	Use	Date
49R	0	On Site	Unspecified Pit	1955
50S	4	E	Pond	1895
51S	4	E	Pond	1870
52S	9	NE	Pond	1912
53S	9	NE	Pond	1938
54S	15	E	Pond	1982
55S	15	E	Pond	1974
56S	15	E	Pond	1992
57	309	S	Ponds	1895
58	325	S	Pond	1870
59	376	Ν	Pool	1974
60	377	NW	Pond	1895
61T	390	Ν	Pool	1992
62T	390	Ν	Pool	1982
63	408	S	Pond	1912





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64U	442	NE	Ponds	1955
65U	450	NE	Pond	1992
66V	450	NE	Pond	1982
67V	450	NE	Pond	1974
68	497	W	Pond	1895





2. Environmental Permits, Incidents and Registers Map



Red List Discharge Consents

Hazardous Substance Consents

and Enforcements





2. Environmental Permits, Incidents and Registers

2.1 Industrial Sites Holding Licences and/or Authorisations

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

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

Database searched and no data found.

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

Database searched and no data found.

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

0

0

0

Database searched and no data found.

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

0

Database searched and no data found.

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

0





0

Database searched and no data found.

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

Database searched and no data found.

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

3

0

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

ID	Distance (m)	Direction	NGR	Details			
2	23	NW	500477 157480	Address: COFFER DAM AT HOE VALLEY, VOLKERFITZPATRICK HOE VALLEY, WESTFIELD AVENUE, WOKING, SURREY, GU22 9PG Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: EPRFP3620GX Permit Version: 1	Receiving Water: HOE STREAM Status: SURRENDERED UNDER EPR 2010 Issue date: 14/12/2010 Effective Date: 14-Dec-2010 Revocation Date: 31/07/2012		
ЗA	424	Ν	500500 157900	Address: Poplar Grove Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: TEMP.1715 Permit Version: 1	Receiving Water: STANFORD BROOK Status: TEMPORARY CONSENTS (WATER ACT 1989, SECTION 113) Issue date: 02/11/1989 Effective Date: 02-Nov-1989 Revocation Date: 02/09/2010		
4A	424	Ν	500500 157900	Address: Poplar Grove Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: TEMP.1715 Permit Version: 2	Receiving Water: Stanford Brook Status: SURRENDERED UNDER EPR 2010 Issue date: 03/09/2010 Effective Date: 03-Sep-2010 Revocation Date: 19/08/2014		

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

0





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

0

0

Database searched and no data found.

2.2 Dangerous or Hazardous Sites

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

Database searched and no data found.

2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents

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

1

The following NIRS List 2 records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Det	ails
1	349	NE	500701 157791	Incident Date: 07-Jul-2003 Incident Identification: 171418 Pollutant: Inorganic Chemicals/Products Pollutant Description: Other Inorganic Chemical or Product	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)

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

0

Database searched and no data found.

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

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





3. Landfill and Other Waste Sites Map



BGS / DoE Survey Landfill 🥤

Local Authority/Historical Mapping

Landfill Records

Search Buffers (m)

250 500





3. Landfill and Other Waste Sites

3.1 Landfill Sites

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

0

Database searched and no data found.

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

1

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

ID	Distance (m)	Direction	NGR	Details		
1	41	W		Site Address: Westfield Tip, Woking Waste Licence: - Site Reference: WO/15, WO/15/LOC, WO/14 Waste Type: Commercial, Household Environmental Permitting Regulations (Waste) Reference: -	Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: 31-Dec-1970 Last Recorded: 31-Dec-1979	

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

0

Database searched and no data found.

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

0





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

0

0

Database searched and no data found.

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



4. Current Land Use Map

Groundsure







4. Current Land Uses

4.1 Current Industrial Data

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

7

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

ID	Distance (m)	Directio n	Company	NGR	Address	Activity	Category
1	16	W	Electricity Sub Station	500478 157459	GU22	Electrical Features	Infrastructure and Facilities
2	41	NE	Electricity Sub Station	500682 157429	GU22	Electrical Features	Infrastructure and Facilities
3	122	SW	Electricity Sub Station	500392 157197	GU22	Electrical Features	Infrastructure and Facilities
4	209	NE	Intelligent Devices	500832 157522	Elmbridge House, Elmbridge Lane, Woking, GU22 9AF	Electronic Equipment	Industrial Products
5	214	E	Electricity Sub Station	500919 157361	GU22	Electrical Features	Infrastructure and Facilities
6	216	Ν	Electricity Sub Station	500468 157685	GU22	Electrical Features	Infrastructure and Facilities
7	219	SE	Peter Croucher	500849 157022	66, Loop Road, Woking, GU22 9BQ	Electrical Equipment Repair and Servicing	Repair and Servicing

4.2 Petrol and Fuel Sites

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

0

Database searched and no data found.

4.3 National Grid High Voltage Underground Electricity Transmission Cables

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

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

Database searched and no data found.

0





4.4 National Grid High Pressure Gas Transmission Pipelines

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

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

0





5. Geology

5.1 Artificial Ground and Made Ground

Database searched and no data found.

