

# **Green Hill Solar Farm**

## **EN010170**

### **Environmental Statement**

### **Appendix 22.1: Preliminary Geo- Environmental Risk Assessment**

### **Revision A**

### **(Part 7 of 7)**

Prepared by: Lucion  
Date: November 2025

Document Reference: EX1/GH6.3.22.1\_A  
APFP Regulation 5(2)(a)

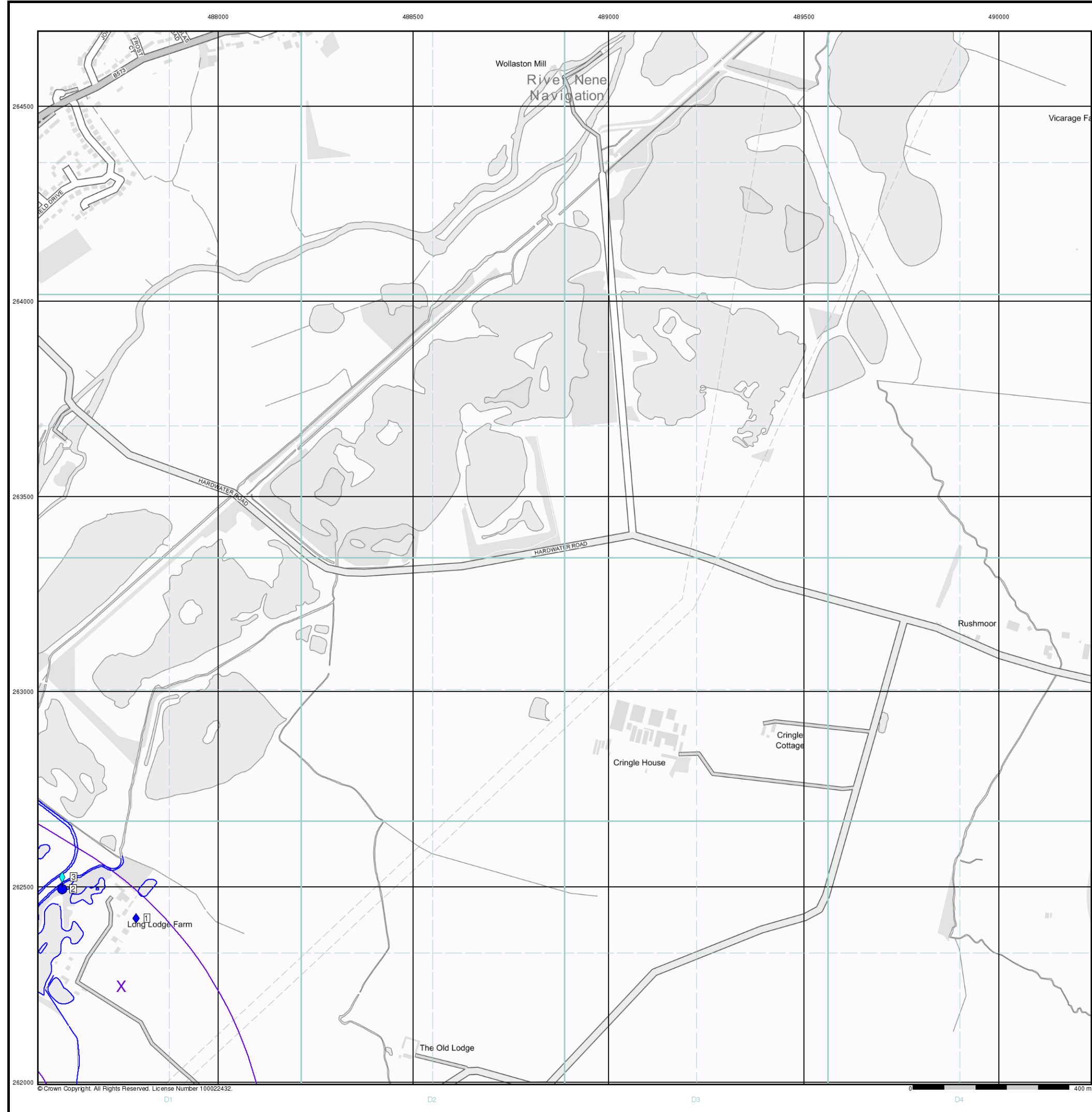




## Schedule of Changes

Revision	Section Reference	Description of Changes	Reason for Revision
A	[cover]	Updated document reference to Revision A	As required for submission at Deadline 1.
	(Part 1 of 7)	Cross assessment of full Envirocheck records into PRA report.	As recommended by the Environment Agency in their Relevant Representation
		Consistency updates with other PRA documents.	Applicant's due diligence.
	pp.331-332	Addition of Appendix G – Hotspot Protocol	Prior omission – Applicant's due diligence





General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

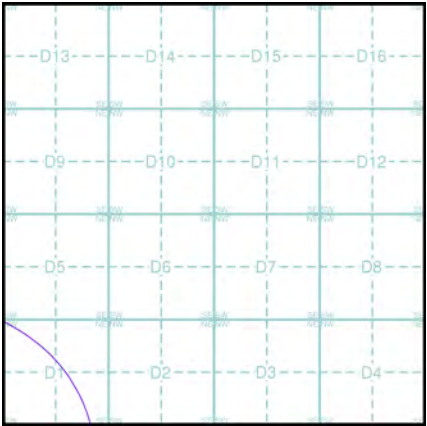
Geological

- BGS Recorded Mineral Site

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

Site Sensitivity Map - Slice D



Order Details

Order Number: 324847725\_1\_1  
Customer Ref: 93791.580478  
National Grid Reference: 487750, 262250  
Slice: D  
Site Area (Ha): 25.34  
Search Buffer (m): 1000

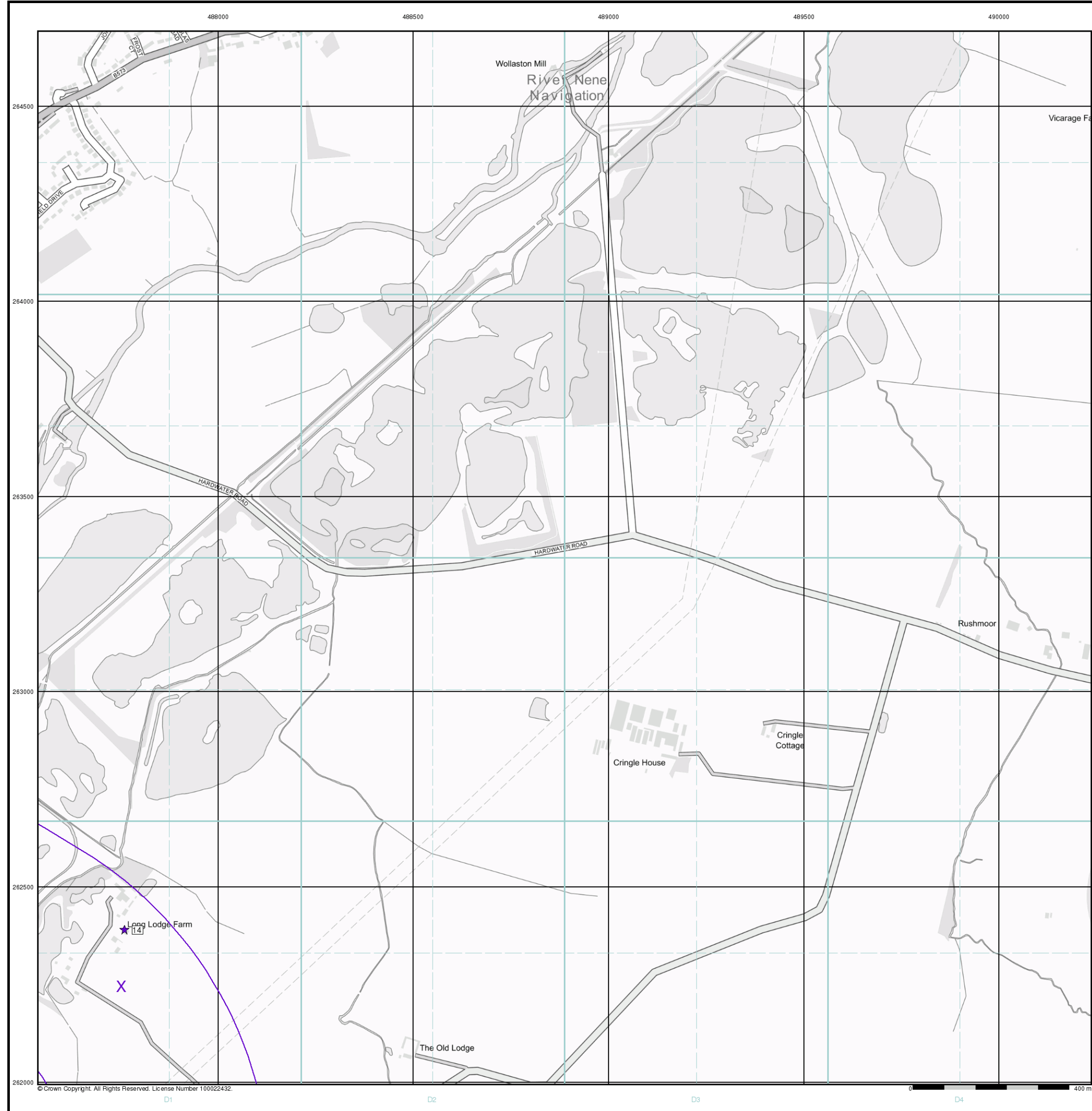
Site Details

Site at, Grendon, Northamptonshire



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Fax: 0844 844 9951  
Web: [Redacted]





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Industrial Land Use Map

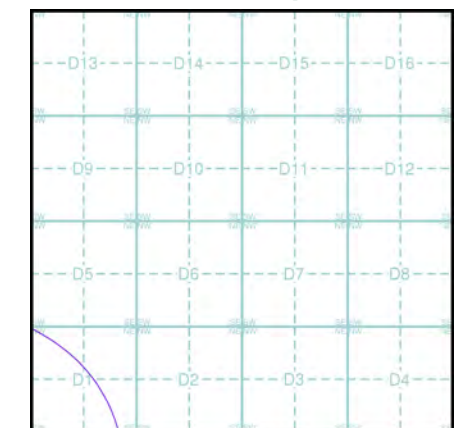
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- Gas Pipeline
- Underground Electrical Cables

Industrial Land Use Map - Slice D



Order Details

Order Number: 324847725\_1\_1  
 Customer Ref: 93791.580478  
 National Grid Reference: 487750, 262250  
 Slice: D  
 Site Area (Ha): 25.34  
 Search Buffer (m): 1000

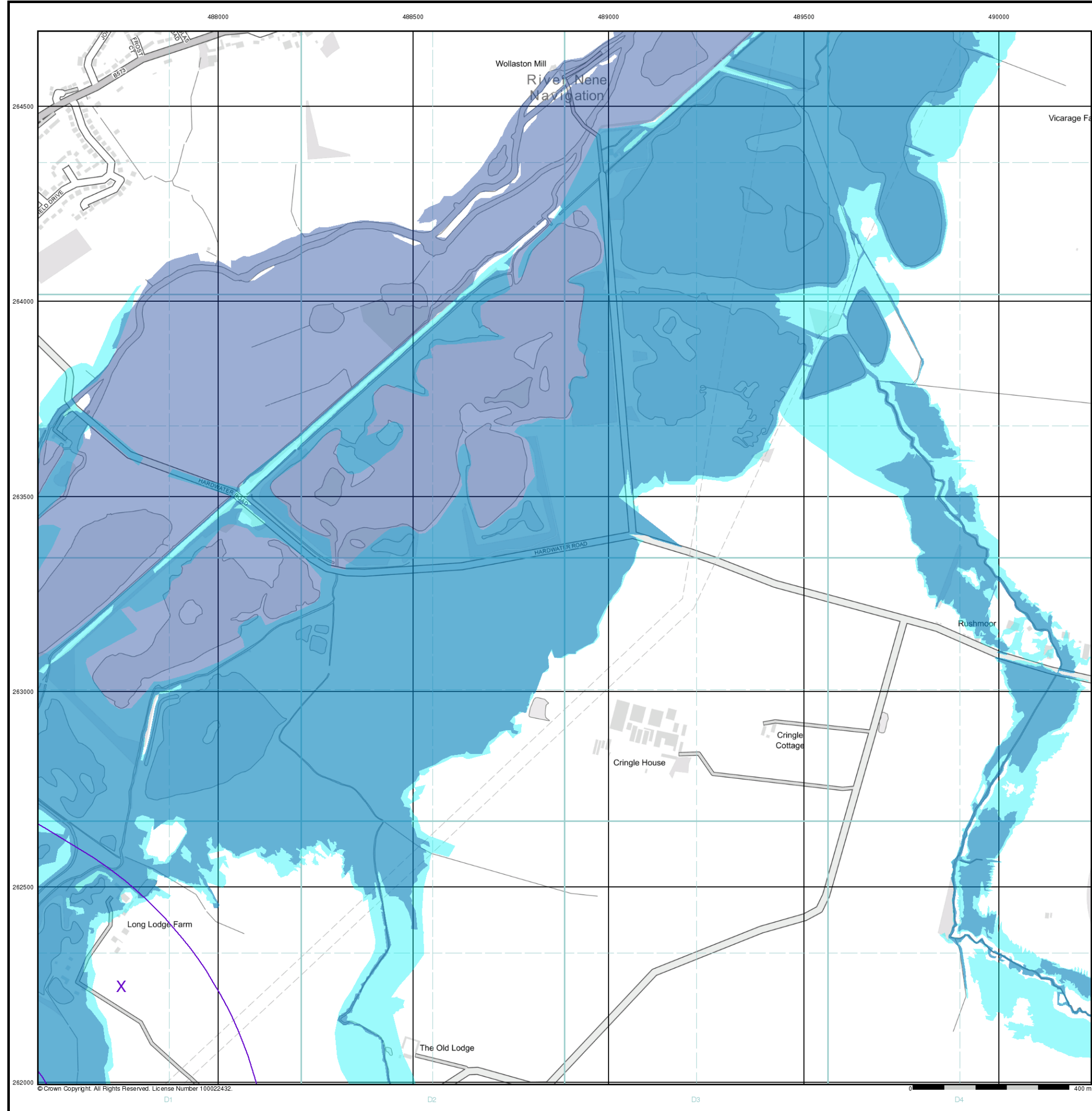
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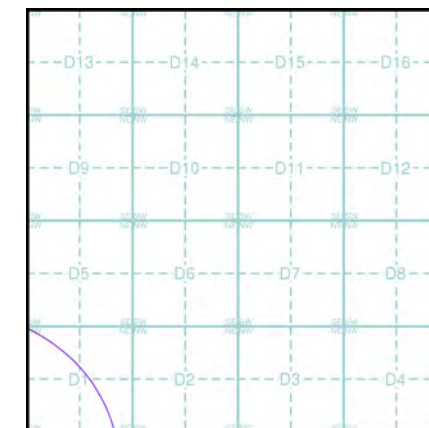
### General

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

### Agency and Hydrological (Flood)

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

### Flood Map - Slice D



### Order Details

Order Number: 324847725\_1\_1  
Customer Ref: 93791.580478  
National Grid Reference: 487750, 262250  
Slice: D  
Site Area (Ha): 25.34  
Search Buffer (m): 1000

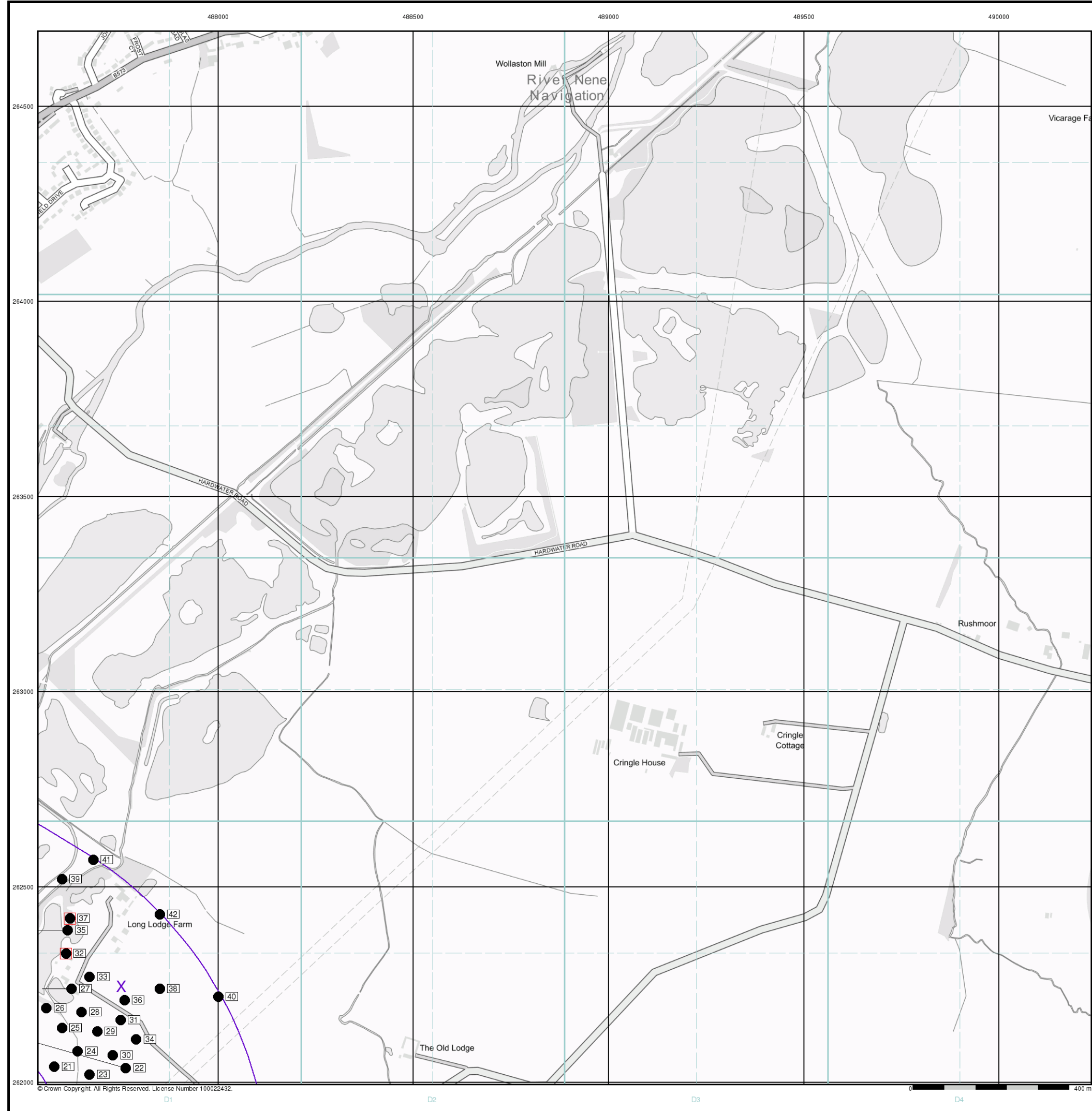
### Site Details

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Fax: 0844 844 9951  
Web: [Redacted]





### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

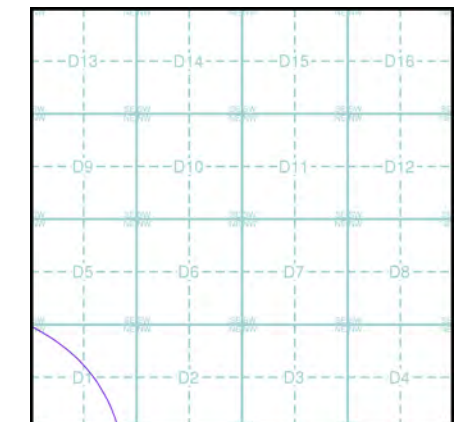
### Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of [REDACTED]

### Borehole Map - Slice D



### Order Details

Order Number: 324847725\_1\_1  
Customer Ref: 93791.580478  
National Grid Reference: 487750, 262250  
Slice: D  
Site Area (Ha): 25.34  
Search Buffer (m): 1000

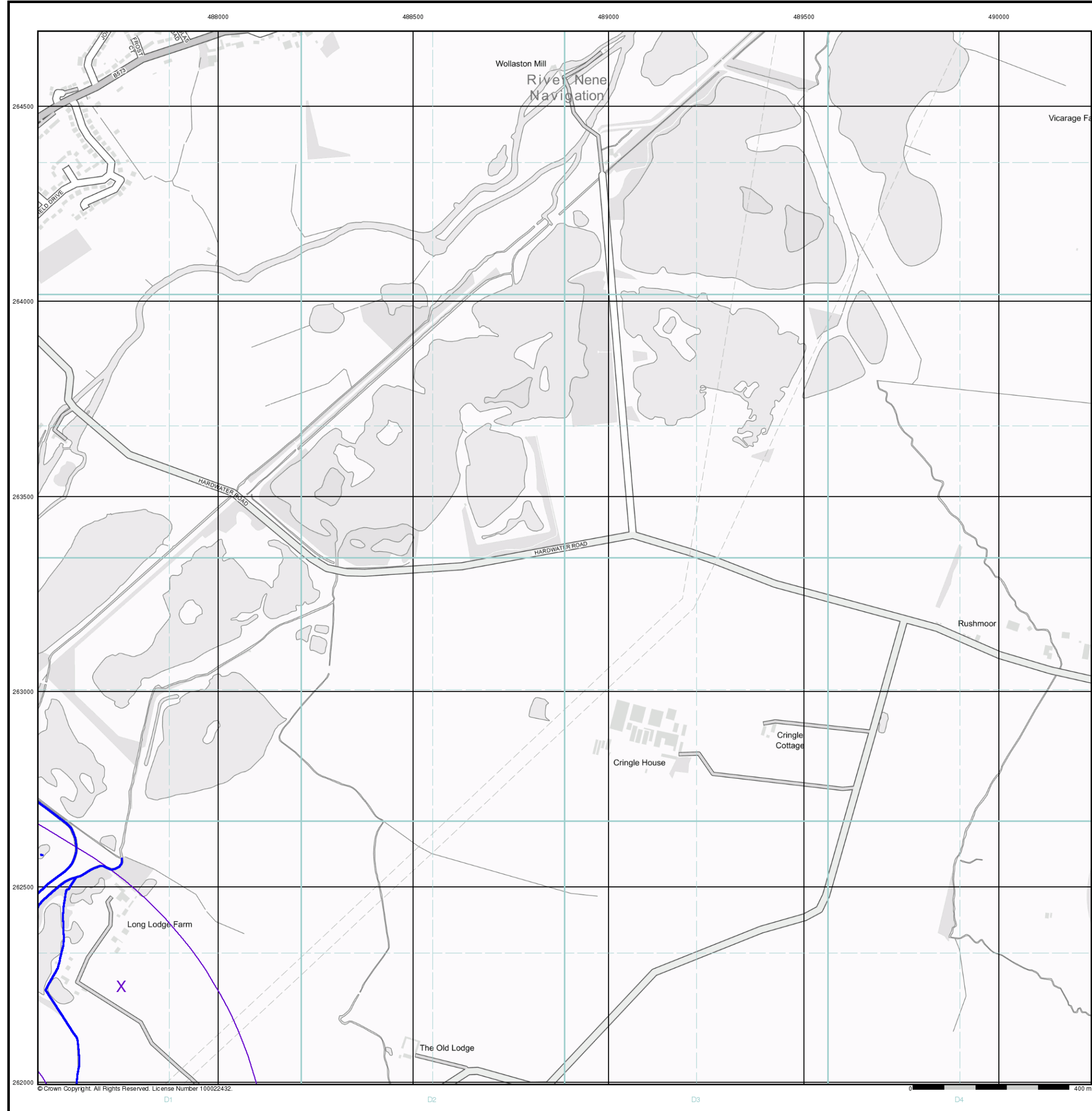
### Site Details

Site at, Grendon, Northamptonshire



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Web: [REDACTED]





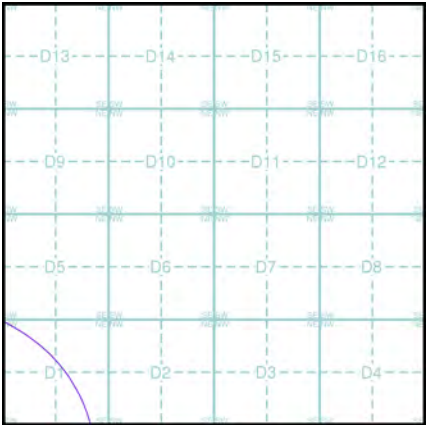
**General**

- Specified Site
- Specified Buffer(s)
- 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                     |

**OS Water Network Map - Slice D**



**Order Details**

Order Number: 324847725\_1\_1  
Customer Ref: 93791.580478  
National Grid Reference: 487750, 262250  
Slice: D  
Site Area (Ha): 25.34  
Search Buffer (m): 1000

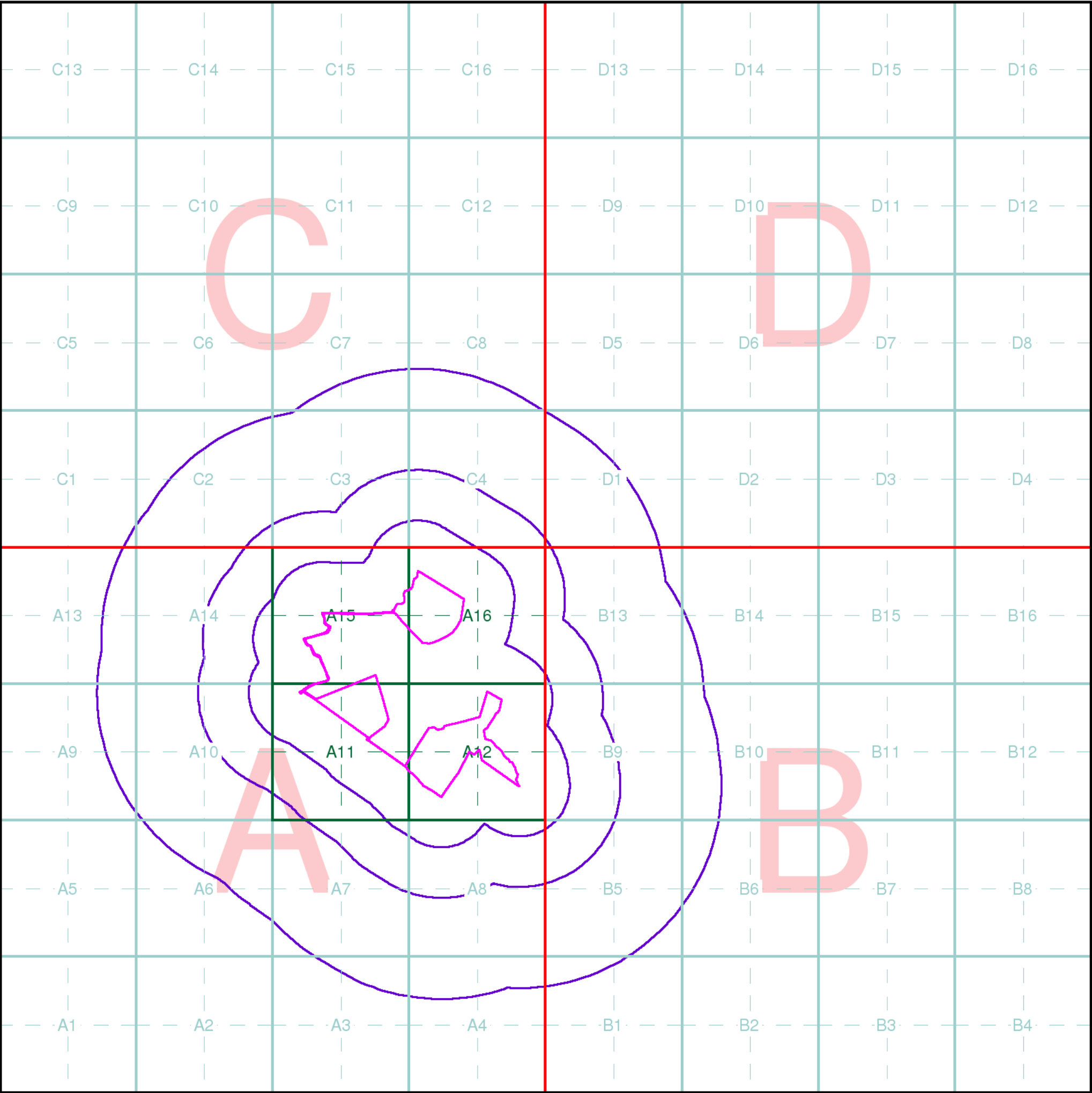
**Site Details**

Site at, Grendon, Northamptonshire



Tel: 0844 844 9952  
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Web: [Redacted]





**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**

Mr J Rhoades, Delta Simons, 20 Little Britain, London, London, EC1A 7D

**Order Details**

Order Number: 324847725\_1\_1  
Customer Ref: 93791.580478  
National Grid Reference: 486940, 261260  
Site Area (Ha): 25.34  
Search Buffer (m): 1000

**Site Details**

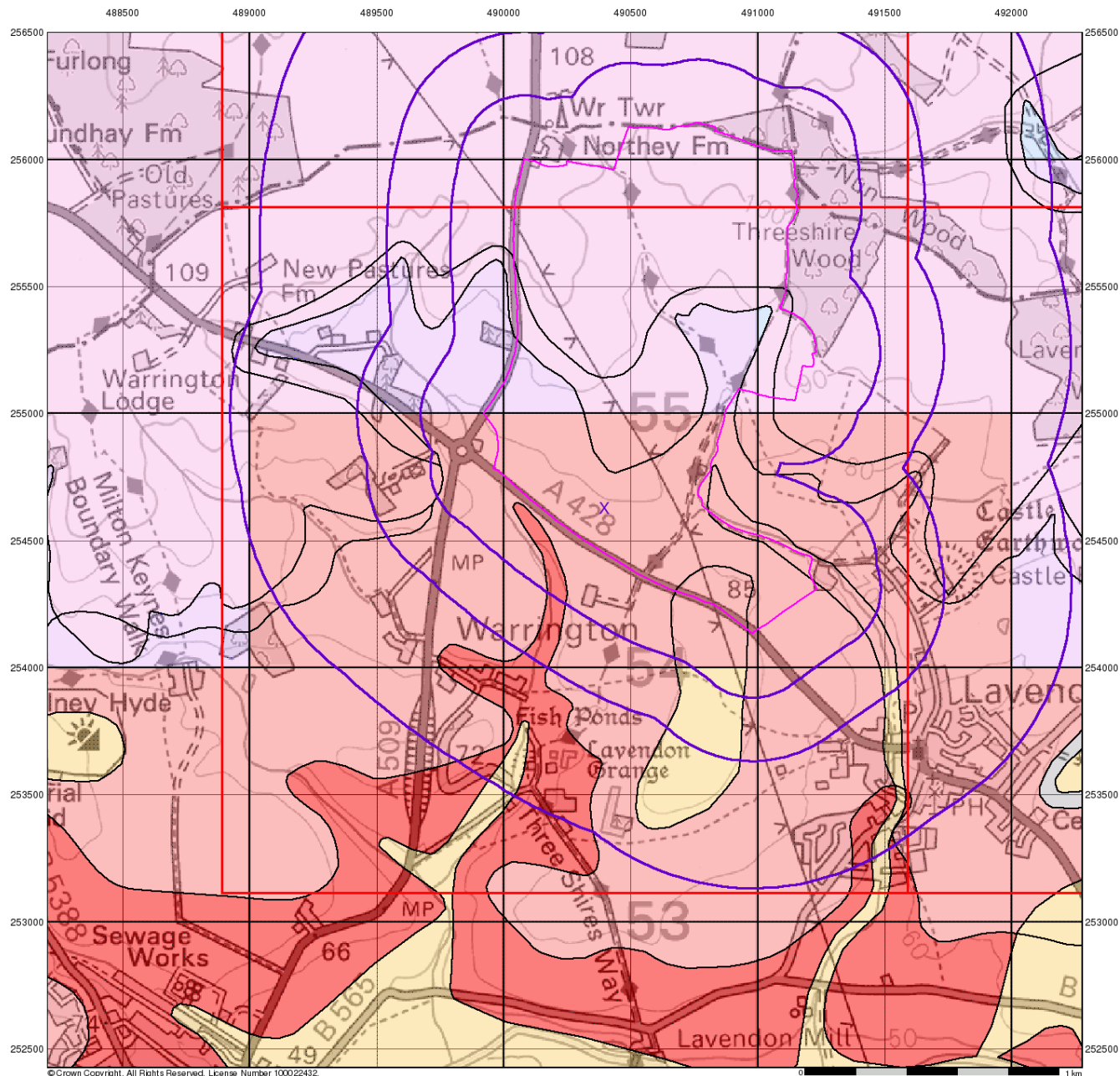
Site at, Grendon, Northamptonshire

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Fax: 0844 844 9951  
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## Groundwater Vulnerability

### General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point
- Slice
- B Map ID

### Agency and Hydrological

#### Bedrock Aquifers

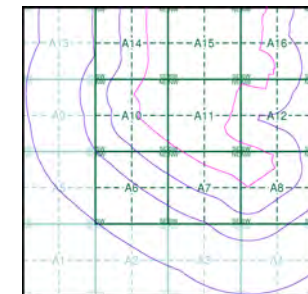
- High Vulnerability, Principal Aquifer
- High Vulnerability, Secondary Aquifer
- Medium Vulnerability, Principal Aquifer
- Medium Vulnerability, Secondary Aquifer
- Low Vulnerability, Principal Aquifer
- Low Vulnerability, Secondary Aquifer

#### Superficial Aquifers

- High Vulnerability, Principal Aquifer
- High Vulnerability, Secondary Aquifer
- Medium Vulnerability, Principal Aquifer
- Medium Vulnerability, Secondary Aquifer
- Low Vulnerability, Principal Aquifer
- Low Vulnerability, Secondary Aquifer

- Unproductive Aquifer
- Soluble Rock

### Site Sensitivity Context Map - Slice A



### Order Details

Order Number: 346936621\_1\_1  
 Customer Ref: DS78309  
 National Grid Reference: 490400, 254630  
 Slice: A  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

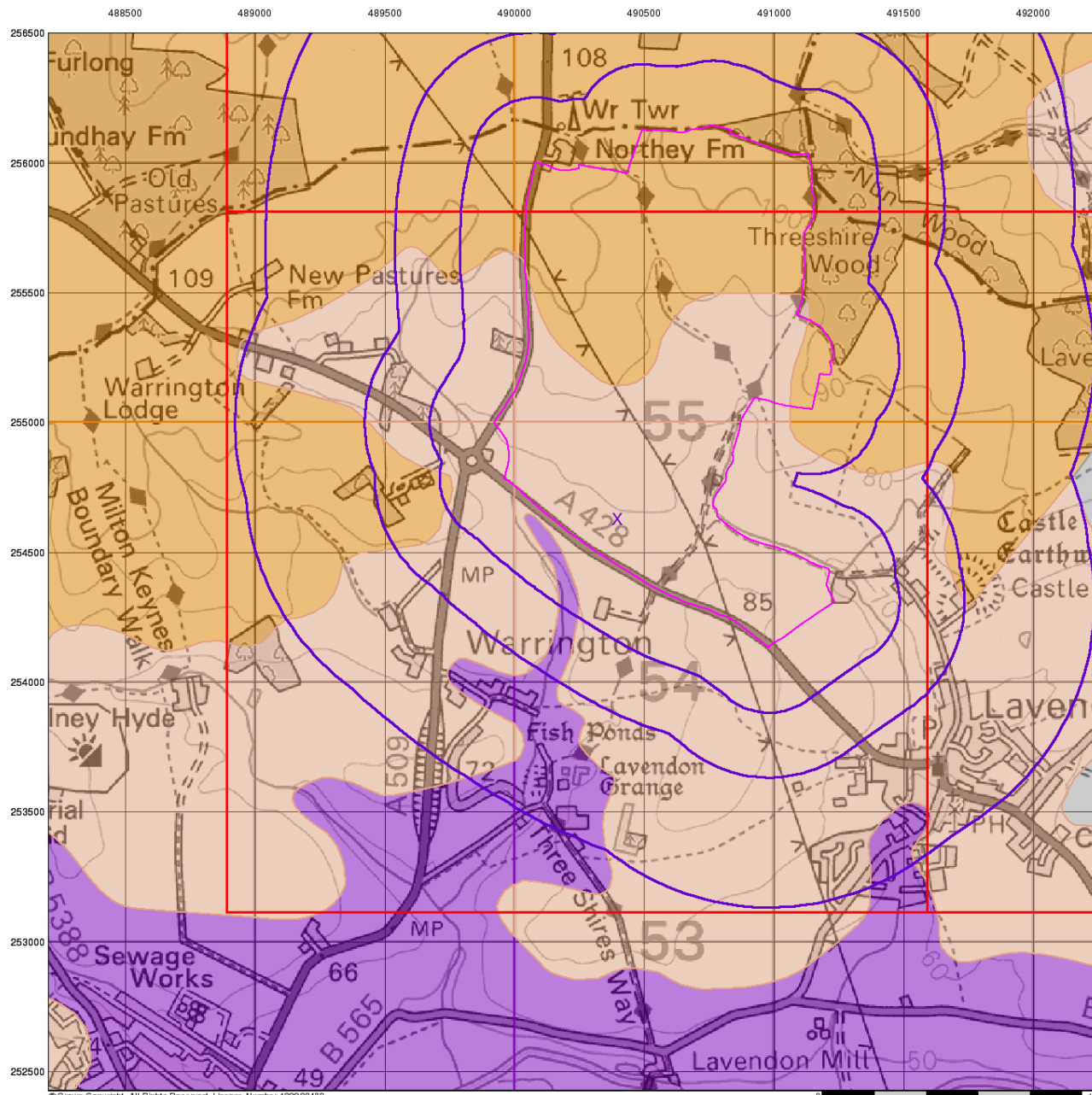
### Site Details

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0 1 km



## Bedrock Aquifer Designation

### General

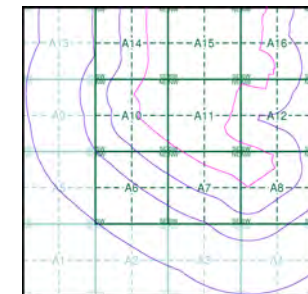
- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point
- Slice
- B Map ID

