

General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

OS Water Network Data

— Canal	— Drain
— Reservoir	— Other
— Foreshore	— Lake
— Marsh	— Transfer
— Tidal River	— Lock Or Flight Of Locks
— Inland River	— Sea

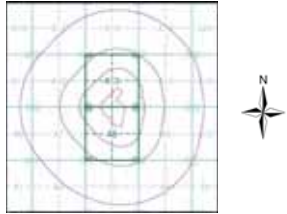
Contours (height in meters)

Standard Contour — 0.5m — Mean Low Water

Master Contour — 1.0m — Mean High Water

Spot Height — 1.0m

OS Water Network Map - Slice A



Order Details

Order Number: 279891064_1_1
 Customer Ref: P02114644
 National Grid Reference: 636030, 150560
 Slice: A
 Site Area (Ha): 8.53
 Search Buffer (m): 1000

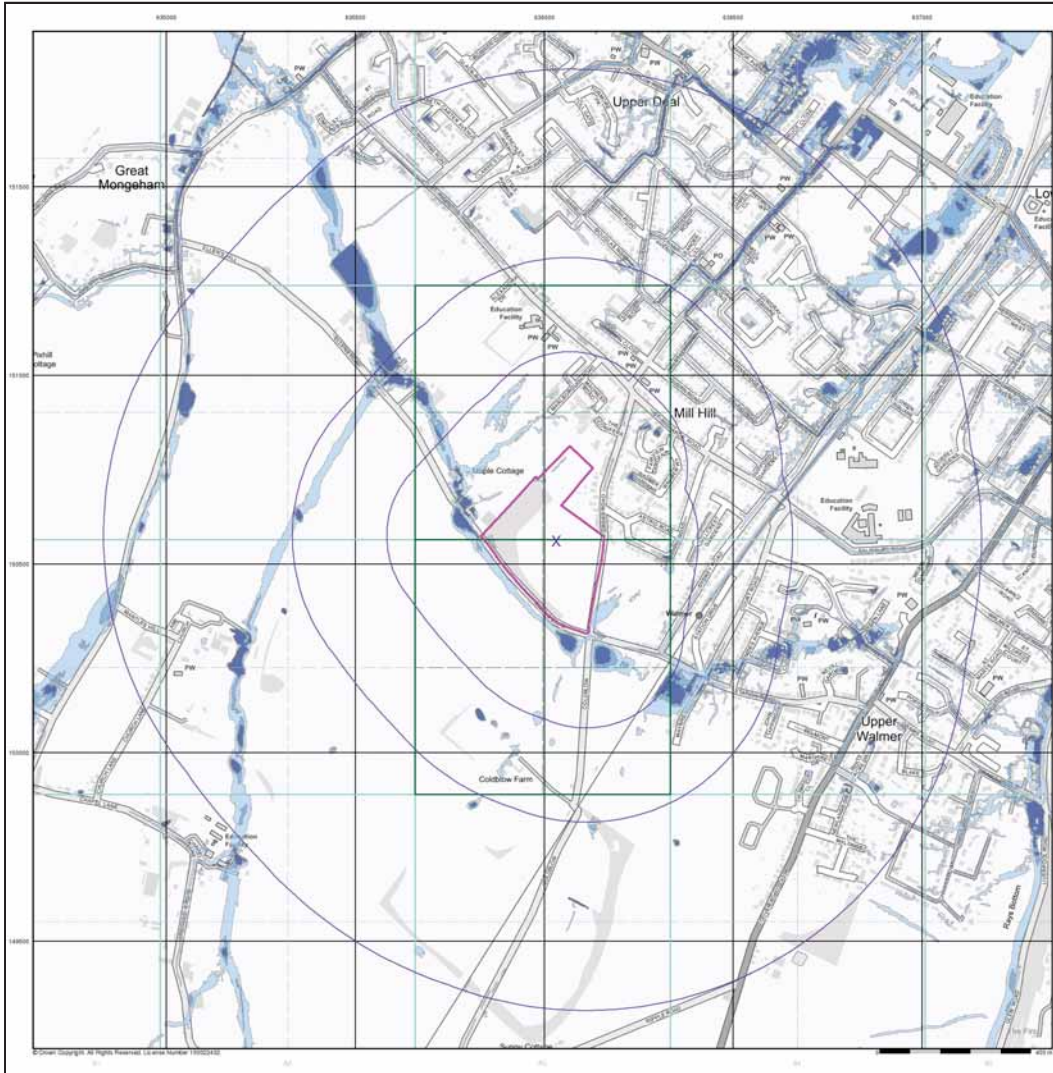
Site Details

April Cottage, Ellens Road, DEAL, CT14 9JJ

Landmark an environmental solutions group

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

A Landmark Information Group Service v5.0.0 04-Jun-2021 Page 5 of 6



General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

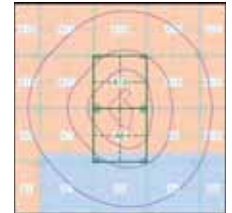
Risk of Flooding from Surface Water

- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

- See the suitability map below
- National to county
 - County to town
 - Town to street
 - Street to parcels of land
 - Property

EAN/RW Suitability Map - Slice A



Order Details

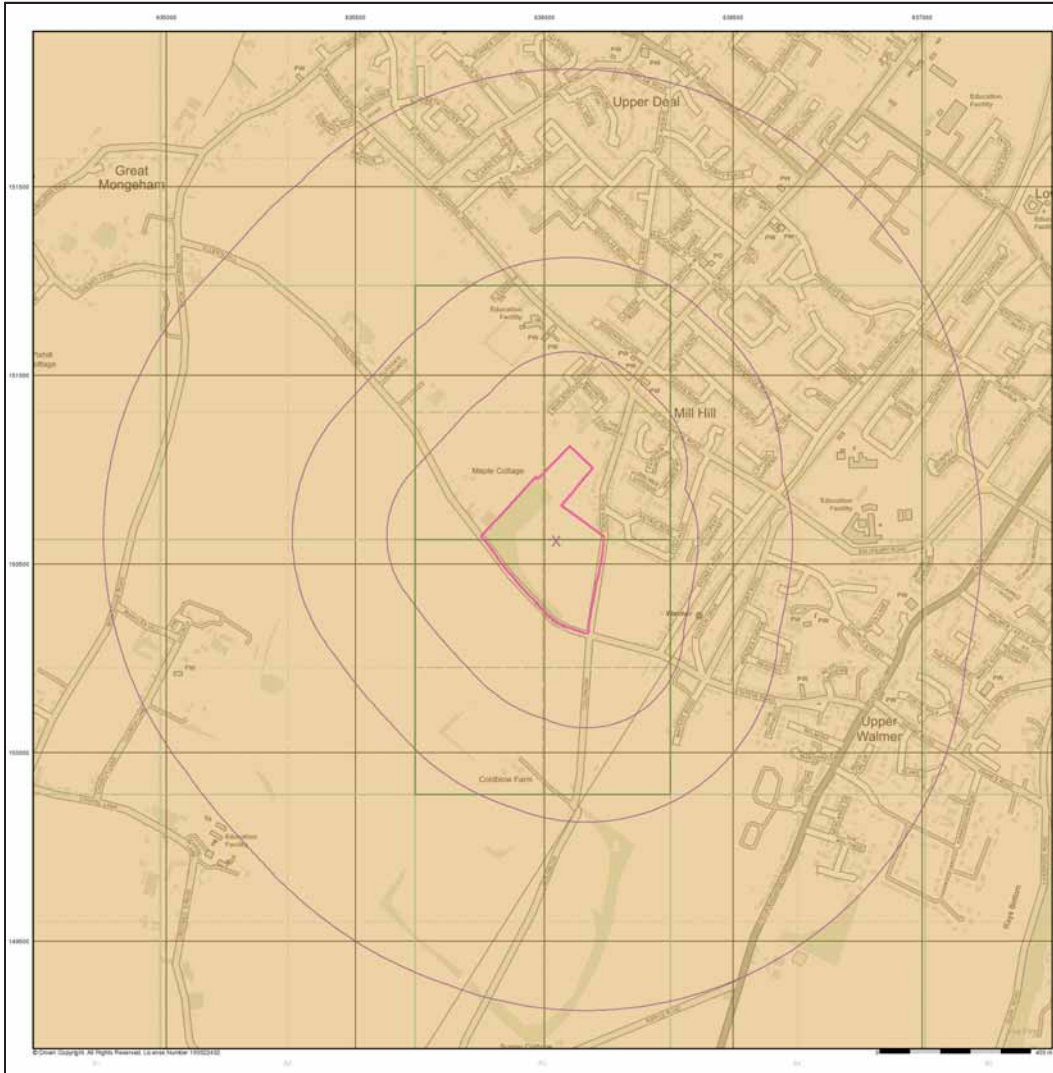
Order Number: 279891064_1_1
 Customer Ref: P02114644
 National Grid Reference: 636030, 150560
 Slice: A
 Site Area (Ha): 8.53
 Search Buffer (m): 1000