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

5.2 Superficial Ground and Drift Geology

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

Lex Code	Description	Rock Type
ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
KPGR-XSV	KEMPTON PARK GRAVEL MEMBER	SAND AND GRAVEL

5.3 Bedrock and Solid Geology

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

Lex Code	Description	Rock Type
LC-XCZS	LONDON CLAY FORMATION	CLAY, SILT AND SAND
BGS-S	BAGSHOT FORMATION	SAND

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





6 Hydrogeology and Hydrology 6a. Aquifer Within Superficial Geology







6b. Aquifer Within Bedrock Geology and Abstraction Licences







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



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6d. Hydrogeology – Source Protection Zones within confined aquifer









6e. Hydrology – Watercourse Network and River Quality



General Quality Assessment: Chemistry

General Quality Assessment: Biology





6.Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

Records of strata classification within the superficial geology at or in proximity to the property Yes

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

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

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

6.2 Aquifer within Bedrock Deposits

Records of strata classification within the bedrock geology at or in proximity to the property Yes

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

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

ID	Distanc e (m)	Direction	Designation	Description
1	0	On Site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
3	0	On Site	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
2	461	W	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers





Groundwater Abstraction Licences within 2000m of the study site

Identified

The following Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	NGR	Details	5
Not show n	1275	S	500900 155900	Status: Active Licence No: 28/39/30/0287 Details: Spray Irrigation - Storage Direct Source: Thames Groundwater Point: Omega, Moor Lane, Westfield - Borehole Data Type: Point Name: DAVIS	Annual Volume (m ³): 3200 Max Daily Volume (m ³): 328 Original Application No: WRA/4342/1 Original Start Date: 5/8/1975 Expiry Date: - Issue No: 100 Version Start Date: 8/1/1988 Version End Date:
Not show n	1275	S	500900 155900	Status: Active Licence No: 28/39/30/0287 Details: Spray Irrigation - Direct Direct Source: Thames Groundwater Point: Omega, Moor Lane, Westfield - Borehole Data Type: Point Name: DAVIS	Annual Volume (m ³): 3200 Max Daily Volume (m ³): 328 Original Application No: WRA/4342/1 Original Start Date: 5/8/1975 Expiry Date: - Issue No: 100 Version Start Date: 8/1/1988 Version End Date:

6.4 Surface Water Abstraction Licences

Surface Water Abstraction Licences within 2000m of the study site

Identified

The following Surface Water Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	NGR	Details	
Not shown	1158	SE	501458 156305	Status: Active Licence No: TH/039/0030/024Annual Volume (m³): 0 Max Daily Volume (m³): 0 Act 2003)Direct Source: Thames Surface Water - Non Tidal Point: River Wey At Gresham Mill, Old Woking, Surrey Data Type: Point Name: Linden LimitedAnnual Volume (m³): 0 Max Daily Volume (m³): 0 Application No: NPS/WR/010471 	
Not shown	1158	SE	501458 156305	Status: Historical Licence No: TH/039/0030/024 Details: Transfer Between Sources (Post Water Act 2003) Direct Source: Thames Surface Water - Non Tidal Point: River Wey At Gresham Mill Data Type: Point Name: Linden Homes South East Limited	Annual Volume (m ³): 0 Max Daily Volume (m ³): 0 Application No: NPS/WR/006738 Original Start Date: 5/8/2011 Expiry Date: 31/3/2027 Issue No: 1 Version Start Date: 5/8/2011 Version End Date:
Not shown	1601	E	502300 157500	Status: Historical Licence No: 28/39/30/0097 Details: Spray Irrigation - Direct Direct Source: Thames Surface Water - Non Tidal Point: Hoe Stream At Woking - Point 'b' Data Type: Point Name: BURHILL ESTATES CO LTD	Annual Volume (m ³): 13638 Max Daily Volume (m ³): 545.52 Application No: WRA/557 Original Start Date: 3/8/2009 Expiry Date: - Issue No: 100 Version Start Date: 18/12/1980 Version End Date:





ID	Distance (m)	Direction	NGR	Details		
Not shown	1611	E	502308 157516	Status: Historical Licence No: TH/039/0030/002 Details: Spray Irrigation - Direct Direct Source: Thames Surface Water - Non Tidal Point: Hoe Stream At Woking - Point 'b' Data Type: Point Name: BURHILL ESTATES CO LTD	Annual Volume (m³): 37850 Max Daily Volume (m³): 251 Application No: NPS WR 000 824 Original Start Date: 3/8/2009 Expiry Date: 31/3/2015 Issue No: 1 Version Start Date: 3/8/2009 Version End Date:	
Not shown	1611	E	502308 157516	Status: Historical Licence No: 28/39/30/0097 Details: Spray Irrigation - Direct Direct Source: Thames Surface Water - Non Tidal Point: Hoe Stream At Woking - Point 'b' Data Type: Point Name: BURHILL ESTATES CO LTD	Annual Volume (m ³): 5500 Max Daily Volume (m ³): 30.5 Application No: NPS WR 000 824 Original Start Date: 3/8/2009 Expiry Date: - Issue No: 101 Version Start Date: 3/8/2009 Version End Date:	
Not shown	1611	E	502308 157520	Status: Active Licence No: 28/39/30/0097 Details: Spray Irrigation - Direct Direct Source: Thames Surface Water - Non Tidal Point: Hoe Stream At Woking - Point 'b' Data Type: Point Name: BURHILL ESTATES CO LTD	Annual Volume (m ³): 5500 Max Daily Volume (m ³): 30.5 Application No: NPS WR 000 824 Original Start Date: 3/8/2009 Expiry Date: - Issue No: 102 Version Start Date: 3/8/2009 Version End Date:	
Not shown	1611	E	502308 157520	Status: Active Licence No: TH/039/0030/002/R01 Details: Spray Irrigation - Storage Direct Source: Thames Surface Water - Non Tidal Point: Hoe Stream At Woking - Point 'b' Data Type: Point Name: BURHILL ESTATES CO LTD	Annual Volume (m³): 37850 Max Daily Volume (m³): 251 Application No: NPS/WR/017002 Original Start Date: 1/4/2015 Expiry Date: 31/3/2027 Issue No: 1 Version Start Date: 1/4/2015 Version End Date:	
Not shown	1984	NW	498670 158240	Status: Historical Annual Volume (m ³ Licence No: 28/39/30/0427 Max Daily Volume (n Details: Transfer between sources Application No: WRA/S 70 Direct Source: Thames Surface Water - Non Tidal Original Start Date: 27/ 10 Point: Inland Water (basingstoke Canal) At Expiry Date: 31/3/2 11 Data Type: Point Version Start Date: 27/ 12 Name: SURREY COUNTY COUNCIL Version End Date		
Not shown	1984	NW	498670 158240	Status: Historical Licence No: 28/39/30/0427 Details: River Recirculation Direct Source: Thames Surface Water - Non Tidal Point: Inland Water (basingstoke Canal) At Langmans Bridge, Lock 7 Data Type: Point Name: SURREY COUNTY COUNCIL	Annual Volume (m ³): 634000 Max Daily Volume (m ³): 1728 Application No: - Original Start Date: 27/4/2005 Expiry Date: 31/3/2015 Issue No: 2 Version Start Date: 25/10/2006 Version End Date:	
Not shown	1984	NW	498670 158240	Status: Active Licence No: 28/39/30/0427/R01 Details: River Recirculation Direct Source: Thames Surface Water - Non Tidal Point: Inland Water (basingstoke Canal) At Langmans Bridge, Lock 7 Data Type: Point Name: SURREY COUNTY COUNCIL	Annual Volume (m ³): 634000 Max Daily Volume (m ³): 1728 Application No: NPS/WR/017212 Original Start Date: 1/4/2015 Expiry Date: 31/3/2027 Issue No: 1 Version Start Date: 1/4/2015 Version End Date:	





Potable Water Abstraction Licences within 2000m of the study site

None identified

Database searched and no data found.

6.6 Source Protection Zones

Source Protection Zones within 500m of the study site

None identified

Database searched and no data found.

6.7 Source Protection Zones within Confined Aquifer

Source Protection Zones within the Confined Aquifer within 500m of the study site None identified

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





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

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Minor Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.
318	SE	Minor Aquifer/Intermediate Leaching Potential	12	Soils which can possibly transmit non – or weakly adsorbed pollutants and liquid discharges but are unlikely to transmit adsorbed pollutants.
432	SE	Minor Aquifer/High Leaching Potential	H1	Soils which readily transmit liquid discharges because they are shallow or susceptible to rapid flow directly to rock, gravel or groundwater.
461	W	Minor Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.

6.9 River Quality

Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site None identified

6.9.1 Biological Quality:

Database searched and no data found.

6.9.2 Chemical Quality:





Ordnance Survey MasterMap Water Network entries within 500m of the study site

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

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

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
1	39 N	Hoe Stream Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: On ground surface Permanence: Unclassified.
67	39	Hoe Stream Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: On ground surface Permanence: Unclassified.
	Ν		.,	Average Width in Watercourse Section (m): 5.5
2	136 W	Hoe Stream Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: On ground surface Permanence: Unclassified.
				Average Width in Watercourse Section (m): 5.4
68	136 W	Hoe Stream Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: On ground surface Permanence: Unclassified. Average Width in Watercourse Section (m): 5.4
3	151		Inland river not influenced	Catchment Area: Thames Relationship to Ground Level: On ground surface
	W	Alternative Name: -	by normal tidal action.	Average Width in Watercourse Section (m): 2.1
69	151	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: On ground surface
	W			Average Width in Watercourse Section (m): 2.1
	189	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: Underground
4	SW			Permanence: Unclassified. Average Width in Watercourse Section (m): Not Provided
	189	-	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: On ground surface
5	SW	Alternative Name: -		Permanence: Unclassified. Average Width in Watercourse Section (m): 5.1
70	189	-	Inland river not influenced	Catchment Area: Thames Relationship to Ground Level: Underground
70	SW	Alternative Name: -	by normal tidal action.	Permanence: Unclassified. Average Width in Watercourse Section (m): Not Provided
71	189	-	Inland river not influenced	Catchment Area: Thames Relationship to Ground Level: On ground surface
/1	SW	Alternative Name: -	by normal tidal action.	Permanence: Unclassified. Average Width in Watercourse Section (m): 5.1
6	191	Hoe Stream	Inland river not influenced	Catchment Area: Thames Relationship to Ground Level: On ground surface
Ŭ	SW	Alternative Name: -	by normal tidal action.	Permanence: Unclassified. Average Width in Watercourse Section (m): 5.1