### Agency and Hydrological

#### Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

### Site Sensitivity Context Map - Slice A



### Order Details

Order Number: 346936621\_1\_1  
 Customer Ref: DS78309  
 National Grid Reference: 490400, 254630  
 Slice: A  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

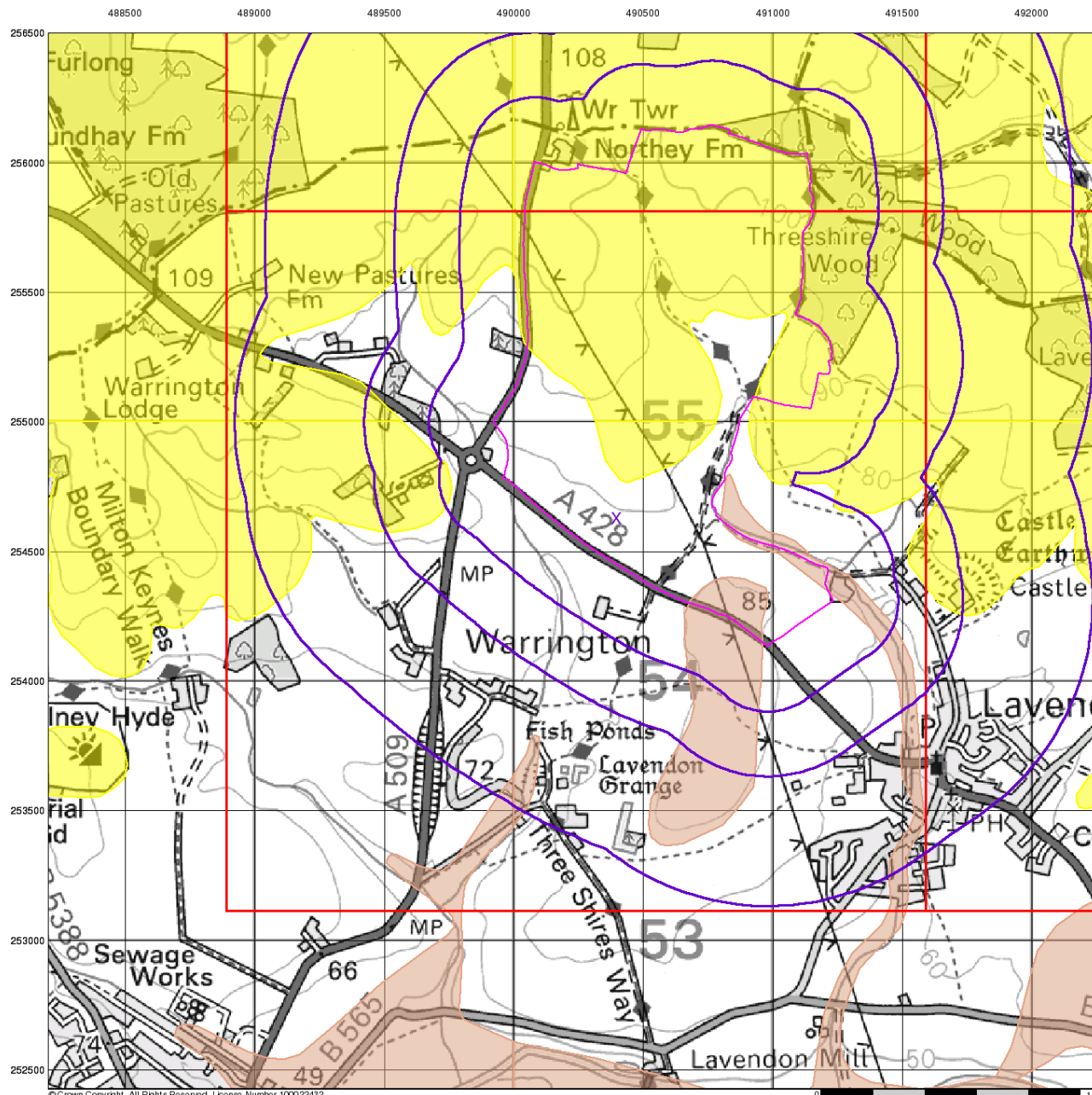
### Site Details

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 Web: [Redacted]





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## Superficial Aquifer Designation

### General

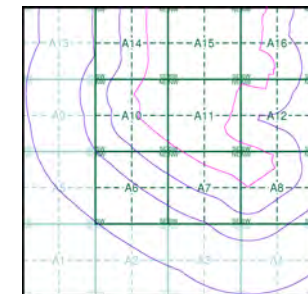
- Specified Site
- Specified Buffer(s)
- Slice
- Map ID
- X Bearing Reference Point

### Agency and Hydrological

#### Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

### Site Sensitivity Context Map - Slice A



### Order Details

Order Number: 346936621\_1\_1  
 Customer Ref: DS78309  
 National Grid Reference: 490400, 254630  
 Slice: A  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

### Site Details

Meikleland

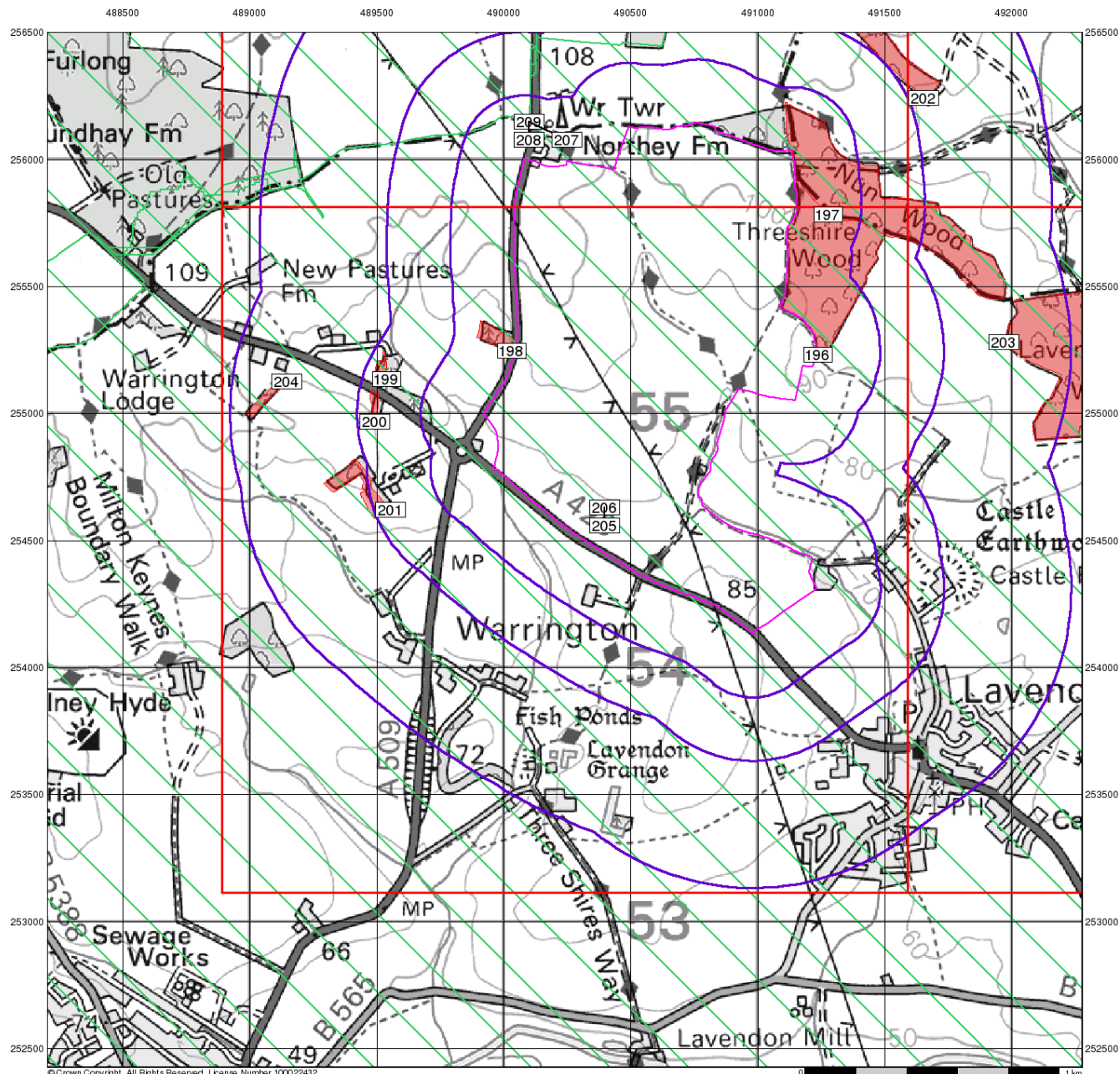


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## Sensitive Land Uses

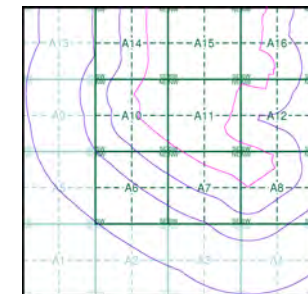
### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### Sensitive Land Uses

- Ancient Woodland
- Area of Adopted Green Belt
- Area of Unadopted Green Belt
- Area of Outstanding Natural Beauty
- Environmentally Sensitive Area
- Forest Park
- Local Nature Reserve
- Marine Nature Reserve
- National Nature Reserve
- National Park
- Nitrate Sensitive Area
- Nitrate Vulnerable Zone
- Ramsar Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area
- World Heritage Sites

### Site Sensitivity Context Map - Slice A



### Order Details

Order Number: 346936621\_1\_1  
 Customer Ref: DS78309  
 National Grid Reference: 490400, 254630  
 Slice: A  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

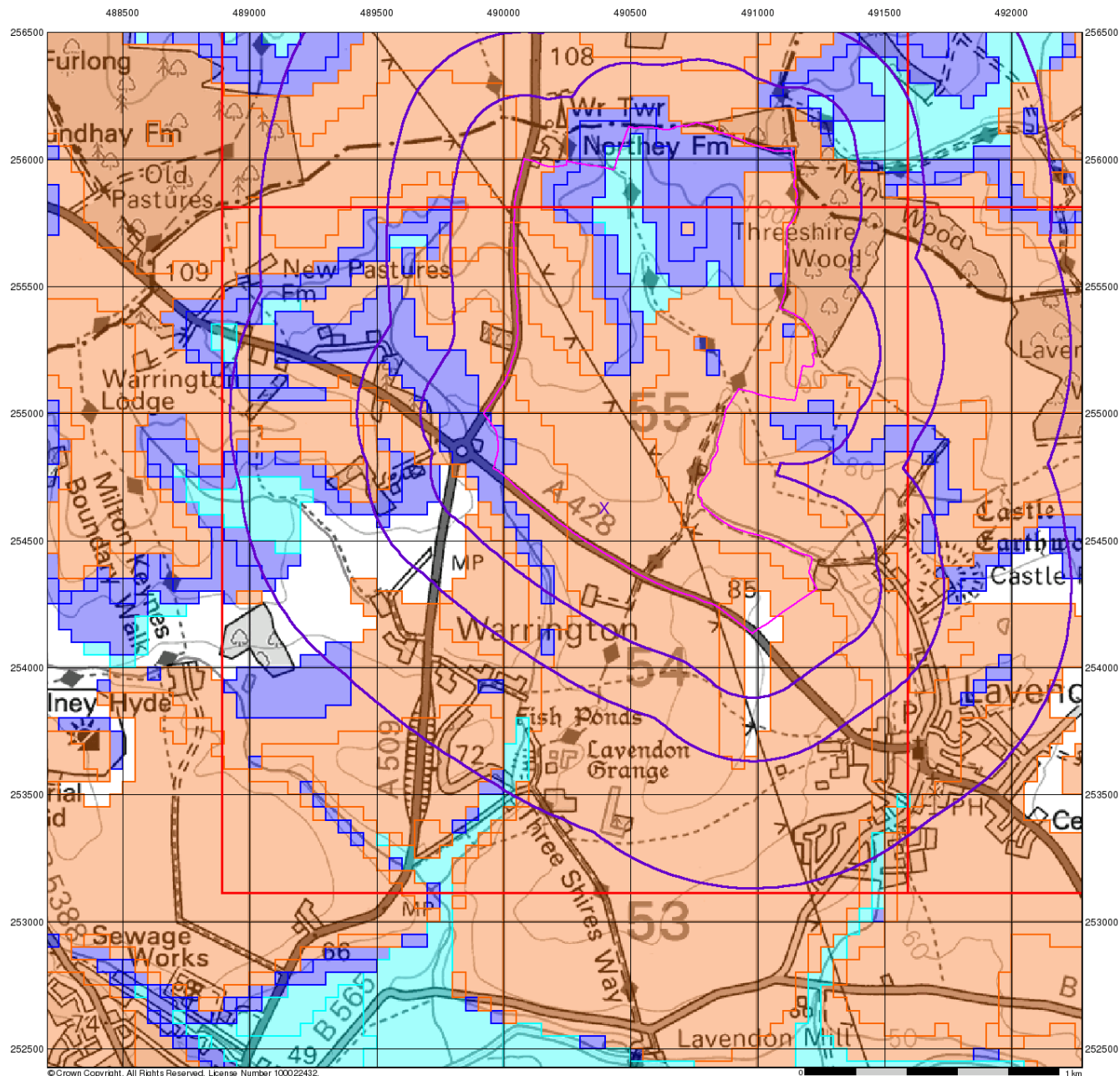
### Site Details

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 Fax: 0844 844 9951  
 Web: [Redacted]





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## BGS Flood GFS Data

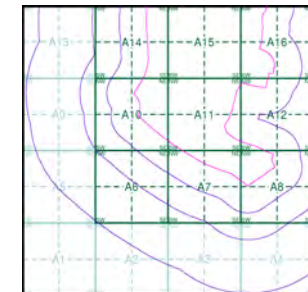
### General

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

### Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

### Site Sensitivity Context Map - Slice A



### Order Details

Order Number: 346936621\_1\_1  
 Customer Ref: DS78309  
 National Grid Reference: 490400, 254630  
 Slice: A  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

### Site Details

Meikleland

**Landmark**  
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# Envirocheck<sup>®</sup> Report:

## Datasheet

### Order Details:

**Order Number:**

346936621\_1\_1

**Customer Reference:**

DS78309

**National Grid Reference:**

490400, 254630

**Slice:**

A

**Site Area (Ha):**

172.36


**Search Buffer (m):**

1000

**Site Details:**

Meikleland

### Client Details:

  
Delta Simons  
Suite 4A  
One Portland Street  
Manchester  
M1 3BE





Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	34
Hazardous Substances	-
Geological	35
Industrial Land Use	42
Sensitive Land Use	45
Data Currency	46
Data Suppliers	53
Useful Contacts	54

#### Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination. For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client. In this datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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#### Report Version v53.0



Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
<b>Agency &amp; Hydrological</b>					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 5		3	2	9
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 9		1		1
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 9	Yes			
Pollution Incidents to Controlled Waters					
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality					
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions	pg 9			1	(*2)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 10	Yes	n/a	n/a	n/a
Groundwater Vulnerability - Soluble Rock Risk	pg 14	8	n/a	n/a	n/a
Groundwater Vulnerability - Local Information			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 15	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 15	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences	pg 15	Yes		n/a	n/a
Flooding from Rivers or Sea without Defences	pg 15	Yes		n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 15	38	33	26	65



Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
<b>Waste</b>					
BGS Recorded Landfill Sites					
Historical Landfill Sites					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage	pg 34	3	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)					
Potentially Infilled Land (Water)					
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
<b>Hazardous Substances</b>					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					



Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
<b>Geological</b>					
BGS 1:625,000 Solid Geology	pg 35	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 35	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 37		1		
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 37	Yes	Yes	n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 37	Yes	Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 38	Yes	Yes	n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 39	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 39	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 40	Yes	Yes	n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
<b>Industrial Land Use</b>					
Contemporary Trade Directory Entries	pg 42		3	1	8
Fuel Station Entries	pg 43		1		1
Points of Interest - Commercial Services	pg 43		3		3
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 43				6
Points of Interest - Public Infrastructure	pg 44		6		2
Points of Interest - Recreational and Environmental					
Gas Pipelines					
Underground Electrical Cables					



Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
<b>Sensitive Land Use</b>					
Ancient Woodland	pg 45	2	1	3	3
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 45	2	3		
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NW (NE)	0	1	491000 255000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15SW (N)	0	1	490400 255350
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A15SW (N)	0	1	490550 255350
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15SE (NE)	0	1	490750 255250
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A16SW (NE)	0	1	491100 255300
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16SW (NE)	0	1	491150 255300
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (SE)	0	1	490950 254350
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11NW (N)	0	1	490500 255000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15NE (N)	0	1	490650 255600
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A16NW (NE)	0	1	490950 255500
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A16NW (NE)	0	1	491050 255500
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15NW (N)	0	1	490250 255750
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A10SE (W)	0	1	490000 254628
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A10SE (NW)	0	1	490050 254800
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15SW (N)	0	1	490395 255450
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NE (N)	0	1	490200 255800
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A15SW (N)	0	1	490395 255150
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A15SW (N)	0	1	490300 255200
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15SW (N)	0	1	490500 255200
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	0	1	490900 256050
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15SW (N)	0	1	490400 255150
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15SE (NE)	0	1	490800 255150



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NW (NE)	0	1	491150 255100
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14NE (N)	0	1	490100 255500
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A15NE (NE)	0	1	490800 255500
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15NE (N)	0	1	490650 255500
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A10NE (NW)	0	1	490000 255000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A10NE (NW)	0	1	490100 255000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A10NE (NW)	0	1	490000 254950
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SW (W)	0	1	490250 254628
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A7NE (SE)	0	1	490900 254350
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15NW (N)	0	1	490350 255700
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A15NW (N)	0	1	490395 255700
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A15NE (N)	0	1	490700 255700
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11NW (N)	0	1	490395 255000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SW (SW)	0	1	490395 254628
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A11SE (NE)	0	1	490600 254750
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NW (NE)	0	1	491050 255000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A10NW (NW)	23	1	489900 255000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	31	1	490050 256000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14SE (NW)	32	1	490000 255200
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A9NE (W)	39	1	489400 255000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14SE (NW)	40	1	490000 255400
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A10SE (W)	45	1	490100 254600



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	48	1	490000 255850
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NW (NE)	51	1	491200 255000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NW (NE)	52	1	491050 254950
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12SW (E)	64	1	490950 254800
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A10SW (W)	71	1	489900 254700
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A10SE (W)	90	1	490100 254550
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A10SE (SW)	97	1	490150 254500
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NW (E)	102	1	491150 254850
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NE)	109	1	491250 256000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A10SW (W)	111	1	489850 254750
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A10SE (W)	114	1	490000 254600
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NE)	116	1	491150 256150
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	117	1	491250 256050
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A10SE (W)	122	1	490050 254550
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	133	1	491250 256100
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	133	1	491200 256150
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	139	1	491000 256200
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A6NE (SW)	149	1	490200 254400
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	156	1	491050 256200
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(NE)	159	1	491300 256000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (E)	161	1	491300 254950
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A10SW (W)	162	1	489800 254800



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(NE)	163	1	491250 256150
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A6NE (SW)	167	1	490100 254450
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A10SE (W)	184	1	490000 254500
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14NW (NW)	190	1	489850 255600
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NW (NW)	193	1	489850 255800
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A6NE (SW)	200	1	490100 254400
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NE)	203	1	491350 255950
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	207	1	490700 256350
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A10SW (W)	211	1	489750 254650
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A10NW (NW)	223	1	489700 255000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NW (NW)	239	1	489800 255700
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NW (NW)	242	1	489750 255650
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	253	1	491400 255950
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (E)	270	1	491450 255000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NW (NW)	290	1	489750 255600
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	302	1	491450 255950
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	309	1	490000 256300
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A10NW (W)	323	1	489600 254850
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A14NW (NW)	339	1	489700 255650
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14NW (NW)	340	1	489700 255600
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NW (NW)	341	1	489700 255750
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	344	1	491500 255850



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NE)	347	1	491500 255900
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A10SW (W)	355	1	489600 254650
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A6NE (S)	360	1	490200 254150
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A9NE (NW)	373	1	489550 255000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A9NE (W)	385	1	489550 254850
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NW (NW)	390	1	489650 255550
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NE)	394	1	491550 255850
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A9SE (W)	401	1	489550 254700
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(E)	436	1	491650 254600
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A9SE (W)	451	1	489550 254600
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(E)	469	1	491700 254400
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A9NE (W)	473	1	489450 254950
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A6NW (SW)	473	1	489800 254300
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	A9SE (W)	475	1	489450 254800
1	<b>Discharge Consents</b> Operator: [REDACTED] Property Type: [REDACTED] Location: [REDACTED] Authority: Environment Agency, Anglian Region Catchment Area: Upper River Ouse Newport-Bedford Reference: Pr1nf1395 Permit Version: 2 Effective Date: 7th February 1992 Issued Date: 7th February 1992 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Land/Soakaway Environment: Receiving Water: Trib River Gt Ouse <b>Status:</b> Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 10m	A8NW (E)	36	2	491244 254395



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	<b>Discharge Consents</b> Operator: [REDACTED] Property Type: [REDACTED] Location: [REDACTED] Authority: Environment Agency, Anglian Region Catchment Area: Upper River Ouse Newport-Bedford Reference: Pr1nf1395 Permit Version: 1 Effective Date: 31st May 1983 Issued Date: 31st May 1983 Revocation Date: 6th February 1992 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Lavendon Brook (Trib) River Gr <b>Status:</b> Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Located by supplier to within 100m	A8NE (E)	68	2	491300 254300
3	<b>Discharge Consents</b> Operator: Elfakir Services Ltd Property Type: SHOP INCL GARDEN CENTRE/RETAIL TRADE(NOT MOTOR VEHICLE) Location: Warrington Crossroads Services Warrington, Olney, Buckinghamshire, Mk46 4jq Authority: Environment Agency, Anglian Region Catchment Area: Upper River Ouse Newport-Bedford Reference: Prcnf04361 Permit Version: 1 Effective Date: 26th July 1991 Issued Date: 26th July 1991 Revocation Date: Not Supplied Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Tributary Of The River Ouse <b>Status:</b> Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 100m	A10NW (W)	93	2	489880 254840
4	<b>Discharge Consents</b> Operator: [REDACTED] Property Type: [REDACTED] Location: [REDACTED] Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: Prcnf01567 Permit Version: 1 Effective Date: 8th August 1989 Issued Date: 8th August 1989 Revocation Date: 1st October 1996 Discharge Type: Unknown Discharge: Land/Soakaway Environment: Receiving Water: Land <b>Status:</b> Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 10m	A8NE (E)	262	2	491490 254360
5	<b>Discharge Consents</b> Operator: [REDACTED] Property Type: [REDACTED] Location: [REDACTED] Authority: Environment Agency, Anglian Region Catchment Area: Not Given Reference: Prcnf05479 Permit Version: 1 Effective Date: 26th May 1995 Issued Date: 26th May 1995 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Unnamed Drainage Ditch <b>Status:</b> Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 100m	A10SW (W)	374	2	489590 254740



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	<b>Discharge Consents</b> Operator: [REDACTED] Property Type: [REDACTED] Location: [REDACTED] Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: PrcIf03905 Permit Version: 1 Effective Date: 5th November 1990 Issued Date: 5th November 1990 Revocation Date: 1st October 1996 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Not Supplied Environment: Receiving Water: Not Supplied <b>Status:</b> Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 10m	A8SE (SE)	555	2	491500 253820
7	<b>Discharge Consents</b> Operator: [REDACTED] Property Type: [REDACTED] Location: [REDACTED] Authority: Environment Agency, Anglian Region Catchment Area: Upper River Ouse Newport-Bedford Reference: Prcnf02494 Permit Version: 2 Effective Date: 3rd February 1992 Issued Date: 3rd February 1992 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Trib River Gt Ouse <b>Status:</b> Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 100m	A6SW (SW)	714	2	489900 253920
7	<b>Discharge Consents</b> Operator: [REDACTED] Property Type: [REDACTED] Location: [REDACTED] Authority: Environment Agency, Anglian Region Catchment Area: Upper River Ouse Newport-Bedford Reference: Prcnf02494 Permit Version: 1 Effective Date: 26th April 1990 Issued Date: 26th April 1990 Revocation Date: 2nd February 1992 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Trib River Great Ouse <b>Status:</b> Post National Rivers Authority Legislation where issue date > 31/08/1989 Positional Accuracy: Located by supplier to within 10m	A6SW (SW)	714	2	489900 253920
8	<b>Discharge Consents</b> Operator: Screencode Ltd T/A Bacchus Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: Then Barn, Warrington House Farm, Olney, Bucks, Mk46 4hn Authority: Environment Agency, Anglian Region Catchment Area: Catchment 33 Unknown Detail Reference: Prcnf14275 Permit Version: 1 Effective Date: 13th October 1999 Issued Date: 9th May 2000 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Trib Of Gt. Ouse <b>Status:</b> Consent without application (Water Resources Act 1991, Schedule 10) Positional Accuracy: Located by supplier to within 10m	A6SW (SW)	715	2	489700 254070



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
9	<b>Discharge Consents</b> Operator: S G Pibworth & Son Property Type: FARMS (NOT HOUSE)/CROP + ANIMAL REARING/PLANT NURSERY Location: Home Farm, Warrington, Bucks., Wa4 2tq Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: Pr1nfg0961 Permit Version: 1 Effective Date: 29th May 1963 Issued Date: 29th May 1963 Revocation Date: 20th February 1991 Discharge Type: Agricultural effluents Discharge: Freshwater Stream/River Environment: Receiving Water: Unknown Trib. <b>Status:</b> Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Located by supplier to within 100m	A6SW (SW)	789	2	489800 253900
10	<b>Discharge Consents</b> Operator: [REDACTED] Property Type: [REDACTED] Location: [REDACTED] Authority: [REDACTED] Catchment Area: Catchment 29 Unknown Detail Reference: Gwclf30736 Permit Version: 1 Effective Date: 1st April 1999 Issued Date: 3rd August 2000 Revocation Date: Not Supplied Discharge Type: Trade Discharge - Agricultural And Surface Discharge: Onto Land Environment: Receiving Water: Groundwater <b>Status:</b> Deemed Groundwater Regulations Authorisation Positional Accuracy: Located by supplier to within 10m	A6SW (SW)	819	2	489720 253920
11	<b>Discharge Consents</b> Operator: [REDACTED] Property Type: [REDACTED] Location: [REDACTED] Authority: [REDACTED] Catchment Area: Upper River Ouse Newport-Bedford Reference: Prcnf14636 Permit Version: 1 Effective Date: 17th December 2001 Issued Date: 18th December 2001 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Trib Of River Great Ouse <b>Status:</b> New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995) Positional Accuracy: Located by supplier to within 100m	A2NE (S)	881	2	490100 253600
12	<b>Discharge Consents</b> Operator: Anglian Water Services Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: S.W.S.S At Lavendon Olney Road, Lavendon, Olney, Mk46 4et Authority: Environment Agency, Anglian Region Catchment Area: Upper River Ouse Newport-Bedford Reference: Aw1nf1024 Permit Version: 1 Effective Date: 13th October 1972 Issued Date: 13th October 1972 Revocation Date: 23rd December 2016 Discharge Type: Discharge Of Other Matter-Surface Water Discharge: Freshwater Stream/River Environment: Receiving Water: Lavendon Brook <b>Status:</b> Surrendered under EPR 2010 Positional Accuracy: Located by supplier to within 100m	A4SE (SE)	898	2	491500 253400



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
13	<b>Discharge Consents</b> Operator: [REDACTED] Property Type: [REDACTED] Location: [REDACTED] Authority: [REDACTED] Catchment Area: Upper River Ouse Newport-Bedford Reference: Npswqd004326 Permit Version: 1 Effective Date: 26th September 2008 Issued Date: 26th September 2008 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: [REDACTED] Receiving Water: Trib Of The River Great Ouse <b>Status:</b> <b>New Consent (Water Resources Act 1991, Section 88 &amp; Schedule 10 as amended by Environment Act 1995)</b> Positional Accuracy: Located by supplier to within 10m	A13NW (NW)	1000	2	489044 255515
14	<b>Local Authority Pollution Prevention and Controls</b> Name: BpThree Counties Filling Station Location: Warrington Road, OLNEY, Buckinghamshire, MK46 4DT Authority: Milton Keynes Council, Environmental Health Department Permit Reference: PPC/VPR/009/01.10 Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station <b>Status:</b> <b>Authorised</b> Positional Accuracy: Automatically positioned to the address	A10NE (NW)	64	3	489914 254869
15	<b>Local Authority Pollution Prevention and Controls</b> Name: Janlin Motors Location: Northampton Road, Warrington, OLNEY, MK46 4HW Authority: Milton Keynes Council, Environmental Health Department Permit Reference: Vpr 038 Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station <b>Status:</b> <b>Authorised</b> Positional Accuracy: Manually positioned to the address or location	A13SW (NW)	920	3	489037 255248
	<b>Nearest Surface Water Feature</b>	A15NW (N)	0	-	490562 255501
16	<b>Water Abstractions</b> Operator: [REDACTED] Licence Number: [REDACTED] Permit Version: [REDACTED] Location: [REDACTED] Authority: Environment Agency, Anglian Region Abstraction: Domestic & Agriculture Abstraction Type: Not Supplied Source: Well And Borehole Daily Rate (m3): 5 Yearly Rate (m3): 18180 Details: Great Oolite; Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8NE (E)	305	2	491520 254430
	<b>Water Abstractions</b> Operator: A J Cony & Partners Licence Number: 6/33/11/*G/0036 Permit Version: 101 Location: Lagoon At Olney Authority: Environment Agency, Anglian Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 May Authorised End: 30 September Permit Start Date: 1st March 2008 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(S)	1702	2	490500 252500



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Water Abstractions</b> Operator: A J Cony Licence Number: 6/33/11/*G/0036 Permit Version: 100 Location: Lagoon At Olney Authority: Environment Agency, Anglian Region Abstraction: General Agriculture: Spray Irrigation - Direct Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Great Oolite; Status: Perpetuity Authorised Start: 01 May Authorised End: 30 September Permit Start Date: 1st May 1978 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(S)	1702	2	490500 252500
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Bedrock Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: 40-70% Superficial Patchiness: <90% Superficial Thickness: 3-10m Superficial Recharge: No Data	A10SE (W)	0	4	490000 254628
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Bedrock Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: 40-70% Superficial Patchiness: <90% Superficial Thickness: <3m Superficial Recharge: No Data	A11SW (SW)	0	4	490395 254628
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Bedrock Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: 40-70% Superficial Patchiness: <90% Superficial Thickness: <3m Superficial Recharge: Low	A12SW (E)	0	4	491000 254497



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Bedrock Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: 40-70% Superficial Patchiness: <90% Superficial Thickness: >10m Superficial Recharge: Low	A10NE (NW)	0	4	490000 255000
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Bedrock Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: 3-10m Superficial Recharge: Low	A11NW (N)	0	4	490317 255000
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Bedrock Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: 3-10m Superficial Recharge: Low	A11NE (NE)	0	4	490781 255000
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Bedrock Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	A16SW (NE)	0	4	491000 255261



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Mixed Dilution: <300 mm/year Baseflow Index: 40-70% Superficial: >90% Patchiness: Superficial >10m Thickness: Superficial Low Recharge:	(N)	0	4	490395 256000
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial: >90% Patchiness: Superficial >10m Thickness: Superficial Low Recharge:	(NE)	0	4	491000 256000
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Bedrock Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: 40-70% Superficial: <90% Patchiness: Superficial <3m Thickness: Superficial No Data Recharge:	A11SW (N)	0	4	490440 254766
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Bedrock Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: 40-70% Superficial: <90% Patchiness: Superficial <3m Thickness: Superficial No Data Recharge:	A7NE (SE)	0	4	490695 254323



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Groundwater Vulnerability Map</b> Combined Secondary Bedrock Aquifer - High Vulnerability Classification: High Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: 40-70% Superficial <90% Patchiness: <3m Superficial Thickness: No Data Superficial Recharge:	A11SE (E)	0	4	490802 254638
	<b>Groundwater Vulnerability Map</b> Combined Secondary Bedrock Aquifer - High Vulnerability Classification: High Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: 40-70% Superficial <90% Patchiness: <3m Superficial Thickness: Low Superficial Recharge:	A12SW (E)	0	4	491000 254570
	<b>Groundwater Vulnerability Map</b> Combined Secondary Superficial Aquifer - Medium Vulnerability Classification: Medium Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial <90% Patchiness: 3-10m Superficial Thickness: Low Superficial Recharge:	A11NW (N)	0	4	490395 255000
	<b>Groundwater Vulnerability Map</b> Combined Secondary Superficial Aquifer - Medium Vulnerability Classification: Medium Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial <90% Patchiness: 3-10m Superficial Thickness: Low Superficial Recharge:	A11NE (NE)	0	4	490912 255000



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial: <90% Patchiness: 3-10m Superficial Thickness: Low Superficial Recharge:	A15SW (N)	0	4	490385 255140
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial: >90% Patchiness: >10m Superficial Thickness: Low Superficial Recharge:	A12NW (NE)	0	4	491000 255000
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial: >90% Patchiness: >10m Superficial Thickness: Low Superficial Recharge:	A12NW (NE)	0	4	491063 255000
	<b>Groundwater Vulnerability - Soluble Rock Risk</b> Classification: Significant Risk - Low Possibility	(NE)	0	4	491000 256000
	<b>Groundwater Vulnerability - Soluble Rock Risk</b> Classification: Significant Risk - Problems Unlikely	(N)	0	4	490395 256000
	<b>Groundwater Vulnerability - Soluble Rock Risk</b> Classification: Significant Risk - Low Possibility	A10NE (NW)	0	4	490000 255000
	<b>Groundwater Vulnerability - Soluble Rock Risk</b> Classification: Significant Risk - Low Possibility	A11NW (N)	0	4	490395 255000
	<b>Groundwater Vulnerability - Soluble Rock Risk</b> Classification: Significant Risk - Low Possibility	A12NW (NE)	0	4	491000 255000
	<b>Groundwater Vulnerability - Soluble Rock Risk</b> Classification: Significant Risk - Low Possibility	A10SE (W)	0	4	490000 254628
	<b>Groundwater Vulnerability - Soluble Rock Risk</b> Classification: Significant Risk - Low Possibility	A11SW (SW)	0	4	490395 254628
	<b>Groundwater Vulnerability - Soluble Rock Risk</b> Classification: Significant Risk - Low Possibility	A12SW (E)	0	4	491000 254628