Site Details

April Cottage, Ellens Road, DEAL, CT14 9JJ



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 Fax: 0844 844 9951
 Web: www.envisirocheck.co.uk





General


Specified Site
 Specified Buffer(s)
 Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg

< 15
15 - 25
25 - 35
35 - 45
45 - 60
60 - 120
> 120

Estimated Soil Chemistry Arsenic - Slice A




Order Details

Order Details: 279891064_1_1
 Customer Ref: P02114644
 National Grid Reference: 636030, 150560
 Slice: A
 Site Area (Ha): 8.53
 Search Buffer (m): 1000

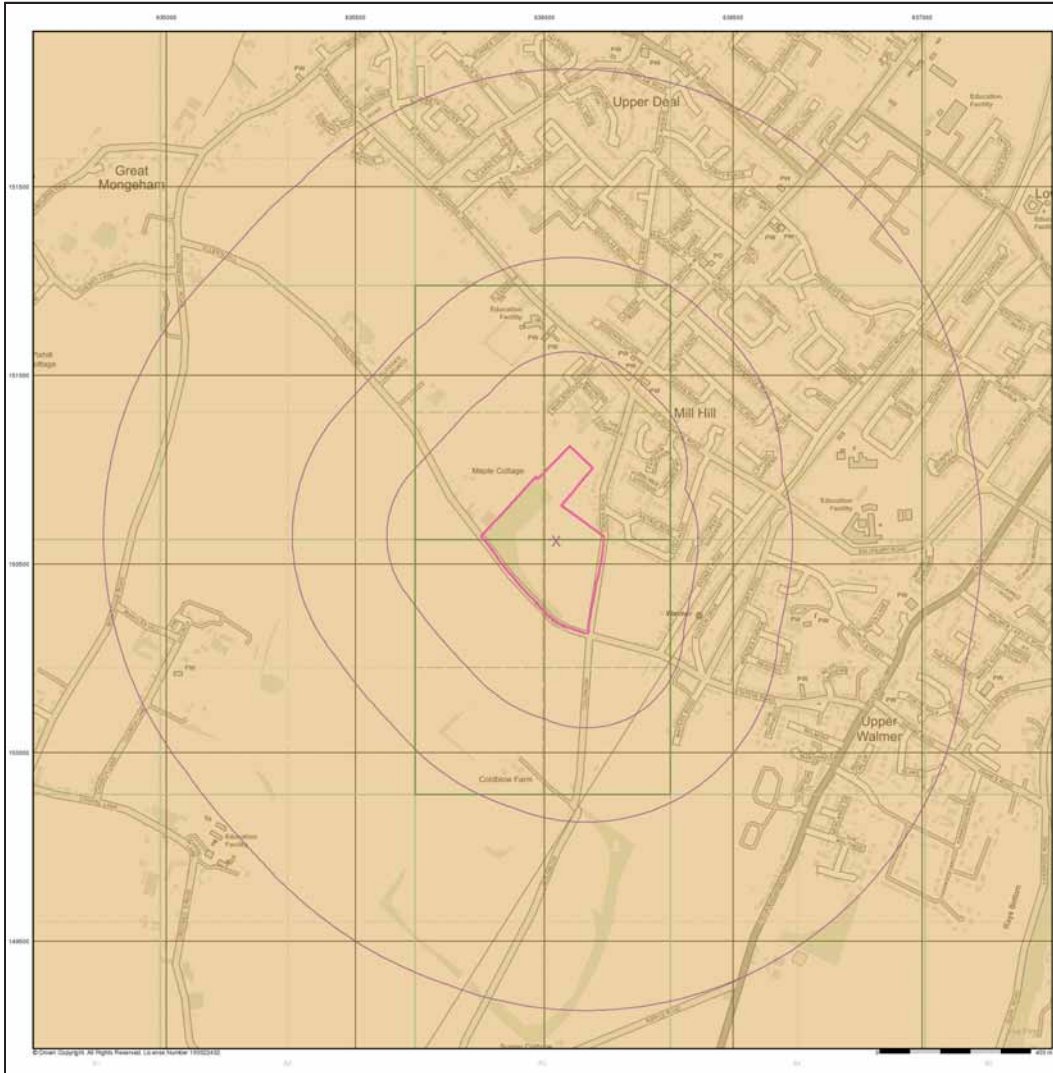
Site Details


April Cottage, Ellens Road, DEAL, CT14 9JJ



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

A Landmark Information Group Service v5.0.0 04-Jun-2021 Page 1 of 5





General


Specified Site
 Specified Buffer(s)
 Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg

	< 1.8
	1.8 - 2.2
	2.2 - 3.0
	> 3.0

Estimated Soil Chemistry Cadmium - Slice A



Order Details

Order Details: 279891064_1_1
 Customer Ref: P02114644
 National Grid Reference: 636030, 150560
 Slice: A
 Site Area (Ha): 8.53
 Search Buffer (m): 1000

Site Details


April Cottage, Ellens Road, DEAL, CT14 9JJ

Landmark
an environmental solutions group

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

A Landmark Information Group Service v5.0.0 04-Jun-2021 Page 2 of 5





General


Specified Site
 Specified Buffer(s)
 Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg

< 20
20 - 40
40 - 60
60 - 90
90 - 120
120 - 180
> 180

Estimated Soil Chemistry Chromium - Slice A




Order Details

Order Details: 279891064_1_1
Customer Ref: P02114644
National Grid Reference: 636030, 150560
Slice: A
Site Area (Ha): 8.53
Search Buffer (m): 1000

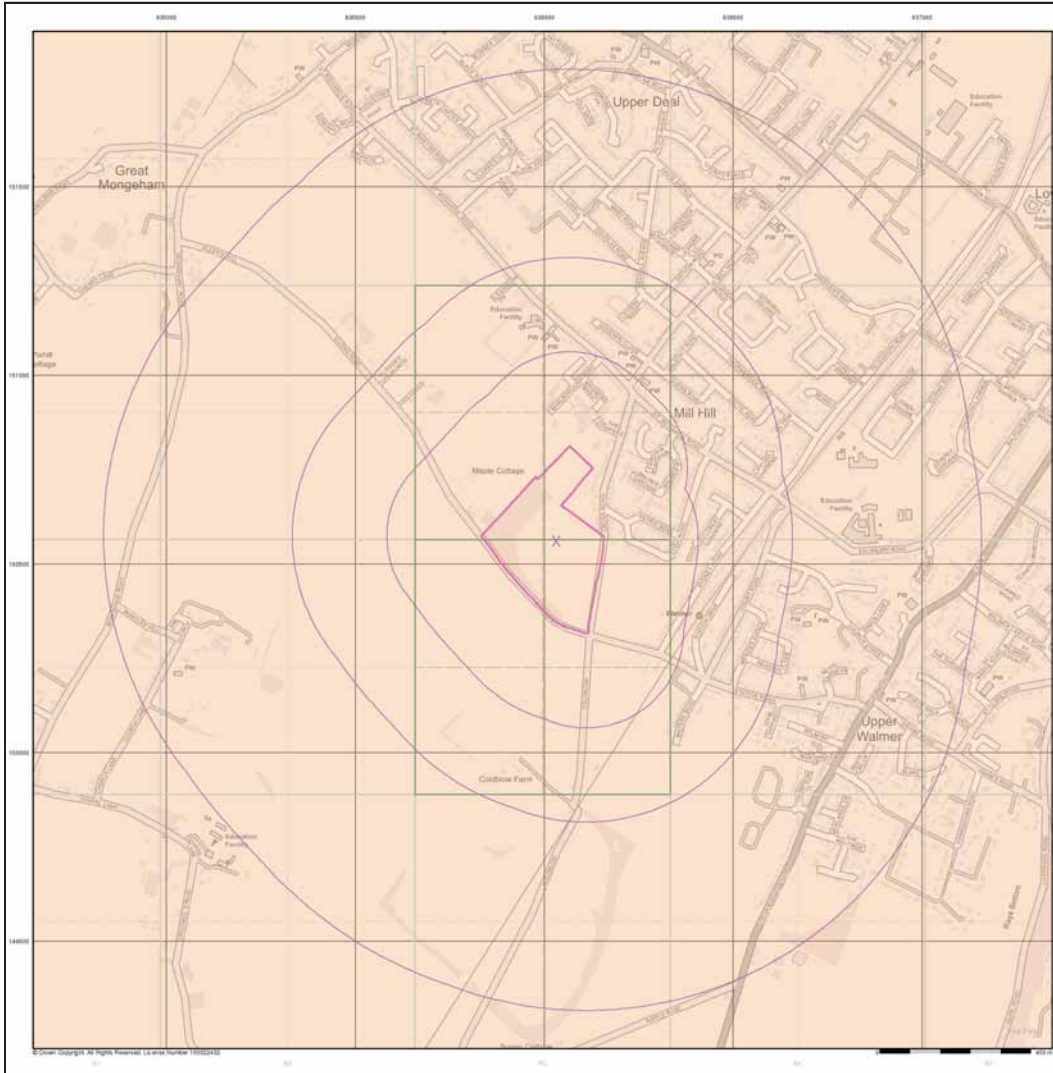
Site Details


April Cottage, Ellens Road, DEAL, CT14 9JJ



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

A Landmark Information Group Service v5.0.0 04-Jun-2021 Page 3 of 5





General

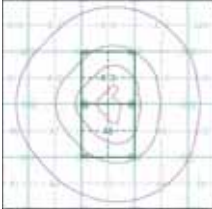
Specified Site
 Specified Buffer(s)
 Showing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg

	<100 mg/kg
	100 - 200
	200 - 300
	300 - 600
	600 - 1200
	>1200

Estimated Soil Chemistry Lead - Slice A




Order Details

Order Details: 279891064_1_1
 Customer Ref: P02114644
 National Grid Reference: 636030, 150560
 Slice: A
 Site Area (Ha): 8.53
 Search Buffer (m): 1000