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ID	Distance/ Direction	Name	Type of Watercourse	Additional Details		
70	191	Hoe Stream	Inland river not influenced	Catchment Area: Thames Relationship to Ground Level: On ground surface		
12	SW	Alternative Name: -	by normal tidal action.	Permanence: Unclassified. Average Width in Watercourse Section (m): 5.1		
7	195	-	Lake loch or reservoir	Catchment Area: Thames Relationship to Ground Level: On ground surface		
	SW	Alternative Name: -	Lake, toth of reservoir.	Permanence: Unclassified. Average Width in Watercourse Section (m): 10.2		
73	195	-	l ake. loch or reservoir	Catchment Area: Thames Relationship to Ground Level: On ground surface		
	SW	Alternative Name: -		Permanence: Unclassified. Average Width in Watercourse Section (m): 10.2		
8	207	-	Inland river not influenced	Catchment Area: Thames Relationship to Ground Level: On ground surface		
	SW	Alternative Name: -	by normal tidal action.	Permanence: Unclassified. Average Width in Watercourse Section (m): Not Provided		
74	207	-	Inland river not influenced	Catchment Area: Thames Relationship to Ground Level: On ground surface		
	SW	Alternative Name: -	by normal tidal action.	Permanence: Unclassified. Average Width in Watercourse Section (m): Not Provided		
9	208	-	Lake, loch or reservoir.	Catchment Area: Thames Relationship to Ground Level: On ground surface		
	SW	Alternative Name: -		Permanence: Unclassified. Average Width in Watercourse Section (m): 15.0		
75	208	-	Lake loch or reservoir	Catchment Area: Thames Relationship to Ground Level: On ground surface		
	SW	Alternative Name: -		Permanence: Unclassified. Average Width in Watercourse Section (m): 15.0		
10	214	Hoe Stream Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: On ground surface		
	SW			Average Width in Watercourse Section (m): 5.1		
76	214	Hoe Stream	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: On ground surface		
	SW	Atternative Name: -		Average Width in Watercourse Section (m): 5.1		
11	308	Hoe Stream	Inland river not influenced	Catchment Area: Thames Relationship to Ground Level: On ground surface		
	NE	Alternative Name: -	by normal tidal action.	Average Width in Watercourse Section (m): Not Provided		
Not	308	Hoe Stream	Inland river not influenced	Catchment Area: Thames Relationship to Ground Level: On ground surface		
shown	NE	Alternative Name: -	by normal tidal action.	Permanence: Unclassified. Average Width in Watercourse Section (m): Not Provided		
12	309	-	Inland river not influenced	Catchment Area: Thames Relationship to Ground Level: On ground surface		
	SW	Alternative Name: -	by normal tidal action.	Permanence: Unclassified. Average Width in Watercourse Section (m): 7.3		
78	309	-	Inland river not influenced	Catchment Area: Thames Relationship to Ground Level: On ground surface		
	SW	Alternative Name: -	by normal tidal action.	Permanence: Unclassified. Average Width in Watercourse Section (m): 7.3		
13	311	Hoe Stream	Inland river not influenced	Catchment Area: Thames Relationship to Ground Level: On ground surface		
	NE	Alternative Name: -	by normal tidal action.	Permanence: Unclassified. Average Width in Watercourse Section (m): 4.9		
Not	311	Hoe Stream	Inland river not influenced	Catchment Area: Thames Relationship to Ground Level: On ground surface		
shown	NE	Alternative Name: -	by normal tidal action.	Permanence: Unclassified. Average Width in Watercourse Section (m): 4.9		