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Bedrock Aquifer Designations</b> Aquifer Designation: Secondary Aquifer - A	A10SE (W)	0	4	490000 254628
	<b>Bedrock Aquifer Designations</b> Aquifer Designation: Secondary Aquifer - A	A11SW (SW)	0	4	490395 254628
	<b>Bedrock Aquifer Designations</b> Aquifer Designation: Secondary Aquifer - A	A10NE (NW)	0	4	490000 255000
	<b>Bedrock Aquifer Designations</b> Aquifer Designation: Secondary Aquifer - A	A11NW (N)	0	4	490395 255000
	<b>Bedrock Aquifer Designations</b> Aquifer Designation: Secondary Aquifer - B	A15SW (N)	0	4	490385 255140
	<b>Superficial Aquifer Designations</b> Aquifer Designation: Secondary Aquifer - Undifferentiated	A11SW (N)	0	4	490440 254766
	<b>Superficial Aquifer Designations</b> Aquifer Designation: Secondary Aquifer - Undifferentiated	A11NW (N)	0	4	490395 255000
	<b>Superficial Aquifer Designations</b> Aquifer Designation: Secondary Aquifer - A	A7NE (SE)	0	4	490695 254323
	<b>Superficial Aquifer Designations</b> Aquifer Designation: Secondary Aquifer - A	A11SE (E)	0	4	490802 254638
	<b>Extreme Flooding from Rivers or Sea without Defences</b> Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A8NW (E)	0	2	491191 254451
	<b>Flooding from Rivers or Sea without Defences</b> Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A6SE (SW)	0	2	490001 253925
	<b>Areas Benefiting from Flood Defences</b> None				
	<b>Flood Water Storage Areas</b> None				
	<b>Flood Defences</b> None				
17	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 448.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A15NW (N)	0	5	490562 255501
18	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 83.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A14NE (N)	0	5	490040 255620
19	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 316.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A14NE (N)	0	5	490039 255708



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
20	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 4.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A11SE (E)	0	5	490793 254745
21	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 3.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A11SE (E)	0	5	490796 254748
22	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 7.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A11SE (E)	0	5	490791 254755
23	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 4.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A11SE (E)	0	5	490787 254757
24	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 22.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A11SE (E)	0	5	490767 254766
25	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 4.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A11SE (E)	0	5	490763 254768
26	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 11.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A11SE (E)	0	5	490752 254774
27	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 8.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A11SE (NE)	0	5	490744 254776
28	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 242.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A11SE (E)	0	5	490815 254775



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
29	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 354.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A11NW (NE)	0	5	490525 254886
30	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 7.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A11NE (NE)	0	5	490867 255006
31	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 452.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A11NE (NE)	0	5	490872 255010
32	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 1.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A11NE (NE)	0	5	490868 255013
33	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 262.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A11NE (NE)	0	5	490868 255014
34	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 19.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A11NE (NE)	0	5	490850 255022
35	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 5.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A11NE (NE)	0	5	490844 255025
36	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 474.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A11NE (NE)	0	5	490612 255122
37	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 88.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A15SE (NE)	0	5	490794 255255



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
38	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 261.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A15SE (NE)	0	5	490794 255255
39	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 188.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A15SW (N)	0	5	490453 255278
40	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 6.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A15SE (NE)	0	5	490781 255342
41	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 273.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A15SE (NE)	0	5	490782 255348
42	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 6.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A11NE (NE)	0	5	490867 255006
43	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 23.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A15SE (N)	0	5	490589 255409
44	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 4.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A15SW (N)	0	5	490576 255428
45	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 69.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A15SW (N)	0	5	490575 255433
46	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 208.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A15SW (N)	0	5	490354 255475



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
47	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 105.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A11SW (SW)	0	5	490241 254551
48	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 175.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A7NW (S)	0	5	490405 254444
49	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 113.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A11SE (E)	0	5	490766 254682
50	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 737.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A7NE (SE)	0	5	490782 254262
51	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 357.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A11SE (E)	0	5	490784 254639
52	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 78.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A12SW (E)	0	5	491102 254483
53	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 21.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A12SW (E)	0	5	491165 254467
54	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 52.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A8NW (E)	0	5	491171 254446
55	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 512.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A16NE (NE)	1	5	491278 255783



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
56	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 29.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A11SE (E)	1	5	490798 254751
57	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 4.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A11SE (E)	1	5	490815 254775
58	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 64.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A10SE (W)	1	5	490159 254617
59	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 2.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A10SE (W)	1	5	490159 254617
60	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 183.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A11SW (SW)	1	5	490314 254501
61	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 4.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A11SE (E)	1	5	490781 254643
62	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 6.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A12SW (E)	1	5	491097 254486
63	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 5.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A11SW (SW)	2	5	490246 254548
64	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 6.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A7NW (S)	2	5	490400 254447



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
65	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 8.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A7NW (SE)	2	5	490555 254353
66	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 236.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A7NW (SE)	2	5	490563 254349
67	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 65.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A8NW (E)	3	5	491218 254425
68	<b>OS Water Network Lines</b> Watercourse Form: Lake Watercourse Length: 36.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A11SE (E)	4	5	490818 254777
69	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 188.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A12SW (E)	16	5	491153 254546
70	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 313.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A10SE (W)	38	5	490064 254545
71	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 8.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A8NE (E)	66	5	491280 254412
72	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 4.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A8NE (E)	66	5	491280 254412
73	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 384.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A8NE (E)	68	5	491279 254404



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
74	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 22.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A8NE (E)	69	5	491283 254415
75	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 28.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A10NW (W)	69	5	489900 254824
76	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 75.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A10NW (W)	69	5	489900 254824
77	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 82.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A8NE (E)	82	5	491297 254434
78	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 40.0 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A10NW (NW)	108	5	489868 254887
79	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 438.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A10NW (NW)	108	5	489833 254928
80	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 5.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A10NW (NW)	113	5	489834 254924
81	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 10.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A10NW (NW)	115	5	489838 254914
82	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 5.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A10SE (W)	116	5	490067 254541



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
83	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 757.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A10SE (SW)	118	5	490114 254475
84	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 14.0 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A12SE (E)	152	5	491349 254498
85	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 25.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A12SE (E)	165	5	491358 254508
86	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 7.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A12SE (E)	189	5	491376 254526
87	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 299.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A12SE (E)	196	5	491380 254531
88	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 223.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A14NW (NW)	257	5	489635 255615
89	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 5.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A8NE (E)	322	5	491555 254305
90	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 5.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A8NE (E)	326	5	491559 254301
91	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 29.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A8NE (E)	329	5	491562 254297



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
92	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 9.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A8SE (SE)	337	5	491496 254099
93	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 22.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A8SE (SE)	344	5	491497 254089
94	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 6.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A8NE (E)	352	5	491583 254275
95	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 7.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A8SE (SE)	356	5	491493 254066
96	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 31.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A8NE (E)	357	5	491588 254271
97	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 271.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A8SE (SE)	359	5	491491 254059
98	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 134.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A14NW (NW)	405	5	489609 255483
99	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 3.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A14NW (NW)	405	5	489635 255614
100	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 52.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A12SE (E)	406	5	491557 254647



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
101	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 3.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A12SE (E)	406	5	491557 254647
102	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 3.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A14NW (NW)	408	5	489632 255616
103	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 310.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A12SE (E)	409	5	491559 254649
104	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 92.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A14NW (NW)	411	5	489629 255618
105	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 3.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A14NW (NW)	439	5	489608 255480
106	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 249.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A13SE (NW)	441	5	489552 255248
107	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 2.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A13SE (NW)	443	5	489553 255242
108	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 4.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A13SE (NW)	443	5	489553 255242
109	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 3.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A13SE (NW)	445	5	489552 255244



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
110	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 19.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A13SE (NW)	448	5	489548 255243
111	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 15.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A13SE (NW)	466	5	489529 255247
112	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 35.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A13SE (NW)	478	5	489523 255259
113	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 31.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A13SE (NW)	478	5	489523 255259
114	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 14.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A13SE (NW)	505	5	489512 255293
115	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 171.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A13SE (NW)	507	5	489492 255266
116	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 15.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A13SE (NW)	507	5	489492 255266
117	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 12.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A13SE (NW)	520	5	489500 255301
118	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 60.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A13SE (NW)	523	5	489480 255276



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
119	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 112.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A13SE (NW)	532	5	489490 255308
120	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 98.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A13SE (NW)	569	5	489421 255264
121	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 9.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A8SE (SE)	588	5	491525 253797
122	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 3.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A8SE (SE)	592	5	491522 253790
123	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 68.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A4NE (SE)	595	5	491523 253788
124	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 52.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A5NE (W)	637	5	489554 254294
125	<b>OS Water Network Lines</b> Watercourse Form: Lake Watercourse Length: 14.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A13SE (NW)	640	5	489413 255389
126	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 8.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A6SE (SW)	652	5	490068 253887
127	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 199.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A4NE (SE)	653	5	491527 253719



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
128	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 163.9 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A4NE (SE)	653	5	491527 253719
129	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 37.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A13SE (NW)	656	5	489322 255262
130	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 10.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A6SE (SW)	660	5	490050 253889
131	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 4.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A6SE (SW)	660	5	490050 253889
132	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 13.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A6SE (SW)	660	5	490054 253887
133	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 23.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A6SE (SW)	660	5	490064 253880
134	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 136.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A6SE (SW)	662	5	490041 253892
135	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 11.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A6SE (SW)	662	5	490041 253892
136	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 4.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A6SE (SW)	670	5	490045 253881



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
137	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 166.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A6SE (SW)	672	5	490046 253877
138	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 119.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A6SE (SW)	673	5	490074 253858
139	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 39.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A5NE (SW)	680	5	489540 254252
140	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 17.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A13SE (NW)	691	5	489285 255262
141	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 51.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A13SE (NW)	691	5	489285 255262
142	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 21.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A13SE (NW)	694	5	489276 255247
143	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 17.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A5NE (SW)	701	5	489553 254214
144	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 51.1 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A6SE (SW)	701	5	489911 253929
145	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 10.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A5NE (SW)	710	5	489562 254194



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
146	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 87.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A5NE (SW)	710	5	489559 254199
147	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 553.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A13SE (NW)	712	5	489255 255244
148	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 914.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A5NE (SW)	714	5	489481 254227
149	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 84.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A5NE (SW)	714	5	489563 254190
150	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 25.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A6SW (SW)	714	5	489728 254047
151	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 42.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A6SW (SW)	714	5	489752 254023
152	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 60.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A6SW (SW)	715	5	489708 254062
153	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 85.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A6SW (SW)	720	5	489861 253941
154	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 19.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A6SW (SW)	721	5	489757 254016



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
155	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 5.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A6SW (SW)	724	5	489657 254092
156	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 24.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A6SW (SW)	727	5	489651 254094
157	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 19.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A6SW (SW)	731	5	489778 253986
158	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 8.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A6SW (SW)	731	5	489786 253982
159	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 4.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A13SE (NW)	733	5	489257 255304
160	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 3.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A5NE (SW)	735	5	489484 254226
161	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 81.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A13SE (NW)	737	5	489254 255308
162	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 5.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A6SW (SW)	741	5	489627 254095
163	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 29.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A6SW (SW)	742	5	489623 254097



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
164	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 3.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A6SW (SW)	746	5	489598 254113
165	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 29.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A2NE (S)	760	5	490099 253741
166	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 278.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A3NW (S)	781	5	490458 253552
167	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 121.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A2NE (S)	787	5	490082 253720
168	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 9.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A4NE (SE)	833	5	491570 253531
169	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 128.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A4NE (SE)	839	5	491567 253521
170	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 32.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 2	A2NE (S)	879	5	490048 253633
171	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 53.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A2NE (S)	879	5	490048 253633
172	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 111.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A2NE (S)	907	5	490046 253601



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
173	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 21.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A4SE (SE)	918	5	491512 253384
174	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 34.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A4SE (SE)	918	5	491512 253384
175	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 11.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A4SE (SE)	923	5	491542 253400
176	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 731.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A4SE (SE)	928	5	491501 253365
177	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 4.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A2NE (S)	989	5	490054 253502
178	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 25.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	A2NE (S)	992	5	490055 253498





Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Local Authority Landfill Coverage</b> Name: Milton Keynes Unitary Council - Has supplied landfill data		0	6	490395 254628
	<b>Local Authority Landfill Coverage</b> Name: Bedford Borough Council - Has supplied landfill data		0	8	491278 255783
	<b>Local Authority Landfill Coverage</b> Name: Bedfordshire County Council - Has no landfill data to supply		0	7	491278 255783



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS 1:625,000 Solid Geology</b> Description: Kellaways Formation And Oxford Clay Formation (Undifferentiated)	A6NW (W)	0	1	489860 254452
	<b>BGS 1:625,000 Solid Geology</b> Description: Great Oolite Group	A11SW (SW)	0	1	490395 254628
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A11SE (E)	0	1	490802 254638
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A11SW (SW)	0	1	490395 254628
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A11SW (N)	0	1	490440 254766
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A7NE (SE)	0	1	490886 254277
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A7NE (SE)	0	1	490695 254323



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A12SW (E)	0	1	491000 254570
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A10SE (SW)	34	1	490183 254506
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic <15 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A10SW (W)	118	1	489883 254679
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A10SW (W)	279	1	489720 254645
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 30 - 45 mg/kg Concentration:	A4NE (SE)	813	1	491540 253534
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	A4NE (SE)	847	1	491581 253521



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic: 15 - 25 mg/kg Concentration: Cadmium: <1.8 mg/kg Concentration: Chromium: 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel: 30 - 45 mg/kg Concentration:	A9SW (W)	923	1	489000 254628
179	<b>BGS Recorded Mineral Sites</b> Site Name: Lower Farm Pit Location: Lavendon, Olney, Buckinghamshire Source: British Geological Survey, National Geoscience Information Service Reference: 181197 Type: Opencast <b>Status: Ceased</b> Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Jurassic Geology: Cornbrash Formation Commodity: Limestone Positional Accuracy: Located by supplier to within 10m	A12SW (E)	54	1	491099 254543
	<b>BGS Measured Urban Soil Chemistry</b> No data available				
	<b>BGS Urban Soil Chemistry Averages</b> No data available				
	<b>Coal Mining Affected Areas</b> In an area that might not be affected by coal mining				
	<b>Non Coal Mining Areas of Great Britain</b> No Hazard				
	<b>Potential for Collapsible Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SE (E)	0	1	490758 254661
	<b>Potential for Collapsible Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10NE (NW)	0	1	490000 255000
	<b>Potential for Collapsible Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NW (N)	0	1	490395 255000
	<b>Potential for Collapsible Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	0	1	490000 254616
	<b>Potential for Collapsible Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SW (SW)	0	1	490395 254628
	<b>Potential for Collapsible Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	39	1	490000 254628
	<b>Potential for Collapsible Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A6NE (SW)	69	1	490151 254448
	<b>Potential for Collapsible Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10NW (NW)	92	1	489846 254921
	<b>Potential for Collapsible Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10NW (NW)	98	1	489825 255000
	<b>Potential for Collapsible Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A6NE (SW)	105	1	490133 254426
	<b>Potential for Compressible Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SW (SW)	0	1	490395 254628



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Potential for Compressible Ground Stability Hazards</b> Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A11SE (E)	0	1	490758 254661
	<b>Potential for Compressible Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	0	1	490000 254616
	<b>Potential for Compressible Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NW (N)	0	1	490395 255000
	<b>Potential for Compressible Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10NE (NW)	0	1	490000 255000
	<b>Potential for Compressible Ground Stability Hazards</b> Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	39	1	490000 254628
	<b>Potential for Compressible Ground Stability Hazards</b> Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A6NE (SW)	69	1	490151 254448
	<b>Potential for Compressible Ground Stability Hazards</b> Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A10NW (NW)	92	1	489846 254921
	<b>Potential for Compressible Ground Stability Hazards</b> Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A10NW (NW)	98	1	489825 255000
	<b>Potential for Compressible Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A6NE (SW)	105	1	490133 254426
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A7NE (SE)	0	1	490688 254376
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10NE (NW)	0	1	490000 255000
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10NE (NW)	0	1	490170 255000
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NE (NE)	0	1	490617 255000
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	0	1	490000 254553
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SW (SW)	0	1	490395 254628
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A7NE (SE)	0	1	490631 254389
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A11NW (N)	0	1	490395 255000
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A11SW (N)	0	1	490427 254745
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A15SW (N)	0	1	490282 255183
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A8NW (E)	25	1	491239 254417
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	31	1	490000 254628



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10SE (SW)	39	1	490188 254521
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A9NE (NW)	39	1	489511 255000
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A10NW (NW)	40	1	489724 255010
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A12NW (NE)	52	1	490990 254885
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A12NW (E)	53	1	490918 254812
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A6NE (W)	95	1	489982 254463
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A6NE (SW)	151	1	490055 254454
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A10NW (W)	177	1	489790 254831
	<b>Potential for Landslide Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10NE (NW)	0	1	490000 255000
	<b>Potential for Landslide Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NW (N)	0	1	490395 255000
	<b>Potential for Landslide Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	0	1	490000 254628
	<b>Potential for Landslide Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SW (SW)	0	1	490395 254628
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10NE (NW)	0	1	490000 255000
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10NE (NW)	0	1	490170 255000
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (NE)	0	1	490617 255000
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	0	1	490000 254616
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SW (SW)	0	1	490395 254628
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A7NE (SE)	0	1	490839 254440
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A11SE (E)	0	1	490758 254661
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A7NE (SE)	0	1	490631 254389
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11SW (N)	0	1	490427 254745



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A11NW (N)	0	1	490395 255000
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	39	1	490000 254628
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10NW (NW)	39	1	489724 255010
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A12NW (E)	52	1	490918 254812
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A6NE (SW)	69	1	490151 254448
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A10NW (NW)	92	1	489846 254921
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	95	1	489974 254479
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A10NW (NW)	98	1	489825 255000
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A6NE (SW)	105	1	490133 254426
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10NW (NW)	119	1	489804 255000
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A11SW (N)	0	1	490427 254745
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A7NE (SE)	0	1	490688 254376
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10NE (NW)	0	1	490000 255000
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10NE (NW)	0	1	490170 255000
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11NE (NE)	0	1	490617 255000
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	0	1	490000 254553
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A7NE (SE)	0	1	490839 254440
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A11SW (SW)	0	1	490395 254628
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A7NE (SE)	0	1	490725 254338
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A7NE (SE)	0	1	490631 254389
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A11SE (E)	0	1	490758 254661