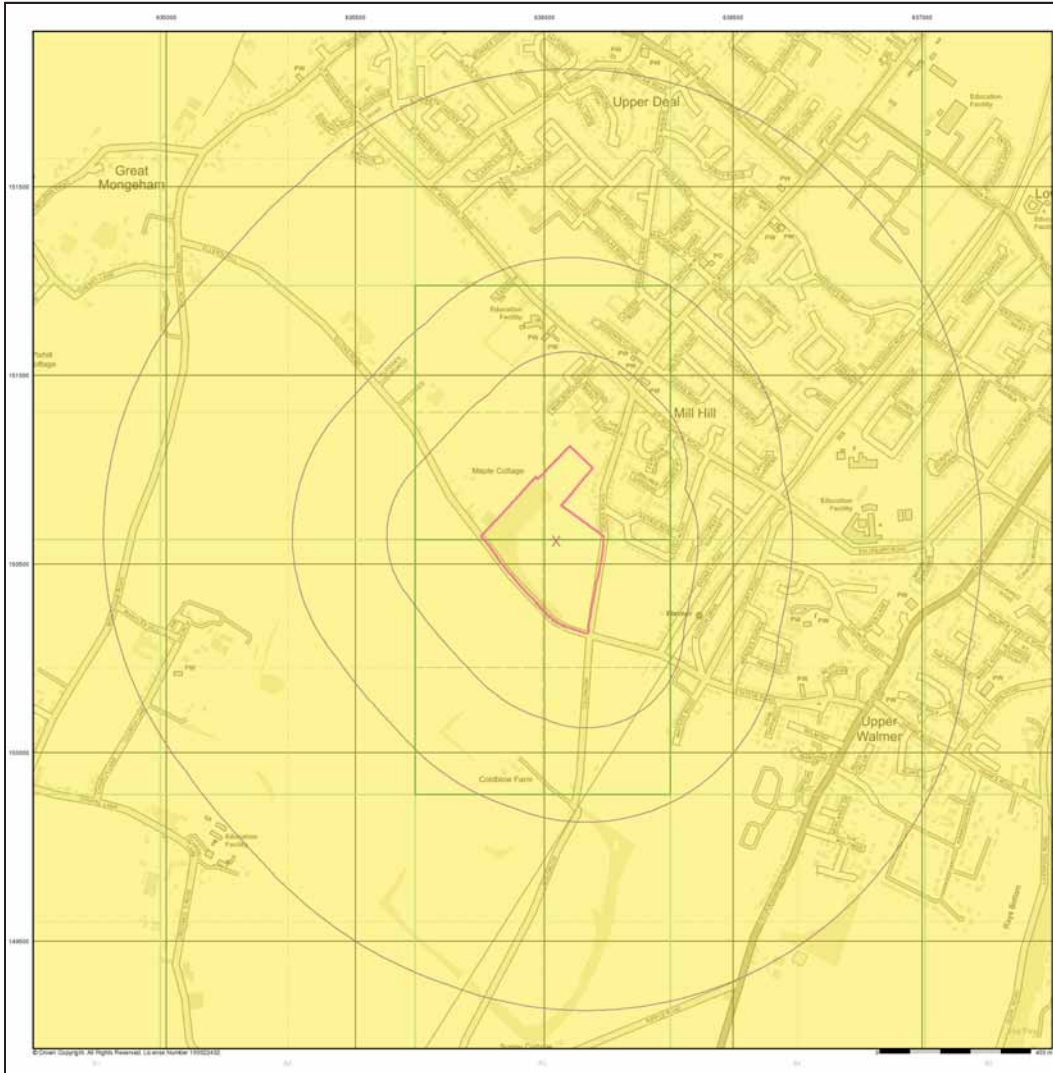
Site Details


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A Landmark Information Group Service v5.0.0 04-Jun-2021 Page 4 of 5





General


Specified Site
 Specified Buffer(s)
 X bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg

< 15
15 - 30
30 - 45
45 - 60
60 - 80
80 - 100
≥ 100

Estimated Soil Chemistry Nickel - Slice A




Order Details

Order Details: 279891064_1_1
 Customer Ref: P02114644
 National Grid Reference: 636030, 150560
 Slice: A
 Site Area (Ha): 8.53
 Search Buffer (m): 1000

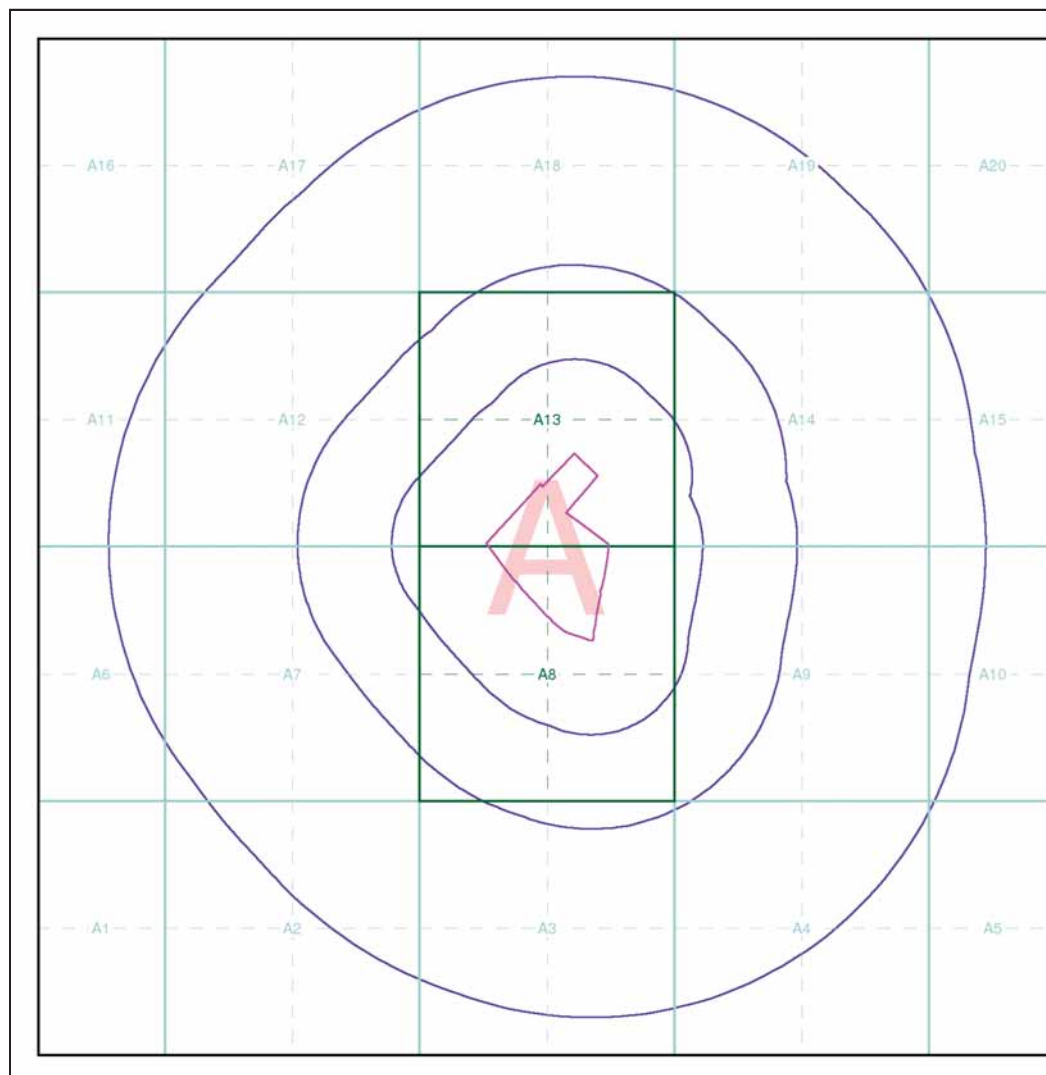
Site Details

April Cottage, Ellens Road, DEAL, CT14 9JJ



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

A Landmark Information Group Service v5.0.0 04-Jun-2021 Page 5 of 5



Index Map

For ease of identification, your site and buffer have been split into Slices, Segments and Quadrants. These are illustrated on the Index Map opposite and explained further below.

Slice

Each slice represents a 1:10,000 plot area (2.7km x 2.7km) for your site and buffer. A large site and buffer may be made up of several slices (represented by a red outline), that are referenced by letters of the alphabet, starting from the bottom left corner of the slice 'grid'. This grid does not relate to National Grid lines but is designed to give best fit over the site and buffer.

Segment

A segment represents a 1:2,500 plot area. Segments that have plot files associated with them are shown in dark green, others in light blue. These are numbered from the bottom left hand corner within each slice.

Quadrant

A quadrant is a quarter of a segment. These are labelled as NW, NE, SW, SE and are referenced in the datasheet to allow features to be quickly located on plots. Therefore a feature that has a quadrant reference of A7NW will be in Slice A, Segment 7 and the NW Quadrant.

A selection of organisations who provide data within this report:



Envirocheck reports are compiled from 136 different sources of data.