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ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
	312	Hoe Stream	Inland river not influenced	Catchment Area: Thames Relationship to Ground Level: On ground surface
14	SW	Alternative Name: -	by normal tidal action.	Permanence: Unclassified. Average Width in Watercourse Section (m): 5.1
	312	Hoe Stream	Inland river not influenced	Catchment Area: Thames Relationship to Ground Level: On ground surface
80	SW	Alternative Name: -	by normal tidal action.	Permanence: Unclassified. Average Width in Watercourse Section (m): 5.1
	324	_	Inland river not influenced	Catchment Area: Thames Relationship to Ground Level: On ground surface
15	Ν	Alternative Name: -	by normal tidal action.	Permanence: Unclassified. Average Width in Watercourse Section (m): 4.8
Not	324	_	Inland river not influenced	Catchment Area: Thames Relationship to Ground Level: On ground surface
shown	Ν	Alternative Name: -	by normal tidal action.	Permanence: Unclassified. Average Width in Watercourse Section (m): 4.8
10	325	-	Inland river not influenced	Catchment Area: Thames Relationship to Ground Level: On ground surface
16	SE	Alternative Name: -	by normal tidal action.	Permanence: Unclassified. Average Width in Watercourse Section (m): Not Provided
	325	_	Inland river not influenced	Catchment Area: Thames Relationship to Ground Level: On ground surface
82	SE	Alternative Name: -	by normal tidal action.	Permanence: Unclassified. Average Width in Watercourse Section (m): Not Provided
	326	Hoe Stream	Inland river not influenced	Catchment Area: Thames Relationship to Ground Level: On ground surface
17	NE	Alternative Name: -	by normal tidal action.	Permanence: Unclassified. Average Width in Watercourse Section (m): 4.9
Not	326	Hoe Stream	Inland river not influenced	Catchment Area: Thames Relationship to Ground Level: On ground surface
shown	NE	Alternative Name: -	by normal tidal action.	Permanence: Unclassified. Average Width in Watercourse Section (m): 4.9
10	350	-	Inland river not influenced	Catchment Area: Thames Relationship to Ground Level: On ground surface
18	SW	Alternative Name: -	by normal tidal action.	Permanence: Unclassified. Average Width in Watercourse Section (m): 5.1
	350	_	Inland river pet influenced	Catchment Area: Thames Relationship to Ground Level: On ground surface
84	SW	Alternative Name: -	by normal tidal action.	Permanence: Unclassified. Average Width in Watercourse Section (m): 5.1
	374	Hoo Stroom	Inland river not influenced	Catchment Area: Thames Relationship to Ground Level: On ground surface
19	SW	Alternative Name: -	by normal tidal action.	Permanence: Unclassified. Average Width in Watercourse Section (m): 5.0
	374	Hoe Stream	Inland river not influenced	Catchment Area: Thames
85	SW	Alternative Name: -	by normal tidal action.	Permanence: Unclassified. Average Width in Watercourse Section (m): 5.0
	444	_	Inland river not influenced	Catchment Area: Thames Relationship to Ground Level: On ground surface
20	SE	Alternative Name: -	by normal tidal action.	Permanence: Unclassified. Average Width in Watercourse Section (m): 2.7
	444	-	Inland river not influenced	Catchment Area: Thames Relationship to Ground Level: On ground surface
21	SE	Alternative Name: -	by normal tidal action.	Permanence: Unclassified. Average Width in Watercourse Section (m): 1.9
00	444	-	Inland river not influenced	Catchment Area: Thames Relationship to Ground Level: On ground surface
80	SE	Alternative Name: -	by normal tidal action.	Permanence: Unclassified. Average Width in Watercourse Section (m): 2.7





ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
Not	444	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Thames Relationship to Ground Level: On ground surface
shown	SE			Permanence: Unclassified. Average Width in Watercourse Section (m): 1.9

6.11 Surface Water Features

Surface water features within 250m of the study site

Identified

The following surface water records are not represented on mapping:

Distance (m)	Direction
9	E
36	Ν
37	W
60	Ν
165	W
189	Ν
208	SW
213	SW





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







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







7 Flooding

7.1 River and Coastal Zone 2 Flooding

Environment Agency/Natural Resources Wales Zone 2 floodplain within 250m

Identified

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

ID	Distance (m)	Direction	Update	Туре
1	16	NW	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
2AS	20	Ν	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
ЗA	20	Ν	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
4A	24	Ν	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
5A	26	Ν	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
6AT	26	W	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
7A	32	Ν	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
8B	36	NW	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
9AW	37	NE	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
10AR	39	NW	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
11B	47	Ν	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
12AV	55	Ν	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
13D	66	Ν	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
14E	74	NW	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
151	79	Ν	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
16C	79	W	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
17C	87	W	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
18D	91	Ν	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
19E	94	N	29-May-2018	Zone 2 - (Fluvial /Tidal Models)





20C	94	W	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
21D	95	Ν	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
22C	99	W	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
23F	102	W	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
24F	104	W	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
25G	104	W	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
26G	107	W	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
27H	108	Ν	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
28F	111	W	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
29	111	W	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
30H	114	Ν	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
31	115	W	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
32J	122	W	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
33K	123	SW	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
341	124	Ν	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
35J	130	W	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
36	131	W	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
37K	132	SW	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
38L	143	SW	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
39	146	Ν	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
40L	148	SW	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
41AX	158	W	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
42	160	SW	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
43S	168	SW	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
44N	169	Ν	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
45M	183	SW	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
46	185	W	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
47M	188	SW	29-May-2018	Zone 2 - (Fluvial /Tidal Models)