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A11NW (N)	0	1	490395 255000
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A8NW (E)	25	1	491239 254417
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	31	1	490000 254628
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A10SE (SW)	39	1	490188 254521
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A10NW (NW)	39	1	489825 255000
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A12NW (E)	52	1	490918 254812
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A10NW (NW)	92	1	489846 254921
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A6NE (W)	95	1	489982 254463
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A10NW (NW)	119	1	489804 255000
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A6NE (SW)	151	1	490055 254454
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A10NW (W)	177	1	489790 254831
	<b>Radon Potential - Radon Affected Areas</b> Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A11NW (N)	0	1	490395 255000
	<b>Radon Potential - Radon Affected Areas</b> Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	0	1	490000 254525
	<b>Radon Potential - Radon Affected Areas</b> Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A11SW (SW)	0	1	490395 254628
	<b>Radon Potential - Radon Affected Areas</b> Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A10NE (NW)	0	1	490000 255000
	<b>Radon Potential - Radon Protection Measures</b> Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A11NW (N)	0	1	490395 255000
	<b>Radon Potential - Radon Protection Measures</b> Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A10SE (W)	0	1	490000 254525
	<b>Radon Potential - Radon Protection Measures</b> Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A11SW (SW)	0	1	490395 254628
	<b>Radon Potential - Radon Protection Measures</b> Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A10NE (NW)	0	1	490000 255000



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
180	<b>Contemporary Trade Directory Entries</b> Name: Bp Location: Warrington Crossroads, Warrington, Olney, Buckinghamshire, MK46 4JQ Classification: Petrol Filling Stations <b>Status: Inactive</b> Positional Accuracy: Automatically positioned to the address	A10NE (NW)	64	-	489914 254869
180	<b>Contemporary Trade Directory Entries</b> Name: B P Service Station Location: Warrington Roundabout, Warrington, Olney, Buckinghamshire, MK46 4JQ Classification: Petrol Filling Stations <b>Status: Active</b> Positional Accuracy: Manually positioned to the address or location	A10NE (NW)	66	-	489912 254875
181	<b>Contemporary Trade Directory Entries</b> Name: Olney Oven Wizards Location: Nest Farm, Lavendon, Olney, Buckinghamshire, MK46 4HP Classification: Oven cleaning <b>Status: Inactive</b> Positional Accuracy: Automatically positioned to the address	A7NW (S)	218	-	490329 254236
182	<b>Contemporary Trade Directory Entries</b> Name: Stringing 2000 Ltd Location: Nunirons, Bedford Road East, Warrington, Olney, Buckinghamshire, MK46 4HW Classification: Print Finishers <b>Status: Active</b> Positional Accuracy: Manually positioned to the address or location	A9SE (W)	445	-	489524 254705
183	<b>Contemporary Trade Directory Entries</b> Name: Snackline Location: The Courtyard, Home Farm, Warrington, Olney, Buckinghamshire, MK46 4HN Classification: Greeting Card Publishers & Wholesalers <b>Status: Inactive</b> Positional Accuracy: Automatically positioned to the address	A6SW (SW)	744	-	489789 253964
183	<b>Contemporary Trade Directory Entries</b> Name: New City Furniture Ltd Location: UNIT 1, HOME FARM, WARRINGTON, MK46 4HN Classification: Kitchen Furniture Manufacturers <b>Status: Active</b> Positional Accuracy: Automatically positioned to the address	A6SW (SW)	752	-	489753 253979
184	<b>Contemporary Trade Directory Entries</b> Name: Janlin Service Station Location: Bedford Road East, Warrington, Olney, Buckinghamshire, MK46 4HW Classification: Petrol Filling Stations <b>Status: Inactive</b> Positional Accuracy: Automatically positioned to the address	A13SW (NW)	901	-	489051 255228
184	<b>Contemporary Trade Directory Entries</b> Name: Janlins Motors Location: Bedford Road East, Warrington, Olney, Buckinghamshire, MK46 4HW Classification: Car Dealers - Used <b>Status: Inactive</b> Positional Accuracy: Automatically positioned to the address	A13SW (NW)	901	-	489051 255228
184	<b>Contemporary Trade Directory Entries</b> Name: Bodycraft Accident Repair Centre Location: Jenlin Complex, Bedford Road East, Warrington, Olney, Buckinghamshire, MK46 4HW Classification: Car Body Repairs <b>Status: Inactive</b> Positional Accuracy: Manually positioned within the geographical locality	A13SW (NW)	902	-	489051 255228
184	<b>Contemporary Trade Directory Entries</b> Name: P T Autos Location: The Janlin Complex, Northampton Road, Warrington, Olney, Buckinghamshire, MK46 4HW Classification: Garage Services <b>Status: Inactive</b> Positional Accuracy: Manually positioned to the address or location	A13SW (NW)	902	-	489051 255229
184	<b>Contemporary Trade Directory Entries</b> Name: Janlins Garage Location: Bedford Road East, Warrington, Olney, MK46 4HW Classification: Car Dealers - Used <b>Status: Inactive</b> Positional Accuracy: Automatically positioned to the address	A13SW (NW)	935	-	489023 255251



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
185	<b>Contemporary Trade Directory Entries</b> Name: Lone Pine Garage Location: Bedford Road East, Warrington, Olney, MK46 4HW Classification: Garage Services <b>Status:</b> Active Positional Accuracy: Automatically positioned to the address	A13SW (NW)	997	-	488978 255317
186	<b>Fuel Station Entries</b> Name: Three Counties Service Station Location: Warrington Roundabout Bedford Road, Warrington , Olney, Milton Keynes, MK46 4JQ Brand: Welcome Break Premises Type: Petrol Station <b>Status:</b> Open Positional Accuracy: Manually positioned to the address or location	A10NE (NW)	66	-	489912 254874
187	<b>Fuel Station Entries</b> Name: Janlin Service Station Location: Northampton Road , Warrington , Olney, Milton Keynes, MK46 4HW Brand: Unbranded Premises Type: Not Applicable <b>Status:</b> Obsolete Positional Accuracy: Approximate location provided by supplier	A9NW (W)	741	-	489192 255122
188	<b>Points of Interest - Commercial Services</b> Name: B P Car Wash Location: Warrington Roundabout, Warrington, Olney, MK46 4JQ Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A10NE (NW)	49	9	489929 254862
188	<b>Points of Interest - Commercial Services</b> Name: Three Counties Service Station Location: Warrington Roundabout, Warrington, Olney, MK46 Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A10NE (NW)	66	9	489912 254874
188	<b>Points of Interest - Commercial Services</b> Name: Car Wash Location: Warrington Roundabout, Warrington, Olney, Buckinghamshire, MK46 9JA Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A10NE (NW)	66	9	489912 254874
189	<b>Points of Interest - Commercial Services</b> Name: P T Autos Location: The Janlin Complex, Northampton Road, Warrington, Olney, MK46 4HW Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SW (NW)	902	9	489051 255229
190	<b>Points of Interest - Commercial Services</b> Name: Bodycraft Accident Repair Centre Location: Northampton Road, Warrington, MK46 4HW Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SW (NW)	997	9	488978 255317
190	<b>Points of Interest - Commercial Services</b> Name: Lone Pine Garage Location: Northampton Road, Warrington, MK46 4HW Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SW (NW)	997	9	488978 255317
191	<b>Points of Interest - Manufacturing and Production</b> Name: Tanks Location: MK46 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A4NW (SE)	542	9	491109 253606
191	<b>Points of Interest - Manufacturing and Production</b> Name: Tank Location: MK46 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A4NW (SE)	549	9	491101 253597



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
191	<b>Points of Interest - Manufacturing and Production</b> Name: Tank Location: MK46 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A4NW (SE)	549	9	491109 253599
191	<b>Points of Interest - Manufacturing and Production</b> Name: Tank Location: MK46 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A4NW (SE)	549	9	491105 253598
192	<b>Points of Interest - Manufacturing and Production</b> Name: B J Wells Location: The Lodge, Northampton Road, Lavendon, Olney, MK46 4EY Category: Farming Class Code: Livestock Farming Positional Accuracy: Positioned to address or location	A4NE (SE)	643	9	491495 253709
193	<b>Points of Interest - Manufacturing and Production</b> Name: I G & G J Pibworth Location: Home Farm, Warrington, Olney, Buckinghamshire, MK46 4HN Category: Farming Class Code: Arable Farming Positional Accuracy: Positioned to address or location	A6SE (SW)	647	9	489935 253978
194	<b>Points of Interest - Public Infrastructure</b> Name: BP Express Shopping Location: Warrington Crossroads, Warrington, Olney, MK46 4JQ Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A10NE (NW)	64	9	489914 254869
194	<b>Points of Interest - Public Infrastructure</b> Name: BP Location: Warrington Crossroads, Warrington, Olney, MK46 4JQ Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A10NE (NW)	64	9	489914 254869
194	<b>Points of Interest - Public Infrastructure</b> Name: Three Counties Filling Station Location: Warrington Crossroads, Warrington, Olney, MK46 4JQ Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A10NE (NW)	64	9	489914 254869
194	<b>Points of Interest - Public Infrastructure</b> Name: BP Service Station Location: Warrington Roundabout, Warrington, Olney, MK46 4JQ Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A10NE (NW)	66	9	489912 254875
194	<b>Points of Interest - Public Infrastructure</b> Name: BP Service Station Location: Warrington Roundabout, Warrington, Olney, MK46 4JQ Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A10NE (NW)	66	9	489912 254875
194	<b>Points of Interest - Public Infrastructure</b> Name: Three Counties Service Station Location: Warrington Roundabout, Warrington, Olney, MK46 9JA Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A10NE (NW)	66	9	489912 254874
195	<b>Points of Interest - Public Infrastructure</b> Name: Janlin Service Station Location: Bedford Road East, Warrington, Olney, MK46 4HW Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A13SW (NW)	901	9	489051 255228
195	<b>Points of Interest - Public Infrastructure</b> Name: Janlin Service Station Location: Bedford Road East, Warrington, Olney, MK46 4HW Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A13SW (NW)	901	9	489051 255228



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
196	<b>Ancient Woodland</b> Name: Three Shire Wood Reference: 1501796 Area(m²): 146931.81 Type: Ancient and Semi-Natural Woodland	A16SW (NE)	0	10	491237 255229
197	<b>Ancient Woodland</b> Name: Nun Wood Reference: 1475867 Area(m²): 178825.06 Type: Ancient and Semi-Natural Woodland	A16NE (NE)	0	10	491278 255783
198	<b>Ancient Woodland</b> Name: Not Supplied Reference: 1503163 Area(m²): 8567.12 Type: Ancient and Semi-Natural Woodland	A14SE (NW)	14	10	490031 255246
199	<b>Ancient Woodland</b> Name: Not Supplied Reference: 1503162 Area(m²): 3956.69 Type: Ancient and Semi-Natural Woodland	A9NE (NW)	407	10	489539 255134
200	<b>Ancient Woodland</b> Name: Not Supplied Reference: 1503161 Area(m²): 2865.51 Type: Ancient and Semi-Natural Woodland	A9NE (W)	420	10	489493 254968
201	<b>Ancient Woodland</b> Name: Not Supplied Reference: 1503160 Area(m²): 17534.78 Type: Ancient and Semi-Natural Woodland	A9SE (W)	439	10	489554 254620
202	<b>Ancient Woodland</b> Name: Not Supplied Reference: 1418468 Area(m²): 53849.6 Type: Ancient and Semi-Natural Woodland	(NE)	503	10	491653 256241
203	<b>Ancient Woodland</b> Name: Lavendon Wood Reference: 1503173 Area(m²): 205906.44 Type: Ancient and Semi-Natural Woodland	(E)	737	10	491967 255280
204	<b>Ancient Woodland</b> Name: Not Supplied Reference: 1503141 Area(m²): 5081.6 Type: Ancient and Semi-Natural Woodland	A9NW (W)	789	10	489144 255126
205	<b>Nitrate Vulnerable Zones</b> Name: Great Ouse Nvz Description: Surface Water Source: Environment Agency, Head Office	A11SW (SW)	0	4	490395 254628
206	<b>Nitrate Vulnerable Zones</b> Name: Bedford Great Oolite Description: Groundwater Source: Environment Agency, Head Office	A11SW (SW)	0	4	490395 254628
207	<b>Nitrate Vulnerable Zones</b> Name: Thrapstone Lake Eutrophic Lake Nvz Description: Eutrophic Water Source: Environment Agency, Head Office	(N)	147	4	490099 256148
208	<b>Nitrate Vulnerable Zones</b> Name: Northampton Sands Description: Groundwater Source: Environment Agency, Head Office	(N)	147	4	490099 256148
209	<b>Nitrate Vulnerable Zones</b> Name: River Nene Nvz Description: Surface Water Source: Environment Agency, Head Office	(N)	147	4	490099 256148



Agency & Hydrological	Version	Update Cycle
<b>Contaminated Land Register Entries and Notices</b> Wellingborough Borough Council (now part of North Northamptonshire Council) - Environmental Health Department Bedford Borough Council - Environmental Health Department North Northamptonshire Council West Northamptonshire Council Environment Agency - Head Office Milton Keynes Council - Environmental Health Division South Northamptonshire Council (now part of West Northamptonshire Council) - Environment Division	August 2013  December 2014 December 2019 December 2019 November 2023 October 2017 September 2017	Annual Rolling Update  Annual Rolling Update Annual Rolling Update Annual Rolling Update Annually Annual Rolling Update Annual Rolling Update
<b>Discharge Consents</b> Environment Agency - Anglian Region	April 2024	Quarterly
<b>Enforcement and Prohibition Notices</b> Environment Agency - Anglian Region	March 2013	
<b>Integrated Pollution Controls</b> Environment Agency - Anglian Region	January 2009	
<b>Integrated Pollution Prevention And Control</b> Environment Agency - Anglian Region	October 2023	Quarterly
<b>Local Authority Integrated Pollution Prevention And Control</b> South Northamptonshire Council (now part of West Northamptonshire Council) - Environmental Health Department Wellingborough Borough Council (now part of North Northamptonshire Council) - Environmental Health Department North Northamptonshire Council West Northamptonshire Council Milton Keynes Council - Environmental Health Department Bedford Borough Council - Environmental Health Department	December 2014  December 2020  February 2015 February 2015 June 2016 March 2015	Variable  Variable  Variable Variable Variable Variable
<b>Local Authority Pollution Prevention and Controls</b> South Northamptonshire Council (now part of West Northamptonshire Council) - Environmental Health Department Bedford Borough Council - Environmental Health Department Wellingborough Borough Council (now part of North Northamptonshire Council) - Environmental Health Department North Northamptonshire Council West Northamptonshire Council Milton Keynes Council - Environmental Health Department	December 2014  December 2020 December 2020  February 2015 February 2015 June 2016	Annual Rolling Update  Annual Rolling Update Annual Rolling Update  Annual Rolling Update Annual Rolling Update Not Applicable
<b>Local Authority Pollution Prevention and Control Enforcements</b> South Northamptonshire Council (now part of West Northamptonshire Council) - Environmental Health Department Wellingborough Borough Council (now part of North Northamptonshire Council) - Environmental Health Department North Northamptonshire Council West Northamptonshire Council Milton Keynes Council - Environmental Health Department Bedford Borough Council - Environmental Health Department	December 2014  December 2014  February 2015 February 2015 June 2016 March 2015	Variable  Variable  Variable Variable Variable Variable
<b>Nearest Surface Water Feature</b> Ordnance Survey	March 2024	
<b>Pollution Incidents to Controlled Waters</b> Environment Agency - Anglian Region	September 1999	
<b>Prosecutions Relating to Authorised Processes</b> Environment Agency - Anglian Region	July 2015	
<b>Prosecutions Relating to Controlled Waters</b> Environment Agency - Anglian Region	March 2013	



Agency & Hydrological	Version	Update Cycle
<b>Registered Radioactive Substances</b> Environment Agency - Anglian Region Environment Agency - Head Office	June 2016 May 2023	As notified Quarterly
<b>River Quality</b> Environment Agency - Head Office	November 2001	Not Applicable
<b>River Quality Biology Sampling Points</b> Environment Agency - Head Office	April 2012	
<b>River Quality Chemistry Sampling Points</b> Environment Agency - Head Office	April 2012	
<b>Substantiated Pollution Incident Register</b> Environment Agency - Anglian Region - Central Area Environment Agency - Anglian Region - Northern Area	April 2024 April 2024	Quarterly Quarterly
<b>Water Abstractions</b> Environment Agency - Anglian Region	April 2024	Quarterly
<b>Water Industry Act Referrals</b> Environment Agency - Anglian Region	October 2017	
<b>Groundwater Vulnerability Map</b> Environment Agency - Head Office	June 2018	As notified
<b>Groundwater Vulnerability - Soluble Rock Risk</b> Environment Agency - Head Office	June 2018	As notified
<b>Bedrock Aquifer Designations</b> Environment Agency - Head Office	January 2018	As notified
<b>Superficial Aquifer Designations</b> Environment Agency - Head Office	January 2018	As notified
<b>Source Protection Zones</b> Environment Agency - Head Office	September 2022	Bi-Annually
<b>Extreme Flooding from Rivers or Sea without Defences</b> Environment Agency - Head Office	December 2023	Quarterly
<b>Flooding from Rivers or Sea without Defences</b> Environment Agency - Head Office	December 2023	Quarterly
<b>Areas Benefiting from Flood Defences</b> Environment Agency - Head Office	February 2023	Quarterly
<b>Flood Water Storage Areas</b> Environment Agency - Head Office	January 2024	Quarterly
<b>Flood Defences</b> Environment Agency - Head Office	August 2022	Quarterly
<b>OS Water Network Lines</b> Ordnance Survey	April 2024	Quarterly
<b>Surface Water 1 in 30 year Flood Extent</b> Environment Agency - Head Office	May 2018	Annually
<b>Surface Water 1 in 100 year Flood Extent</b> Environment Agency - Head Office	May 2018	Annually
<b>Surface Water 1 in 1000 year Flood Extent</b> Environment Agency - Head Office	May 2018	Annually
<b>Surface Water Suitability</b> Environment Agency - Head Office	February 2016	Annually
<b>BGS Groundwater Flooding Susceptibility</b> British Geological Survey - National Geoscience Information Service	May 2013	As notified