Client Details

Miss S Gower, RSK Environment Ltd, 18 Frogmore Road,
Hemel Hempstead, Hertfordshire, HP3 9RT

Order Details

Order Number: 279891064_1_1
Customer Ref: P02114644
National Grid Reference: 636020, 150550
Site Area (Ha): 8.53
Search Buffer (m): 1000

Site Details

April Cottage, Ellens Road, DEAL, CT14 9JJ

Full Terms and Conditions can be found on the following link:
<http://www.landmarkinfo.co.uk/Terms/Show/515>



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



APPENDIX D

SUPPORTING DESK STUDY INFORMATION

FORM WR - 38

Agency No:



ENVIRONMENT AGENCY

Eastern L.S. Southern E.A.
BOREHOLE RECORD

A. SITE DETAILS

290

TR34/101
TE34/NE 22

Borehole drilled for	W. BOURNE - KNEEDOWN WATER CO.	
Location	HAWKSDON, WALSLEY, KENT	
NGR (8 fig) Ground Level (if known)	TR3657 4947	Please attach site plan <input checked="" type="checkbox"/>
Drilling Company	STRATA INVESTIGATION.	
Date of drilling	Commenced: 1 st Dec 98. Completed: 18 th Dec 98	

B. CONSTRUCTION DETAILS

Borehole datum (if not ground level).....	<u>GROUND LEVEL</u>	above	
(point from which all measurements of depth are taken eg flange, edge of chamber, etc)		m below GL	
Borehole drilled diameter	<u>250</u> mm from <u>GL</u>	to	<u>20.0</u> m/depth
	<u>200</u> mm from <u>20.0</u>	to	<u>70.0</u> m/depth
	mm from	to	m/depth
Casing material <u>PLASTIC</u> diameter	<u>1/2 140</u> mm from	to	m/depth
and type (eg plain steel, plastic slotted)			
<u>SLOTTED</u> diameter	<u>1/0 140</u> mm from <u>49.0</u>	to	<u>70.0</u> m/depth
<u>PLAIN</u> diameter	<u>1/0 140</u> mm from <u>GL</u>	to	<u>49.0</u> m/depth
diameter	mm from	to	m/depth
Grouting details	<u>COMPACTONITE 0.70 - 3.0, SHIMMER 3.0 - 12.50 COMPACTONITE 12.50 - 29.50</u>		
Water struck at	<u>47.30</u>	m (depth below datum - mbd)	
		m (depth below datum - mbd)	
Rest water level on completion	<u>45.12</u>	m (depth below datum - mbd)	
	<u>44.99</u>		

* Bm COMPLETION DATUM = TOP OF DIP TUBE

ENVIRONMENT AGENCY

C. TEST PUMPING SUMMARY (Please supply fully details on Form W8 - 39)


Test Pumping Datum (if different from borehole datum)	<u>0.14</u>	^{above} m below borehole datum (mbd)
Pump Suction Depth	<u>66.10m</u>	mbd
Water Level (Start of Test)	<u>44.99</u>	mbd
Water Level (End of Test)	<u>45.13</u>	mbd
Pumping rate	<u>31494</u> ^{L/day}	3149 m ³ /d
for	<u>1</u>	days/ hours
Recovery to (from end of pumping)	<u>44.99</u> mbd	in <u>45</u> mins : hrs : days
Date(s) of measurements	<u>17th & 18th DECEMBER 98</u>	
Please Supply Chemical Analysis If Available		

D. STRATA LOG

Geological Classification	Description of Strata	Thickness	Depth
(BGS only)		m	m
	MADE GROUND. — " — UPPER CHALK.	<u>0.40</u> <u>69.60</u> <u>69.60</u>	<u>0.40</u> <u>70.00</u>
[continue on separate page if necessary]			
Other Comments (eg gas encountered, saline water intercepted, etc)			

FOR OFFICIAL USE ONLY		
FILE	CONSENT NO	BCS REF NO
LICENCE NO	USE OF BH	NGR

SITE BOREHOLE LOG.



STRATA
INVESTIGATION

Tel: 01795 066587 Fax: 01795 500901

TO 01722375057 F.03

TR34/101
BH. No. N2

SHEET No. 1

Day, Date, Tuesday, 1st Dec 98 - Thurs. 3rd Dec 98

CLIENT W. BOWLER.

LOCATION **WALNOR PRAK. FARM** TR 3657 4947

Type No. Sample	Penetration of Sampler From To	No. of Blows to take Sample							TOTAL	Depth of Charge	STRATA DESCRIPTION	WATER LEVEL	STATUS
		0-10"	10-20"	20-30"	30-40"	40-50"	50-60"	60-70"					
										0.0	Concrete		
										0.20	Loose Dry Chalk & Brick Fill		
	1.0									0.40	Good Dry Hard White Chalk. No Flints.		
	3.0									1.50	Very Dry Chalk, trace of powder when cut. Some pebbles.		
										9.70	Flint Boulders Tool Damage		
										10.45			
										11.0	Drilled 1 st Dec 98	Dry	
										11.0	2 nd Dec 98	Dry	
											Very Dry Hard White Chalk with random small 1/2" Boulder size flints.		
										12.70	Flint - 12.90		
										14.25	Flint 14.55		
										15.0	Less Dry.		
										19.0	Flint Boulder - to 19.70		
										19.70	Drilled 2 nd Dec 98	Dry	
										19.70	8 th Dec 98	Dry	
										20.0	Brownish Moist.		
										22.0	Loose Pebbles.		
										28.0	Drilled 8 th Dec 98	Dry	

REDUCED CASING FROM 10" Ø TO 8" Ø 2 HRS. 11.15 TO 1.15 PM.

28.0

Drilling Total	S/C	D	B	U	W
		3			
Instrumentation	Move	Dist	Stand	Break	Work
			2.		
	Metres	Grouting			
	28.0				

REMARKS & WATER OBSERVATION

11/12/98

25-11-1999 11:04 FROM

TO 81732075057

P. 92, 1.



SITE BOREHOLE LOG.

BH. No. ... W 2

DRILLING SERVICES

SHEET No. ... 2

Tel: 01795 666587 Fax: 01795 580901

Day: Date: Friday 11th Dec. 1999

LOCATION WARMOR PINE FARM

CLIENT W. BOWLER.

Group No. Well No.	Type No. Sample	Penetration of Sample		No. of Blows to Drive Sample								Depth of Change	STRATA DESCRIPTION	WATER LEVEL -	Status
		From	To	0 to 2'	2' to 4'	4' to 8'	8' to 12'	12' to 15'	15' to 18'	18' to 24'	TOTAL				
												28.0	Ground White Moist Clay with Random Small Flint & Occasional Flint Boulders.		
													40.04	Flint. Seams	
													41.50		
													42.0	Becomes Very Moist/Wet & Soft	
													47.30	Water Rises to 46.40 m.	*
													48.0	Drilled Friday 4th Dec 98	
													48.0	Monday 7th Dec 98	46.20
														Alternating layers soft hard clay (Green White) with random flints, small to boulder size.	
														Water level, constant.	
														Tuesday 8th Dec 98	
														Well Luster, Clamps & Flaps.	
														63.50 Drilled Monday 7th Dec 98	46.20
														63.50 Wednesday 9th Dec 98	46.60
														68.40 Very Fluffy.	
														70.0	Bl. Flt. TD

CHISEL



CHISEL



REPELLING TOTAL	S/C	D	B	U	W
m					
PERMEATION	Move	On	Stand	break	Work
	Metres		Grouting		
	70.0				