48	190	W	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
490	191	NE	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
50N	193	Ν	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
51M	198	SW	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
520	203	NE	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
53P	203	Ν	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
54M	208	SW	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
55P	211	Ν	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
56Q	214	Ν	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
57Q	214	NE	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
58R	215	NE	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
59R	226	NE	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
60R	229	NE	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
61S	237	SW	29-May-2018	Zone 2 - (Fluvial /Tidal Models)
62U	245	SW	29-May-2018	Zone 2 - (Fluvial /Tidal Models)

7.2 River and Coastal Zone 3 Flooding

Environment Agency/Natural Resources Wales Zone 3 floodplain within 250m Identified

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

ID	Distance (m)	Direction	Update	Туре
1	26	NW	30-May-2018	Zone 3 - (Fluvial Models)
2AS	28	W	30-May-2018	Zone 3 - (Fluvial Models)
3A	36	Ν	30-May-2018	Zone 3 - (Fluvial Models)
4A	124	Ν	30-May-2018	Zone 3 - (Fluvial Models)

Report Reference: HMD-377-5286261 Client Reference: P1381J1460-1

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

Highest risk of flooding onsite

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

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

Any relevant data within 250m is represented on the RoFRaS Flood map. Data to 50m is reported in the table below.

ID	Distance (m)	Direction	RoFRas flood Risk
1	17.0	NW	Low
2	18.0	NW	High
3	23.0	W	Low
4	27.0	W	Low
5A	29.0	Ν	Medium
6A	36.0	NW	Medium
7	37.0	NE	High
8	39.0	Ν	Medium
9	40.0	W	Medium
10	40.0	W	Low

7.4 Flood Defences

Flood Defences within 250m of the study site

The following flood defence records are represented as lines on the Flood Map:

ID	Distanc e (m)	Direction	Update
190	54	Ν	11-May-2018
191	57	Ν	11-May-2018
192	60	NW	11-May-2018
193	96	NE	11-May-2018
194	145	W	11-May-2018
195	145	W	11-May-2018

7.5 Areas benefiting from Flood Defences

Areas benefiting from Flood Defences within 250m of the study site

Very Low





Identified

Identified





Areas used for Flood Storage within 250m of the study site

None identified

Clearwater Flooding

7.7 Groundwater Flooding Susceptibility Areas

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

Clearwater Flooding or Superficial Deposits Flooding

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

7.7.2 Highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions

Potential at Surface Where potential for groundwater flooding to occur at surface is indicated, this means that given the geological conditions in the area groundwater flooding hazard should be considered in all land-use planning decisions. It is recommended that other relevant information e.g. records of previous incidence of groundwater flooding, rainfall, property type, and land drainage information be investigated in order to establish relative, but not absolute, risk of groundwater flooding.

7.8 Groundwater Flooding Confidence Areas

British Geological Survey confidence rating in this result

Moderate

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

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




8. Designated Environmentally Sensitive Sites Map







8. Designated Environmentally Sensitive Sites

Designated Environmentally Sensitive Sites within 2000m of the study site

Identified

1

0

0

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

The following Site of Special Scientific Interest (SSSI) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	SSSI Name	Data Source
Not shown	1864	SW	Smart's and Prey Heaths	Natural England

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

Database searched and no data found.

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

Database searched and no data found.

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

0

Database searched and no data found.

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

0

Database searched and no data found.

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

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

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
6	1237	W	UNKNOWN	Ancient and Semi-Natural Woodland
Not shown	1289	S	UNKNOWN	Ancient and Semi-Natural Woodland
Not shown	1712	SW	UNKNOWN	Ancient and Semi-Natural Woodland

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

The following Local Nature Reserve (LNR) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	LNR Name	Data Source
2	807	NE	White Rose Lane	Natural England
3	855	SW	Mayford Meadows	Natural England
4	948	NE	White Rose Lane	Natural England

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

Database searched and no data found.

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

Database searched and no data found.



3

3

0

0





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

Database searched and no data found.

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

Database searched and no data found.

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

0

1

0

0

Database searched and no data found.

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

The following Nitrate Vulnerable Zone records produced by DEFRA are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	NVZ Name	Data Source
Not shown	1450	NW	Modified	DEFRA

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

4

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

ID	Distance	Direction	Green Belt Name	Local Authority Name
9	125	SW	London Area Greenbelt	Woking District (B)
10	484	E	London Area Greenbelt	Woking District (B)
11	1204	SE	London Area Greenbelt	Guildford District (B)
Not shown	1721	Ν	London Area Greenbelt	Woking District (B)





9. Natural Hazards Findings

9.1 Detailed BGS GeoSure Data

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

9.1.1 Shrink Swell

Maximum Shrink-Swell** hazard rating identified on the study site

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

Hazard

Ground conditions predominantly medium plasticity. Do not plant trees with high soil moisture demands near to buildings. For new build, consideration should be given to advice published by the National House Building Council (NHBC) and the Building Research Establishment (BRE). There is a possible increase in construction cost to reduce potential shrink-swell problems. For existing property, there is a possible increase in insurance risk, especially during droughts or where vegetation with high moisture demands is present.

9.1.2 Landslides

Maximum Landslide* hazard rating identified on the study site

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

Hazard 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.