Waste	Version	Update Cycle
<b>BGS Recorded Landfill Sites</b> British Geological Survey - National Geoscience Information Service	November 2002	As notified
<b>Historical Landfill Sites</b> Environment Agency - Head Office	May 2024	Quarterly
<b>Integrated Pollution Control Registered Waste Sites</b> Environment Agency - Anglian Region	January 2009	Not Applicable
<b>Licensed Waste Management Facilities (Landfill Boundaries)</b> Environment Agency - Anglian Region - Central Area Environment Agency - Anglian Region - Northern Area	May 2024 May 2024	Quarterly Quarterly
<b>Licensed Waste Management Facilities (Locations)</b> Environment Agency - Anglian Region - Central Area Environment Agency - Anglian Region - Northern Area	January 2023 January 2023	Quarterly Quarterly
<b>Local Authority Landfill Coverage</b> Bedford Borough Council - Environmental Health Department Bedfordshire County Council (now part of Central Bedfordshire Council) Milton Keynes Council - Planning and Transport Department Northamptonshire County Council South Northamptonshire Council (now part of West Northamptonshire Council) - Environmental Health Department Wellingborough Borough Council (now part of North Northamptonshire Council) North Northamptonshire Council West Northamptonshire Council	February 2003 February 2003 February 2003 February 2003 February 2003 February 2003 May 2000 May 2000	Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable
<b>Local Authority Recorded Landfill Sites</b> North Northamptonshire Council West Northamptonshire Council Bedford Borough Council - Environmental Health Department Bedfordshire County Council (now part of Central Bedfordshire Council) Milton Keynes Council - Planning and Transport Department Northamptonshire County Council South Northamptonshire Council (now part of West Northamptonshire Council) - Environmental Health Department Wellingborough Borough Council (now part of North Northamptonshire Council)	August 2006 August 2006 October 2018 October 2018 October 2018 October 2018 October 2018 October 2018	
<b>Potentially Infilled Land (Non-Water)</b> Landmark Information Group Limited	December 1999	
<b>Potentially Infilled Land (Water)</b> Landmark Information Group Limited	December 1999	
<b>Registered Landfill Sites</b> Environment Agency - Anglian Region - Central Area Environment Agency - Anglian Region - Northern Area	March 2006 March 2006	Not Applicable Not Applicable
<b>Registered Waste Transfer Sites</b> Environment Agency - Anglian Region - Central Area Environment Agency - Anglian Region - Northern Area	April 2018 April 2018	
<b>Registered Waste Treatment or Disposal Sites</b> Environment Agency - Anglian Region - Central Area Environment Agency - Anglian Region - Northern Area	June 2015 June 2015	



Hazardous Substances	Version	Update Cycle
<b>Control of Major Accident Hazards Sites (COMAH)</b> Health and Safety Executive	January 2024	Bi-Annually
<b>Explosive Sites</b> Health and Safety Executive	March 2017	
<b>Notification of Installations Handling Hazardous Substances (NIHHS)</b> Health and Safety Executive	August 2001	
<b>Planning Hazardous Substance Enforcements</b> North Northamptonshire Council Wellingborough Borough Council (now part of North Northamptonshire Council) Bedfordshire County Council (now part of Central Bedfordshire Council) Bedford Borough Council Northamptonshire County Council Milton Keynes Council - Planning and Transport Department South Northamptonshire Council (now part of West Northamptonshire Council) West Northamptonshire Council	February 2016 February 2016 July 2008 March 2023 May 2013 May 2023 May 2023 May 2023	Variable Variable Annual Rolling Update Variable Annual Rolling Update Variable Variable Variable
<b>Planning Hazardous Substance Consents</b> Northamptonshire County Council Bedford Borough Council Milton Keynes Council - Planning and Transport Department North Northamptonshire Council South Northamptonshire Council (now part of West Northamptonshire Council) Wellingborough Borough Council (now part of North Northamptonshire Council) West Northamptonshire Council Bedfordshire County Council (now part of Central Bedfordshire Council)	December 2014 February 2016 February 2016 February 2016 February 2016 February 2016 February 2016 July 2008	Annual Rolling Update Variable Variable Variable Variable Variable Variable Annual Rolling Update



<b>Geological</b>	<b>Version</b>	<b>Update Cycle</b>
<b>BGS 1:625,000 Solid Geology</b> British Geological Survey - National Geoscience Information Service	January 2009	As notified
<b>BGS Estimated Soil Chemistry</b> British Geological Survey - National Geoscience Information Service	December 2015	As notified
<b>BGS Recorded Mineral Sites</b> British Geological Survey - National Geoscience Information Service	January 2024	Bi-Annually
<b>CBSCB Compensation District</b> Cheshire Brine Subsidence Compensation Board (CBSCB) Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011 November 2020	As notified
<b>Coal Mining Affected Areas</b> The Coal Authority - Property Searches	February 2023	Annual Rolling Update
<b>Mining Instability</b> Ove Arup & Partners	June 1998	Not Applicable
<b>Non Coal Mining Areas of Great Britain</b> British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
<b>Potential for Collapsible Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	April 2020	As notified
<b>Potential for Compressible Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	As notified
<b>Potential for Ground Dissolution Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	As notified
<b>Potential for Landslide Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	As notified
<b>Potential for Running Sand Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	As notified
<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	As notified
<b>Radon Potential - Radon Affected Areas</b> British Geological Survey - National Geoscience Information Service	October 2023	Annually
<b>Radon Potential - Radon Protection Measures</b> British Geological Survey - National Geoscience Information Service	October 2023	Annually



Industrial Land Use	Version	Update Cycle
<b>Contemporary Trade Directory Entries</b> Thomson Directories	April 2024	Quarterly
<b>Fuel Station Entries</b> Catalist Ltd - Experian	February 2024	Quarterly
<b>Gas Pipelines</b> National Grid	October 2021	Bi-Annually
<b>Points of Interest - Commercial Services</b> PointX	March 2024	Quarterly
<b>Points of Interest - Education and Health</b> PointX	March 2024	Quarterly
<b>Points of Interest - Manufacturing and Production</b> PointX	March 2024	Quarterly
<b>Points of Interest - Public Infrastructure</b> PointX	March 2024	Quarterly
<b>Points of Interest - Recreational and Environmental</b> PointX	March 2024	Quarterly
<b>Underground Electrical Cables</b> National Grid	January 2024	Bi-Annually



<b>Sensitive Land Use</b>	<b>Version</b>	<b>Update Cycle</b>
<b>Ancient Woodland</b> Natural England	April 2024	Bi-Annually
<b>Areas of Adopted Green Belt</b> Bedford Borough Council Milton Keynes Council - Planning and Transport Department North Northamptonshire Council South Northamptonshire Council (now part of West Northamptonshire Council) Wellingborough Borough Council (now part of North Northamptonshire Council) West Northamptonshire Council	February 2024 February 2024 February 2024 February 2024 February 2024 February 2024	Quarterly Quarterly Quarterly Quarterly Quarterly Quarterly
<b>Areas of Unadopted Green Belt</b> Bedford Borough Council Milton Keynes Council - Planning and Transport Department North Northamptonshire Council South Northamptonshire Council (now part of West Northamptonshire Council) Wellingborough Borough Council (now part of North Northamptonshire Council) West Northamptonshire Council	February 2024 February 2024 February 2024 February 2024 February 2024 February 2024	Quarterly Quarterly Quarterly Quarterly Quarterly Quarterly
<b>Areas of Outstanding Natural Beauty</b> Natural England	May 2024	Bi-Annually
<b>Environmentally Sensitive Areas</b> Natural England	August 2023	
<b>Forest Parks</b> Forestry Commission	May 2023	Not Applicable
<b>Local Nature Reserves</b> Natural England	February 2024	Bi-Annually
<b>Marine Nature Reserves</b> Natural England	February 2024	Bi-Annually
<b>National Nature Reserves</b> Natural England	February 2024	Bi-Annually
<b>National Parks</b> Natural England	February 2018	Bi-Annually
<b>Nitrate Sensitive Areas</b> Natural England	April 2023	Not Applicable
<b>Nitrate Vulnerable Zones</b> Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA) Environment Agency - Head Office	April 2016 April 2024	Bi-Annually
<b>Ramsar Sites</b> Natural England	February 2024	Bi-Annually
<b>Sites of Special Scientific Interest</b> Natural England	April 2024	Bi-Annually
<b>Special Areas of Conservation</b> Natural England	April 2024	Bi-Annually
<b>Special Protection Areas</b> Natural England	April 2024	Bi-Annually



A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	 <b>British Geological Survey</b> NATURAL ENVIRONMENT RESEARCH COUNCIL
Centre for Ecology and Hydrology	 <b>Centre for Ecology &amp; Hydrology</b> NATURAL ENVIRONMENT RESEARCH COUNCIL
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Stantec UK Ltd	





Contact	Name and Address	Contact Details
1	<b>British Geological Survey - Enquiry Service</b> British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: <a href="mailto:enquiries@bgs.ac.uk">enquiries@bgs.ac.uk</a> Website: <a href="http://www.bgs.ac.uk">www.bgs.ac.uk</a>
2	<b>Environment Agency - National Customer Contact Centre (NCCC)</b> PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: <a href="mailto:enquiries@environment-agency.gov.uk">enquiries@environment-agency.gov.uk</a>
3	<b>Milton Keynes Council - Environmental Health Department</b> Civic Offices, 1 Saxon Gate East, Milton Keynes, Buckinghamshire, MJ9 3HH	Telephone: 01908 252759 Website: <a href="http://www.miltonkeynes.gov.uk">www.miltonkeynes.gov.uk</a>
4	<b>Environment Agency - Head Office</b> Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409
5	<b>Ordnance Survey</b> Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: <a href="mailto:customerservices@ordnancesurvey.co.uk">customerservices@ordnancesurvey.co.uk</a> Website: <a href="http://www.ordnancesurvey.gov.uk">www.ordnancesurvey.gov.uk</a>
6	<b>Milton Keynes Council - Planning and Transport Department</b> PO Box 125, Civic Offices, 1 Saxon Gate East, Milton Keynes, Buckinghamshire, MK9 3ZJ	Telephone: 01908 691691 Fax: 01908 252211 Website: <a href="http://www.miltonkeynes.gov.uk">www.miltonkeynes.gov.uk</a>
7	<b>Bedfordshire County Council (now part of Central Bedfordshire Council)</b> Priory House, Monks Walk, Chicksands, Shefford, Bedfordshire, SG17 5TQ	Telephone: 0300 300 8301 Email: <a href="http://www.centralbedfordshire.gov.uk">www.centralbedfordshire.gov.uk</a> Website: <a href="http://www.centralbedfordshire.gov.uk">www.centralbedfordshire.gov.uk</a>
8	<b>Bedford Borough Council - Environmental Health Department</b> Town Hall, St Pauls Street, Bedford, Bedfordshire, MK40 1SJ	Telephone: 01234 267422 Fax: 01234 325671 Email: <a href="mailto:enquiries@bedford.gov.uk">enquiries@bedford.gov.uk</a> Website: <a href="http://www.bedford.gov.uk">www.bedford.gov.uk</a>
9	<b>PointX</b> 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: <a href="http://www.pointx.co.uk">www.pointx.co.uk</a>
10	<b>Natural England</b> County Hall, Spetchley Road, Worcester, WR5 2NP	Telephone: 0300 060 3900 Email: <a href="mailto:enquiries@naturalengland.org.uk">enquiries@naturalengland.org.uk</a> Website: <a href="http://www.naturalengland.org.uk">www.naturalengland.org.uk</a>
-	<b>Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards</b> Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: <a href="mailto:radon@phe.gov.uk">radon@phe.gov.uk</a> Website: <a href="http://www.ukradon.org">www.ukradon.org</a>
-	<b>Landmark Information Group Limited</b> Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: <a href="mailto:customerservices@landmarkinfo.co.uk">customerservices@landmarkinfo.co.uk</a> Website: <a href="http://www.landmarkinfo.co.uk">www.landmarkinfo.co.uk</a>


Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.



## Geology 1:50,000 Maps Legends

### Artificial Ground and Landslip









Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	WGR	Worked Ground (Undivided)	Void	Not Supplied - Holocene
	LSGR	Landscaped Ground (Undivided)	Artificially Modified Ground	Not Supplied - Holocene

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
		Faults		

### Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay and Silt	Not Supplied - Holocene
	ODT	Oadby Member	Diamicton	Not Supplied - Anglian
	GFDMP	Glaciofluvial Deposits, Mid Pleistocene	Sand and Gravel	Not Supplied - Cromerian
	BIDM	Biddenham Member	Sand and Gravel	Not Supplied - Pleistocene
	FELM	Felmersham Member	Sand and Gravel	Not Supplied - Pleistocene
	STGO	Stoke Goldington Member	Sand and Gravel	Not Supplied - Pleistocene
	HEAD	Head	Clay, Silt, Sand and Gravel	Not Supplied - Quaternary

### Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	KLS	Kellaways Sand Member	Sandstone and Siltstone, Interbedded	Not Supplied - Callovian
	KLC	Kellaways Clay Member	Mudstone	Not Supplied - Callovian
	OXC	Oxford Clay Formation	Mudstone	Not Supplied - Callovian
	PET	Peterborough Member	Mudstone	Not Supplied - Callovian
	CB	Combrash Formation	Limestone	Not Supplied - Bathonian
	BWC	Blisworth Clay Formation	Mudstone	Not Supplied - Bathonian
	BWL	Blisworth Limestone Formation	Limestone	Not Supplied - Bathonian
	RLD	Rutland Formation	Argillaceous Rocks with Subordinate Sandstone and Limestone	Not Supplied - Bajocian



### Geology 1:50,000 Maps

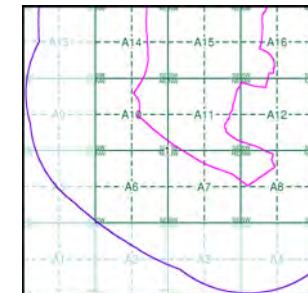
This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published paper maps.

The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page. Not all layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

### Geology 1:50,000 Maps Coverage

Map ID:	1
Map Sheet No:	203
Map Name:	Bedford
Map Date:	2010
Bedrock Geology:	Available
Superficial Geology:	Available
Artificial Geology:	Available
Faults:	Not Supplied
Landslip:	Available
Rock Segments:	Not Supplied

### Geology 1:50,000 Maps - Slice A



### Order Details:

Order Number:	346936621_1_1
Customer Reference:	DS78309
National Grid Reference:	490400, 254630
Slice:	A
Site Area (Ha):	172.36
Search Buffer (m):	1000

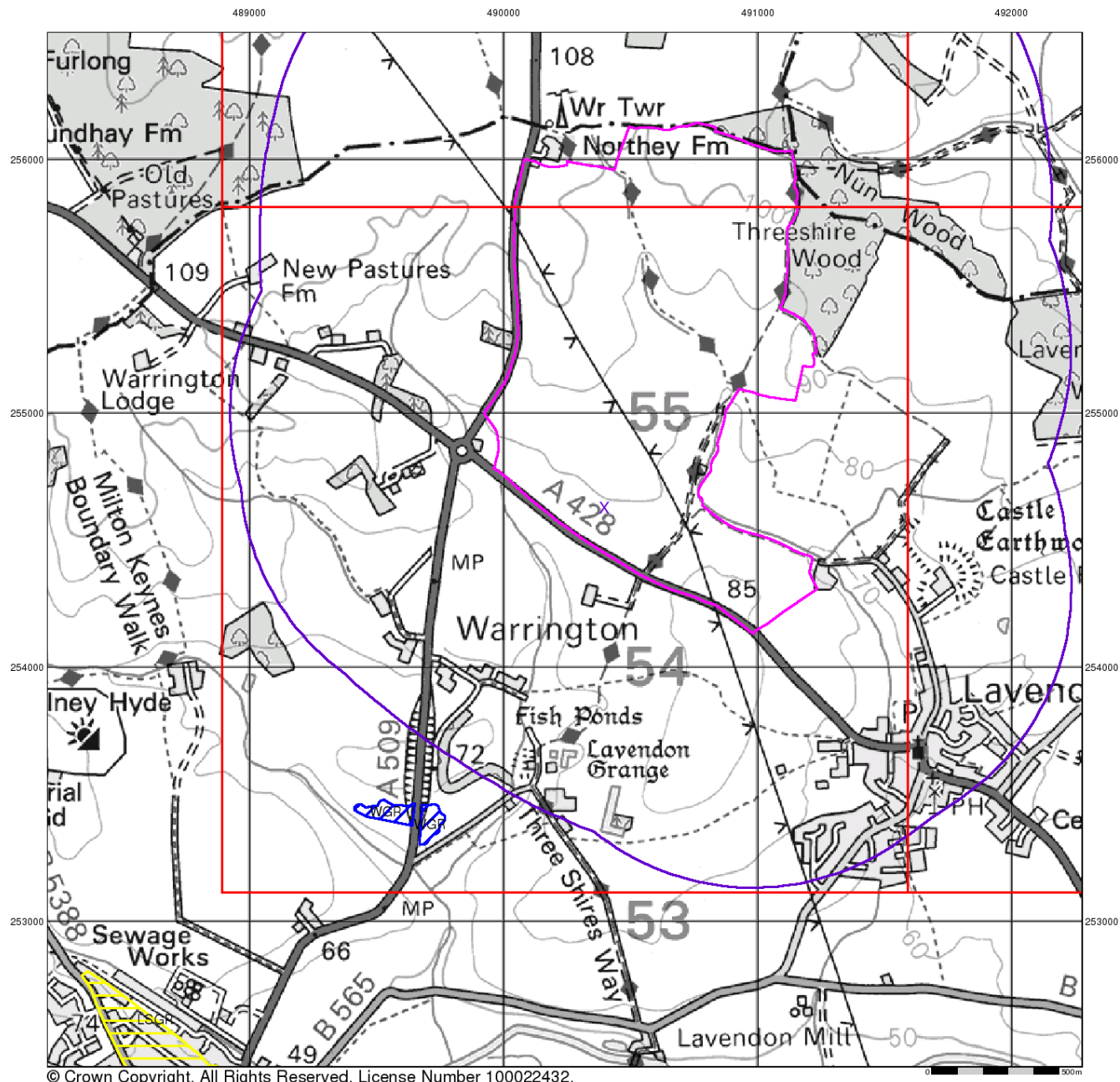
### Site Details:

Meikleland

**Landmark**  
INFORMATION GROUP

Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: 





### Artificial Ground and Landslip

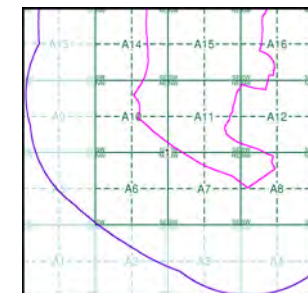
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions and unstable ground.