Depth of finish of day's boring Water Level = 46.40

REMARKS & WATER OBSERVATION

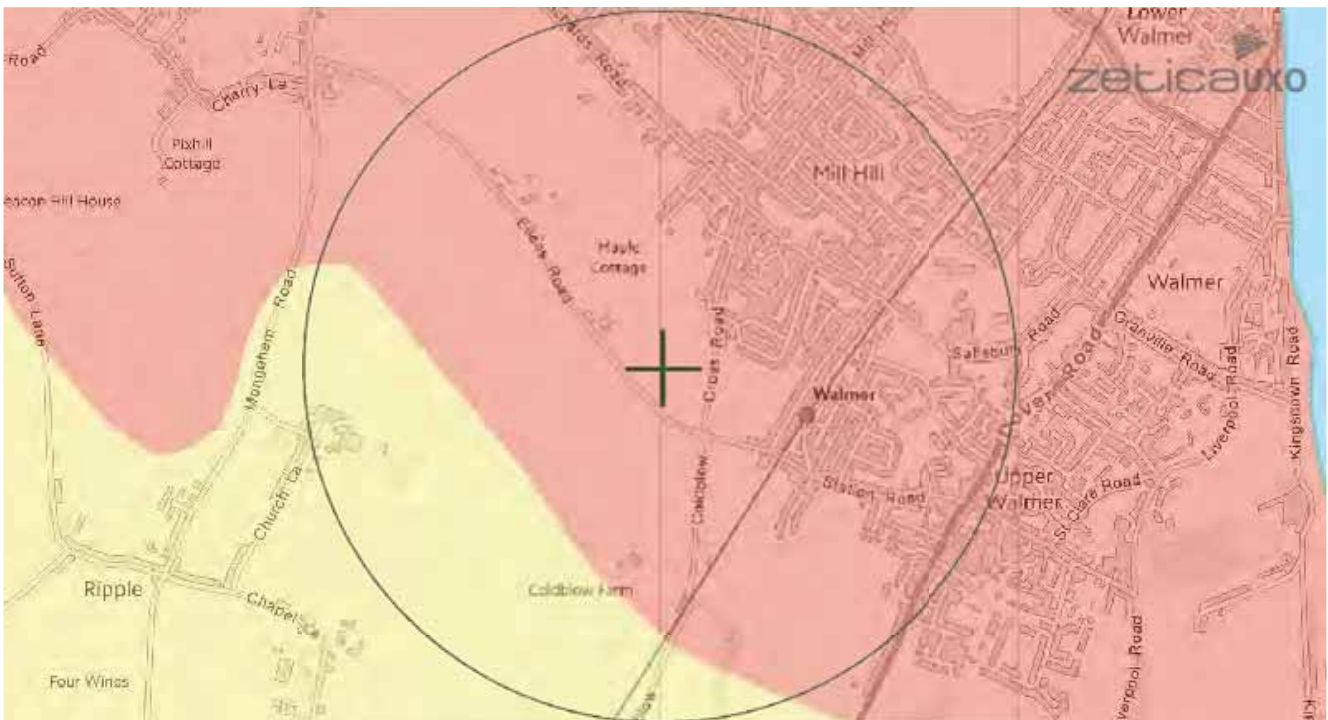
CHIEF M. ...

UNEXPLODED BOMB RISK MAP



SITE LOCATION

Map Centre: 636016,150500



LEGEND

- High:** Areas indicated as having a bombing density of 50 bombs per 1000acre or higher.
- Moderate:** Areas indicated as having a bombing density of 15 to 49 bombs per 1000acre.
- Low:** Areas indicated as having 15 bombs per 1000acre or less.

- military
- industry
- UXO find
- transport
- dock
- Luftwaffe targets
- utilities
- Bombing decoy
- other

How to use your Unexploded Bomb (UXB) risk map?

The map indicates the potential for Unexploded Bombs (UXB) to be present as a result of World War Two (WWII) bombing.

You can incorporate the map into your preliminary risk assessment* for potential Unexploded Ordnance (UXO) for a site. Using this map, you can make an informed decision as to whether more in-depth detailed risk assessment* is necessary.

What do I do if my site is in a moderate or high risk area?

Generally, we recommend that a detailed UXO desk study and risk assessment is undertaken for sites in a moderate or high UXB risk area.

Similarly, if your site is near to a designated Luftwaffe target or bombing decoy then additional detailed research is recommended.

More often than not, this further detailed research will conclude that the potential for a significant UXO hazard to be present on your site is actually low.

Never plan site work or undertake a risk assessment using these maps alone. More detail is required, particularly where there may be a source of UXO from other military operations which are not reflected on these maps.

If my site is in a low risk area, do I need to do anything?

If both the map and other research confirms that there is a low potential for UXO to be present on your site then, subject to your own comfort and risk tolerance, works can proceed with no special precautions.

A low risk really means that there is no greater probability of encountering UXO than anywhere else in the UK.

If you are unsure whether other sources of UXO may be present, you can ask for one of our **pre-desk study assessments (PDSA)**

If I have any questions, who do I contact?

tel: **+44 (0) 1993 886682**

email: **uxo@zetica.com**

web: **www.zeticauxo.com**

The information in this UXB risk map is derived from a number of sources and should be used in conjunction with the accompanying notes on our website: (<https://zeticauxo.com/downloads-and-resources/risk-maps/>)

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It is important to note that this map is not a UXO risk assessment and should not be reported as such when reproduced.

*Preliminary and detailed UXO risk assessments are advocated as good practice by industry guidance such as CIRIA C681 'Unexploded Ordnance (UXO), a guide for the construction industry'.

Flood map for planning

Your reference
Flood Map

Location (easting/northing)
636042/150527

Created
22 Jun 2021 9:22

Your selected location is in flood zone 1, an area with a low probability of flooding.

This means:

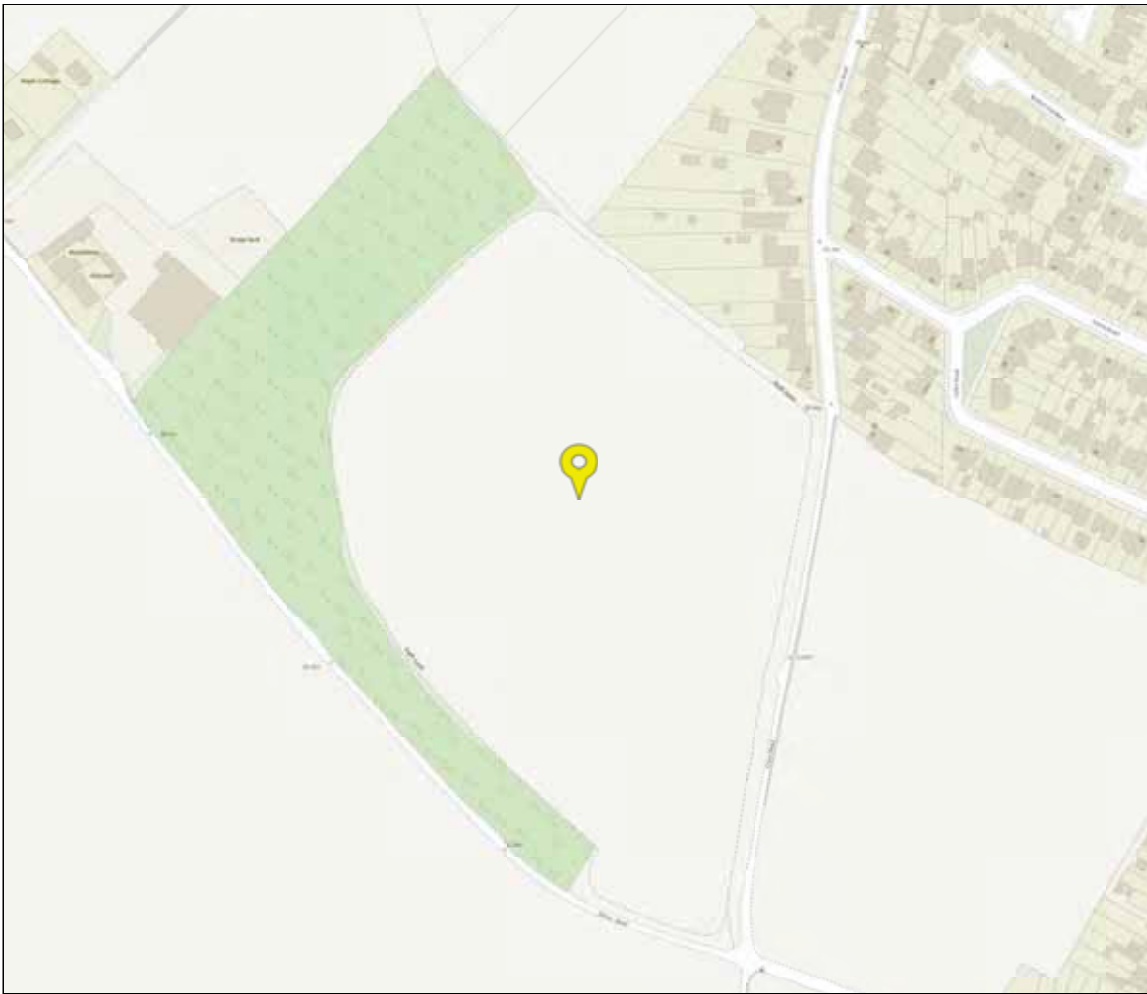
- you don't need to do a flood risk assessment if your development is smaller than 1 hectare and not affected by other sources of flooding
- you may need to do a flood risk assessment if your development is larger than 1 hectare or affected by other sources of flooding or in an area with critical drainage problems

Notes

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.

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<https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/>



Flood map for planning

Your reference

Flood Map

Location (easting/northing)


636042/150527

Scale

1:2500

Created

22 Jun 2021 9:22

-  Selected point
-  Flood zone 3
-  Flood zone 3: areas benefitting from flood defences
-  Flood zone 2
-  Flood zone 1
-  Flood defence
-  Main river
-  Flood storage area





The Coal
Authority

Resolving the **impacts** of mining

CON29M Non-Residential Mining Report

LAND OFF CROSS ROAD, DEAL
KENT
CV14 9LA

Date of enquiry: 30 November 2016
Date enquiry received: 30 November 2016
Issue date: 30 November 2016

Our reference: 51001303745001
Your reference: 28926



CON29M Non-Residential Mining Report

This report is based on, and limited to, the records held by the Coal Authority and the Cheshire Brine Subsidence Compensation Board's records, at the time we answer the search.

Client name

Joanna Wilding

Enquiry address

LAND OFF CROSS ROAD, DEAL, KENT, CV14 9LA

How to contact us


0345 762 6848 (UK)
+44 (0)1623 637 000 (International)

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

www.groundstability.com

 /company/the-coal-authority

 /thecoalauthority

 /coalauthority



Approximate position of property



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Ordnance Survey Licence number: 100020315

Summary

Has the search report highlighted evidence or potential of		
1	Past underground coal mining	No
2	Present underground coal mining	No
3	Future underground coal mining	Yes
4	Mine entries	No
5	Coal mining geology	No
6	Past opencast coal mining	No
7	Present opencast coal mining	No
8	Future opencast coal mining	No
9	Coal mining subsidence	No
10	Mine gas	No
11	Hazards related to coal mining	No
12	Withdrawal of support	No
13	Working facilities order	No
14	Payments to owners of former copyhold land	No
15	Information from the Cheshire Brine Subsidence Compensation Board	No

For detailed findings, please go to page 4.

Detailed findings

1. Past underground coal mining

The property is not within a surface area that could be affected by past underground mining.

2. Present underground coal mining

The property is not within a surface area that could be affected by present underground mining.

3. Future underground coal mining

The property is not in an area where the Coal Authority has plans to grant a licence to remove coal using underground methods.

The property is not in an area where a licence has been granted to remove or otherwise work coal using underground methods.

The property is not in an area likely to be affected from any planned future underground coal mining.

However, reserves of coal exist in the local area which could be worked at some time in the future.

No notices have been given, under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence.

4. Mine entries

There are no known coal mine entries within, or within 20 metres of, the boundary of the property.

5. Coal mining geology

The Coal Authority is not aware of any damage due to geological faults or other lines of weakness that have been affected by coal mining.

6. Past opencast coal mining

The property is not within the boundary of an opencast site from which coal has been removed by opencast methods.

7. Present opencast coal mining

The property does not lie within 200 metres of the boundary of an opencast site from which coal is being removed by opencast methods.

8. Future opencast coal mining

There are no licence requests outstanding to remove coal by opencast methods within 800 metres of the boundary.

The property is not within 800 metres of the boundary of an opencast site for which a licence to remove coal by opencast methods has been granted.

9. Coal mining subsidence

The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres, since 31 October 1994.

There is no current Stop Notice delaying the start of remedial works or repairs to the property.

The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.

10. Mine gas

The Coal Authority has no record of a mine gas emission requiring action.

11. Hazards related to coal mining

The property has not been subject to remedial works, by or on behalf of the Authority, under its Emergency Surface Hazard Call Out procedures.

12. Withdrawal of support

The property is not in an area where a notice to withdraw support has been given.

The property is not in an area where a notice has been given under section 41 of the Coal Industry Act 1994, cancelling the entitlement to withdraw support.

13. Working facilities order

The property is not in an area where an order has been made, under the provisions of the Mines (Working Facilities and Support) Acts 1923 and 1966 or any statutory modification or amendment thereof.

14. Payments to owners of former copyhold land

The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

15. Information from the Cheshire Brine Subsidence Compensation Board

The property lies outside the Cheshire Brine Compensation District.

Additional remarks

Information provided by the Coal Authority in this report is compiled in response to the Law Society's Con29M Coal Mining and Brine Subsidence Claim enquiries. The said enquiries are protected by copyright owned by the Law Society of 113 Chancery Lane, London WC2A 1PL. Please note that Brine Subsidence Claim enquiries are only relevant for England and Wales. This report is prepared in accordance with the Law Society's Guidance Notes 2006, the User Guide 2006 and the Coal Authority and Cheshire Brine Board's Terms and Conditions applicable at the time the report was produced.

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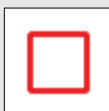
Alternative formats

If you would like this report in an alternative format, please contact our communications team.