9.1.3 Soluble Rocks

Maximum Soluble Rocks* hazard rating identified on the study site

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

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

This indicates an automatically generated 50m buffer and site.

Very Low

Low

Negligible

Hazard





Maximum Compressible Ground* hazard rating identified on the study site

Moderate

Very Low

Low

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

Significant potential for compressibility problems. Avoid large differential loadings of ground. Do not drain or de-water ground near the property without technical advice. For new build consider possibility of compressible ground in ground investigation, construction and building design. Consider effects of groundwater changes. Extra construction costs are likely. For existing property possible increase in insurance risk from compressibility, especially if water conditions or loading of the ground change significantly.

Hazard

9.1.5 Collapsible Rocks

Maximum Collapsible Rocks* hazard rating identified on the study site

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

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

Hazard

9.1.6 Running Sand

Maximum Running Sand** hazard rating identified on the study site

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

Hazard

Possibility of running sand problems after major changes in ground conditions. Normal maintenance to avoid leakage of water-bearing services or water bodies (ponds, swimming pools) should reduce likelihood of problems due to running sand. For new build consider possibility of running sand into trenches or excavations if water table is high or sandy strata are exposed to water. Avoid concentrated water inputs to site. Unlikely to be an increase in construction costs due to potential for running sand. For existing property no significant increase in insurance risk due to running sand problems is likely.

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





9.2.1 Radon Affected Areas

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

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

9.2.2 Radon Protection

Is the property in an area where Radon Protection are required for new properties or extensions to existing

ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.





10. Mining

10.1 Coal Mining

Coal mining areas within 75m of the study site

Database searched and no data found.

10.2 Non-Coal Mining

Non-Coal Mining areas within 50m of the study site boundary

Database searched and no data found.

10.3 Brine Affected Areas

Brine affected areas within 75m of the study site Guidance: No Guidance Required.

None identified

None identified

None identified





Contact Details

Jomas Associates Ltd Telephone: +44843 289 2187 rs@jomasassociates.com



British Geological Survey Enquiries Kingsley Dunham Centre Keyworth, Nottingham NG12 5GG Tel: 0115 936 3143. Fax: 0115 936 3276.

Email: Web:**www.bgs.ac.uk** BGS Geological Hazards Reports and general geological enquiries: **enquiries@bgs.ac.uk**

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

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

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

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

British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL





The Coal Authority



Local Authority Authority: Woking Borough Council Phone: 01483 755 855 Web: http://www.woking.gov.uk/ Address: Civic Offices, Gloucester Square, Woking, Surrey, GU21 6YL

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







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Standard Terms and Conditions

Groundsure's Terms and Conditions can be viewed online at this link:

https://www.groundsure.com/terms-and-conditions-may25-2018



APPENDIX 3 – OS HISTORICAL MAPS









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WOKING F LAITHWAIT STADIUM, KINGFIELD 9AA	WOKING FOOTBALL CLUB, LAITHWAITE COMMUNITY STADIUM, KINGFIELD ROAD, KINGFIELD, WOKING, GU22 9AA					
Client Ref: Report Ref: Grid Ref:	P1381J1460-1 HMD-377-5286263 500583, 157316					
Map Name:	1:10,000 Raster	Ν				
Map date:	2002					
Scale:	1:10,000					
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2002



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2010



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2014



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APPENDIX 4 – QUALITATIVE RISK ASSESSMENT METHODOLOGY

QUALITATIVE RISK ASSESSMENT METHODOLOGY

The following Contaminated Land Risk Assessment methodology is based on CIRIA C552 (2001) *Contaminated Land Risk Assessment – A Guide to Good Practice*, in order to quantify potential risk via **risk estimation** and **risk evaluation**, which can be adopted at the Phase I stage. This will then determine an overall risk category which can be used to identify likely actions. This methodology uses qualitative descriptors and therefore is a qualitative approach.

The methodology requires the classification of:

- the magnitude of the consequence (severity) of a risk occurring, and
- the magnitude of the **probability** (likelihood) of a risk occurring.

The potential consequences of contamination risks occurring at this site are classified in accordance with Table A4.1 below, which is adapted from the CIRIA guidance.

Classification	Definition of Consequence
Severe	 Short-term (acute) risks to human health. Short-term risk of pollution of sensitive water resource or ecosystem. Catastrophic damage to crops/buildings/property/infrastructure, including off-site soils.
Medium	 Medium/long-term (chronic) risks to human health. Medium/long-term risk of pollution of sensitive water resource or ecosystem. Significant damage to crops/buildings/property/infrastructure (on or off-site). Contamination of off-site soils.
Mild	 Easily preventable, permanent health effects on humans. Pollution of non-sensitive water resources. Localised damage to crops/buildings/property/infrastructure (on or off-site).
Minor	 Easily preventable, non-permanent health effects on humans, or no effects. Minor, low-level and localised contamination of on-site soils. Easily repairable damage to crops/buildings/property/infrastructure.

Table A4.1: Classification of Consequence

The probability of contamination risks occurring at this site will be classified in accordance with Table A4.2 below which is also adapted from the CIRIA guidance. Note that for each category, it is assumed that a pollution linkage exists. Where a pollution linkage does not exist, the likelihood is zero, as is the risk.

Classification	Definition of Probability
High Likelihood	Circumstances are such that an event appears very likely in the short-term or almost inevitable in the long-term; or there is already evidence that such an event has occurred.
Likely	Circumstances are such that such an event is not inevitable, but is possible in the short-term and is likely over the long-term.
Low Likelihood	Circumstances are such that it is by no means certain that an event would occur even over a longer period, and it is less likely in the short-term.
Unlikely	Circumstances are such that it is improbable that an event would occur even in the very long-term.

Table A4.2: Classification of Probability

For each possible pollution linkage (source-pathway-receptor) identified, the potential risk can be evaluated, as presented in Table A3.3. Based upon this, CIRIA C552 presents definitions of the risk categories, together with the investigatory and remedial actions that are likely to be necessary in each case, as in Table A3.4. These risk categories apply to each possible pollutant linkage, and not simply to each hazard/source of contamination or sensitive receptor.

		Consequence			
		Severe	Medium	Mild	Minor
Probability	High likelihood	Very high risk	High risk	Moderate risk	Low risk
	Likely	High risk	Moderate risk	Moderate risk	Low risk
	Low likelihood	Moderate risk	Moderate risk	Low risk	Very low risk
	Unlikely	Low risk	Low risk	Very low risk	Very low risk

Table A4.3: Overall Contamination Risk Matrix

Table A4.4: Definition of Risk Categories and Likely Actions Required

Risk Category	Definition and likely actions required		
Very high	 Severe harm to a defined receptor is very likely, or has already occurred. The risk is likely to result in a substantial liability. Urgent investigation (if not already undertaken) is likely to be required. Urgent remediation is likely to be required. 		
High	 Harm to a defined receptor is likely. The risk, if realised, may result in a substantial liability. Urgent investigation (if not already undertaken) is likely to be required. Remediation is likely to be required in the long term, possibly sooner. 		
Moderate	 Harm to a defined receptor is possible, but severe harm is unlikely. Investigation is likely to be required to clarify the level of potential liability and risk. Some remediation may be required in the longer term 		
Low	 Harm to a defined receptor is possible, but is likely to be mild at worst. Liabilities could theoretically arise, but are unlikely. Further investigation is not required at this stage Remediation is unlikely to be required. 		
Very low	 Harm to a defined receptor is unlikely, and would be minor at worst. No liabilities are likely to arise. Further investigation is not required at this stage Remediation is very unlikely to be required. 		



APPENDIX 5 – LOCAL AUTHORITY CORRESPONDENCE

amm@jomasassociates.com

From:	amm@jomasassociates.com
Sent:	16 August 2018 11:11
То:	'Environmental.Health@woking.gov.uk'
Cc:	'eh@jomasassociates.com'
Subject:	P1381J1460 - Kingfield Road, Woking - Land Contamination Enquiry

Good Morning,

Jomas Associates Ltd have been appointed as environmental consultants with regards to land contamination issues for a site located Woking Football Club, Laithwaite Community Stadium, Kingfield Road, Kingfield, Woking, GU22 9AA. The site location and boundary is shown below.



We are currently undertaking a Preliminary Risk Assessment / Phase 1 Desk Study for the site. As part of our investigations the following information sources will / have been consulted:

• Historical Ordnance survey mapping spanning dates 1871 – 2014.

- Environmental database report collating information from EA, BGS, Public Health England, Coal Authority, and Ordnance Survey sources (including recorded pollution incidents and licensing of potentially contaminative activities)
- BGS and EA geological and hydrogeological records
- A site walkover
- Available planning records from the Local Authority planning website

Does the Local Authority possess any additional information or records pertaining to land contamination issues at the site, which are not likely to be obtained via the above sources. Of principal interest would be:

- site investigation or remedial reports pertaining to the site or the site vicinity
- information relating to any potential landfilling in the site vicinity
- details of any private water supplies in the site vicinity
- any anecdotal information or specific local concerns that the local authority has / is aware of with regards land contamination in the site vicinity
- any local mapping resources which are unlikely to be supplied from Ordnance Survey
- records of tanks or fuel storage at the site

Kind regards, Alex Marcelo BSc (Hons) Geotechnical Engineer M: 07403 927 087 / T: 0843 289 2187 / E: <u>amm@jomasassociates.com</u> A: Lakeside House, 1 Furzeground Way, Stockley Park, UB11 1BD Follow Us for Updates: Website / Facebook / Twitter / Linkedin

WE'RE IN THE TOP 10 WINNERS! WE NEED YOUR SUPPORT!

Jomas Associates are in the **TOP 10 WINNERS** for **TWO** Construction Enquirer Awards. If you haven't voted for us already, please click the links below to vote for us **(it takes less than a minute):** <u>'Best Construction Supplier to Work With'</u> & <u>'Best Consultant to Work For'</u>