Enquiry boundary

Key

Approximate position of enquiry boundary shown




How to contact us

0345 762 6848 (UK)
+44 (0)1623 637 000 (International)

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

www.groundstability.com

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VAT receipt

Issued by	The Coal Authority 200 Lichfield Lane Mansfield Nottinghamshire NG18 4RG
Tax point date	30 November 2016
Issued to	JOANNA WILDING 12 ROYAL SCOT ROAD DERBY DERBY DE24 8AJ
Property search for	LAND OFF CROSS ROAD, DEAL KENT CV14 9LA
Reference number	51001303745001
Date of issue	30 November 2016
Cost	£77.00
VAT @ 20%	£15.40
Total received	£92.40
VAT registration	598 5850 68

APPENDIX E

SITE RECONNAISSANCE PHOTOGRAPHS

PHOTOGRAPHIC LOG		
Photo no. 1	Date: 09.06.21	
Photo Direction: Looking northwest		
Description: Access at the intersection of Cross Road and Ellens Road		

Photo No. 2	Date: 09.06.21	
Photo Direction: Looking south		
Description: Eastern boundary and manhole covers associated with the drain line/water culvert/sewer drain line		

PHOTOGRAPHIC LOG		
Photo no. 3	Date: 09.06.21	
Photo Direction: n/a		
Description: Manhole covers associated with the drain line/water culvert/sewer drain line		

Photo No. 4	Date: 09.06.21	
Photo Direction: Looking southwest		
Description: Limited access on the northeast corner of the site, along Cross Road		



PHOTOGRAPHIC LOG		
Photo no. 5	Date: 09.06.21	
Photo Direction: Looking southwest		
Description: Central/western portion of the site, agricultural use		

Photo No. 6	Date: 09.06.21	
Photo Direction: Looking north-northwest		
Description: Gated access to the fallow field on the northwest portion of the site		

PHOTOGRAPHIC LOG		
Photo no. 7	Date: 09.06.21	
Photo Direction: Looking southwest		
Description: Thick vegetation present on the western boundary of the site		

Photo No. 8	Date: 09.06.21	
Photo Direction: Looking northwest		
Description: Thick vegetation present on the southwestern corner of the site		

APPENDIX F

TECHNICAL BACKGROUND

1. H1 Desk Study

Aquifer designation and Source protection zones

Principal aquifer: layers of rock or drift deposit that have high intergranular and/or fracture permeability (usually providing a high level of water storage). They may support water supply and/or river base flow on a strategic scale.

Secondary A aquifer: 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.

Secondary B aquifer: predominantly lower permeability layers that may store and yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering.

Secondary undifferentiated aquifer: it has not been possible to attribute either a category A or B to a rock type. In most cases this means that it was previously designated as both a minor and non-aquifer in different locations owing to the variable characteristics.

Unproductive' strata: low permeability with negligible significance for water supply or river base flow.

The EA generally adopts a three-fold classification of source protection zones (SPZ) surround abstractions for public water supply. The Site is situated in an area defined as follows:

- Zone 1 or the 'inner protection zone' is located immediately adjacent to the groundwater source and is based on a 50-day travel time from any point below the water table to the source. It is designed to protect against the effects of human activity and biological/chemical contaminants that may have an immediate effect on the source
- Zone 2 or the 'outer protection zone' is defined by a 400-day travel time from a point below the water table to the source. The travel time is designed to provide delay and attenuation of slowly degrading pollutants
- Zone 3 or the 'total catchment' is the area around the source within which all groundwater recharge is presumed to be discharged at the source.

Preliminary risk assessment methodology

CLR11 outlines the framework to be followed for risk assessment in the UK. The framework is designed to be consistent with UK legislation and policies including planning. Under CLR11, three stages of risk assessment exist: preliminary, generic quantitative and detailed quantitative. An outline conceptual model should be formed at the preliminary risk assessment stage that collates all the existing information pertaining to a site in text, tabular or diagrammatic form. The outline conceptual model identifies potentially complete (termed possible) contaminant linkages (contaminant–pathway–receptor) and is used as the basis for the design of the site investigation. The outline conceptual model is updated as further information becomes available, for example as a result of the site investigation.

Production of a conceptual model requires an assessment of risk to be made. Risk is a combination of the likelihood of an event occurring and the magnitude of its consequences. Therefore, both the

likelihood and the consequences of an event must be taken into account when assessing risk. RSK has adopted guidance provided in CIRIA C552 for use in the production of conceptual models.

The likelihood of an event can be classified on a four-point system using the following terms and definitions based on CIRIA C552:

- highly likely: the event appears very likely in the short term and almost inevitable over the long term or there is evidence at the receptor of harm or pollution
- likely: it is probable that an event will occur or circumstances are such that the event is not inevitable, but possible in the short term and likely over the long term
- low likelihood: circumstances are possible under which an event could occur, but it is not certain even in the long term that an event would occur and it is less likely in the short term
- unlikely: circumstances are such that it is improbable the event would occur even in the long term.

The severity can be classified using a similar system also based on CIRIA C552. The terms and definitions relating to severity are:

- severe: short term (acute) risk to human health likely to result in 'significant harm' as defined by the Environment Protection Act 1990, Part IIA. Short-term risk of pollution of sensitive water resources. Catastrophic damage to buildings or property. Short-term risk to an ecosystem or organism forming part of that ecosystem (note definition of ecosystem in 'Draft Circular on Contaminated Land', DETR 2000)
- medium: chronic damage to human health ('significant harm' as defined in 'Draft Circular on Contaminated Land', DETR 2000), pollution of sensitive water resources, significant change in an ecosystem or organism forming part of that ecosystem
- mild: pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services ('significant harm' as defined in 'Draft Circular on Contaminated Land', DETR 2000). Damage to sensitive buildings, structures or the environment
- minor: harm, not necessarily significant, but that could result in financial loss or expenditure to resolve. Non-permanent human health effects easily prevented by use of personal protective clothing. Easily repairable damage to buildings, structures and services.

Once the probability of an event occurring and its consequences have been classified, a risk category can be assigned according to the table below.

		Consequences			
		Severe	Medium	Mild	Minor
Probability	Highly likely	Very high	High	Moderate	Moderate/low
	Likely	High	Moderate	Moderate/low	Low
	Low likelihood	Moderate	Moderate/low	Low	Very low
	Unlikely	Moderate/low	Low	Very low	Very low

Definitions of these risk categories are as follows together with an assessment of the further work that may be required:

- very high: there is a high probability that severe harm could occur or there is evidence that severe harm is currently happening. This risk, if realised, could result in substantial liability; urgent investigation and remediation are likely to be required
- high: harm is likely to occur. Realisation of the risk is likely to present a substantial liability. Urgent investigation is required. Remedial works may be necessary in the short term and are likely over the long term
- moderate: it is possible that harm could arise, but it is unlikely that the harm would be severe and it is more likely that the harm would be relatively mild. Investigation is normally required to clarify the risk and determine the liability. Some remedial works may be required in the longer term
- low: it is possible that harm could occur, but it is likely that if realised this harm would at worst normally be mild
- very low: there is a low possibility that harm could occur and if realised the harm is unlikely to be severe.