Artificial ground includes:

- Made ground - man-made deposits such as embankments and spoil heaps on the natural ground surface.
- Worked ground - areas where the ground has been cut away such as quarries and road cuttings.
- Infilled ground - areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground - areas where the surface has been reshaped.
- Disturbed ground - areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes foundered strata, where the ground has collapsed due to subsidence.

### Artificial Ground and Landslip Map - Slice A



### Order Details:

Order Number: 346936621\_1\_1  
 Customer Reference: DS78309  
 National Grid Reference: 490400, 254630  
 Slice: A  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

### Site Details:

Meikleland

**Landmark**  
 INFORMATION GROUP

Tel: 0844 844 9952  
 Fax: 0844 844 9951  
 Web: [Redacted]





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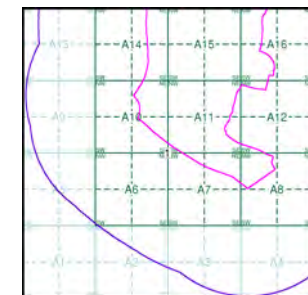
### Superficial Geology

Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, the Quaternary, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

### Superficial Geology Map - Slice A



### Order Details:

Order Number: 346936621\_1\_1  
 Customer Reference: DS78309  
 National Grid Reference: 490400, 254630  
 Slice: A  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

### Site Details:

Meikleland



Tel: 0844 844 9952  
 Fax: 0844 844 9951  
 Web: [Redacted]

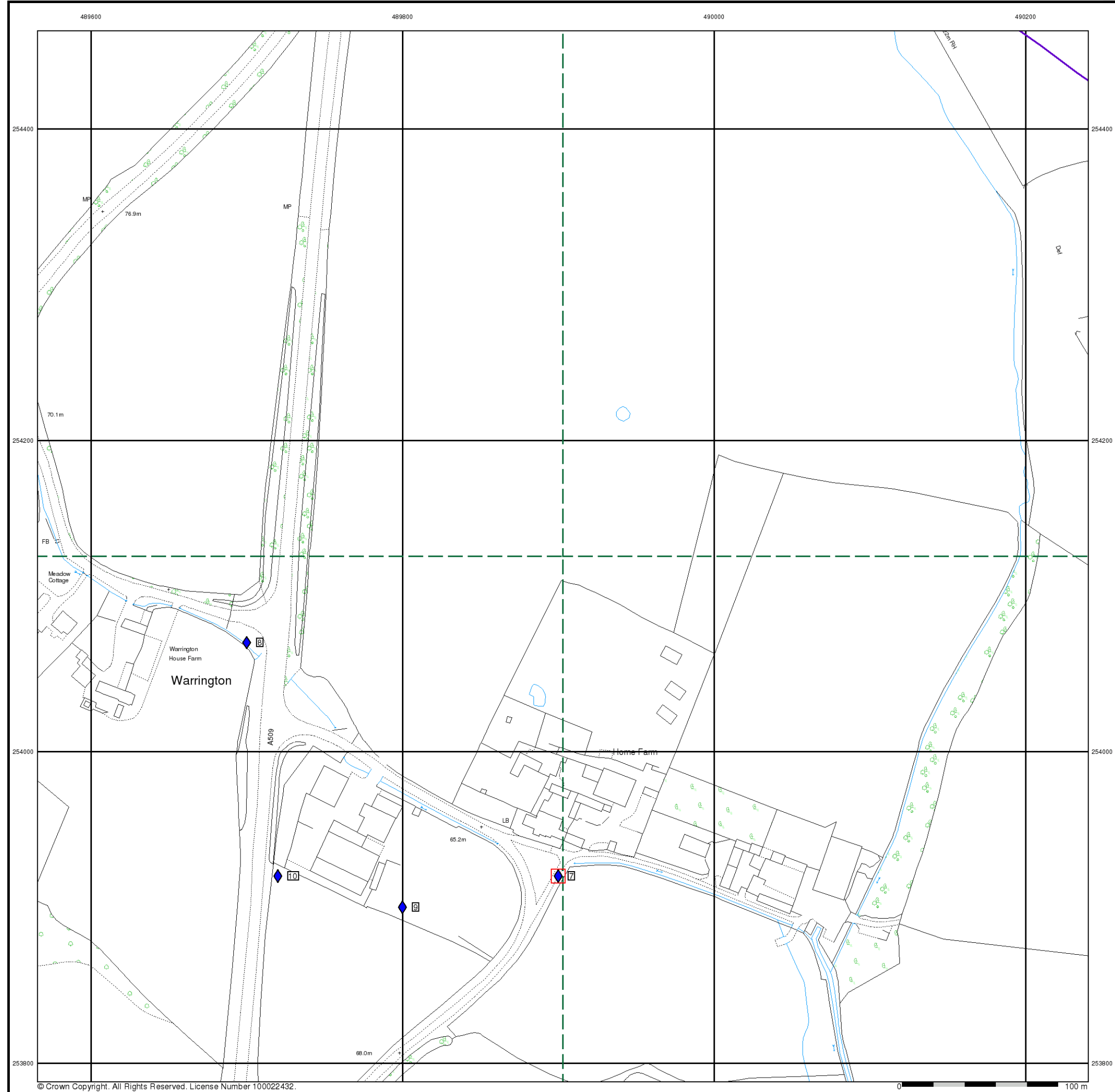












- General**

Specified Site

Specified Buffer(s)

Bearing Reference Point

Map ID

Several of Type at Location

Pylon

Overhead Transmission Line
- Agency and Hydrological**

Contaminated Land Register Entry or Notice (Location)

Contaminated Land Register Entry or Notice

Discharge Consent

Enforcement or Prohibition Notice

Integrated Pollution Control

Integrated Pollution Prevention Control

Local Authority Integrated Pollution Prevention and Control

Local Authority Pollution Prevention and Control Enforcement

Local Authority Pollution Prevention and Control Enforcement

Pollution Incident to Controlled Waters

Prosecution Relating to Authorised Processes

Prosecution Relating to Controlled Waters

Registered Radioactive Substance

River Network or Water Feature

River Quality Sampling Point

Substantiated Pollution Incident Register

Water Abstraction

Water Industry Act Referral

COMAH Site

NIHHS Site

Planning Hazardous Substance Consent

Planning Hazardous Substance Enforcement

BGS Recorded Mineral Site

**Waste**

BGS Recorded Landfill Site (Location)

BGS Recorded Landfill Site

EA Historic Landfill (Buffered Point)

EA Historic Landfill (Polygon)

Integrated Pollution Control Registered Waste Site

Licensed Waste Management Facility (Landfill Boundary)

Licensed Waste Management Facility (Location)

Local Authority Recorded Landfill Site (Location)

Local Authority Recorded Landfill Site

Potentially Infilled Land (Non-water)

Potentially Infilled Land (Non-water)

Potentially Infilled Land (Water)

Potentially Infilled Land (Water)

Potentially Infilled Land (Water)

Registered Landfill Site

Registered Landfill Site (Location)

Registered Landfill Site (Point Buffered to 100m)

Registered Landfill Site (Point Buffered to 250m)

Registered Waste Transfer Site (Location)

Registered Waste Transfer Site

Registered Waste Treatment or Disposal Site (Location)

Registered Waste Treatment or Disposal Site

**Hazardous Substances**

COMAH Site

Explosive Site

NIHHS Site

Planning Hazardous Substance Consent

Planning Hazardous Substance Enforcement

**Geological**

BGS Recorded Mineral Site
- Site Sensitivity Map - Segment A6
- 
- Order Details**

Order Number:

Customer Ref:

National Grid Reference:

Slice:

Site Area (Ha):

Plot Buffer (m):

346936621\_1\_1

DS78309

490400, 254630

A

172.36

100

**Site Details**

Meikleland
- Landmark**

INFORMATION GROUP

Tel:

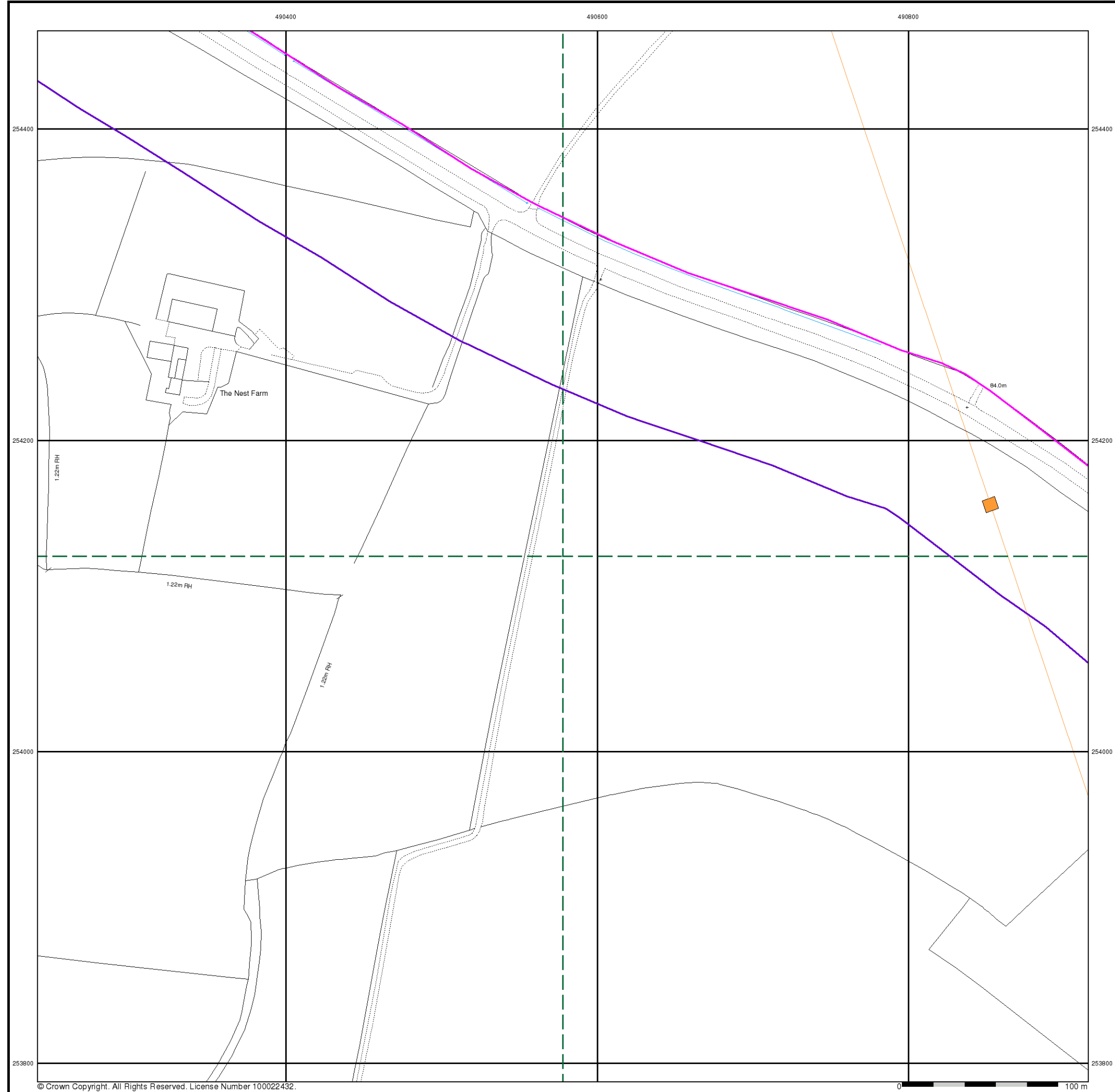
Fax:

Web:

0844 844 9952

0844 844 9951
- A Landmark Information Group Service v50.0 16-May-2024 Page 1 of 9





**General**

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location
- Pylon
- Overhead Transmission Line

**Agency and Hydrological**

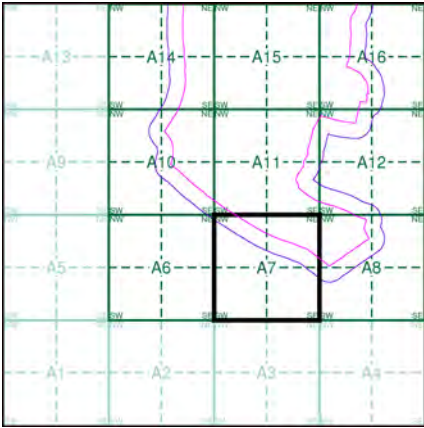
- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

**Hazardous Substances**

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement
- BGS Recorded Mineral Site
- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

**Geological**

**Site Sensitivity Map - Segment A7**



**Order Details**

Order Number: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 490400, 254630  
Slice: A  
Site Area (Ha): 172.36  
Plot Buffer (m): 100

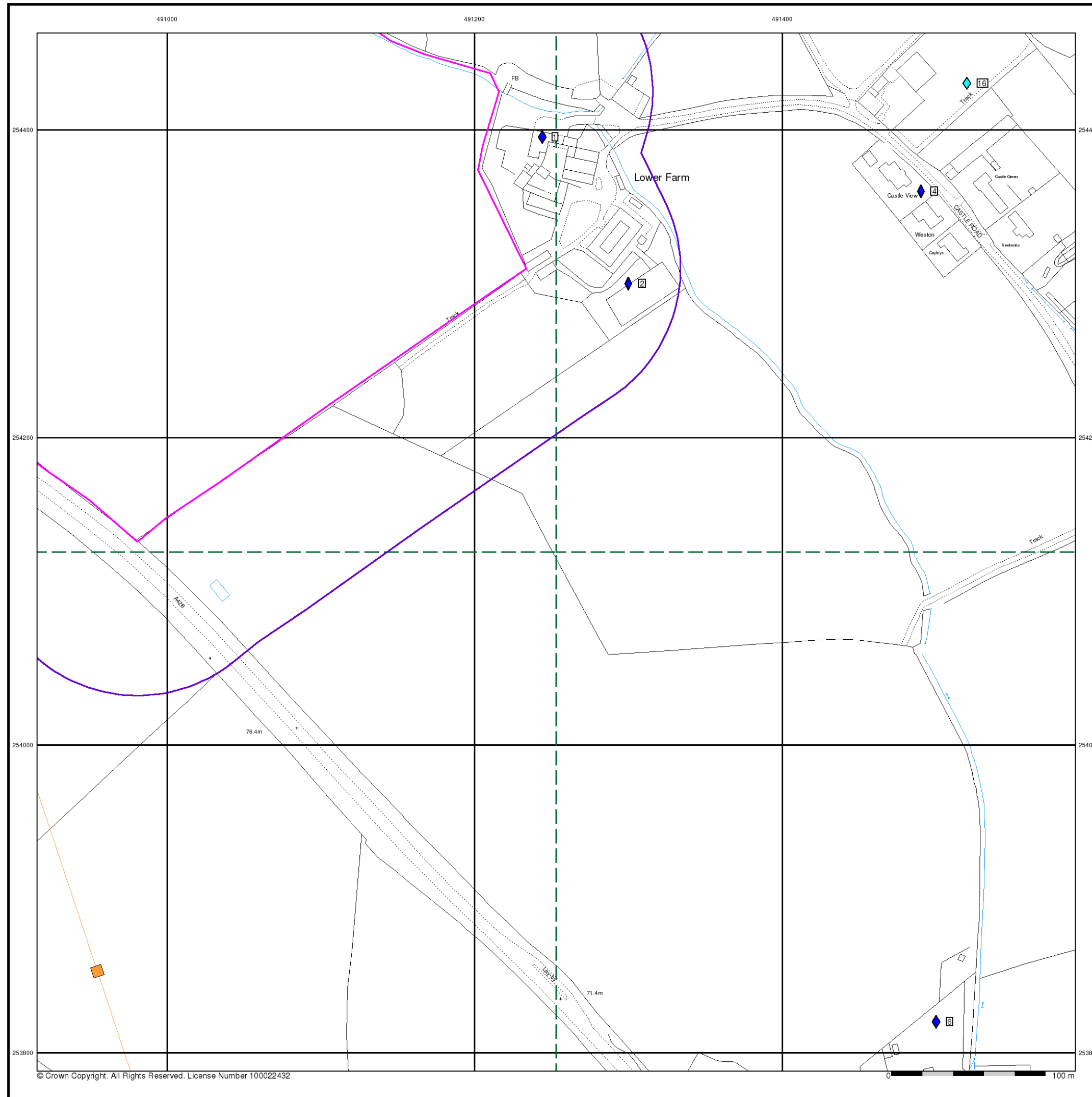
**Site Details**

Meikleland



Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [Redacted]





### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID

### Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

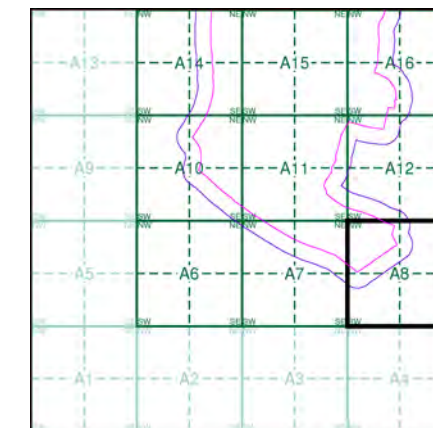
### Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement
- BGS Recorded Mineral Site

### Geological

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

### Site Sensitivity Map - Segment A8



### Order Details

Order Number: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 490400, 254630  
Slice: A  
Site Area (Ha): 172.36  
Plot Buffer (m): 100

### Site Details

Meikleland



Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [Redacted]

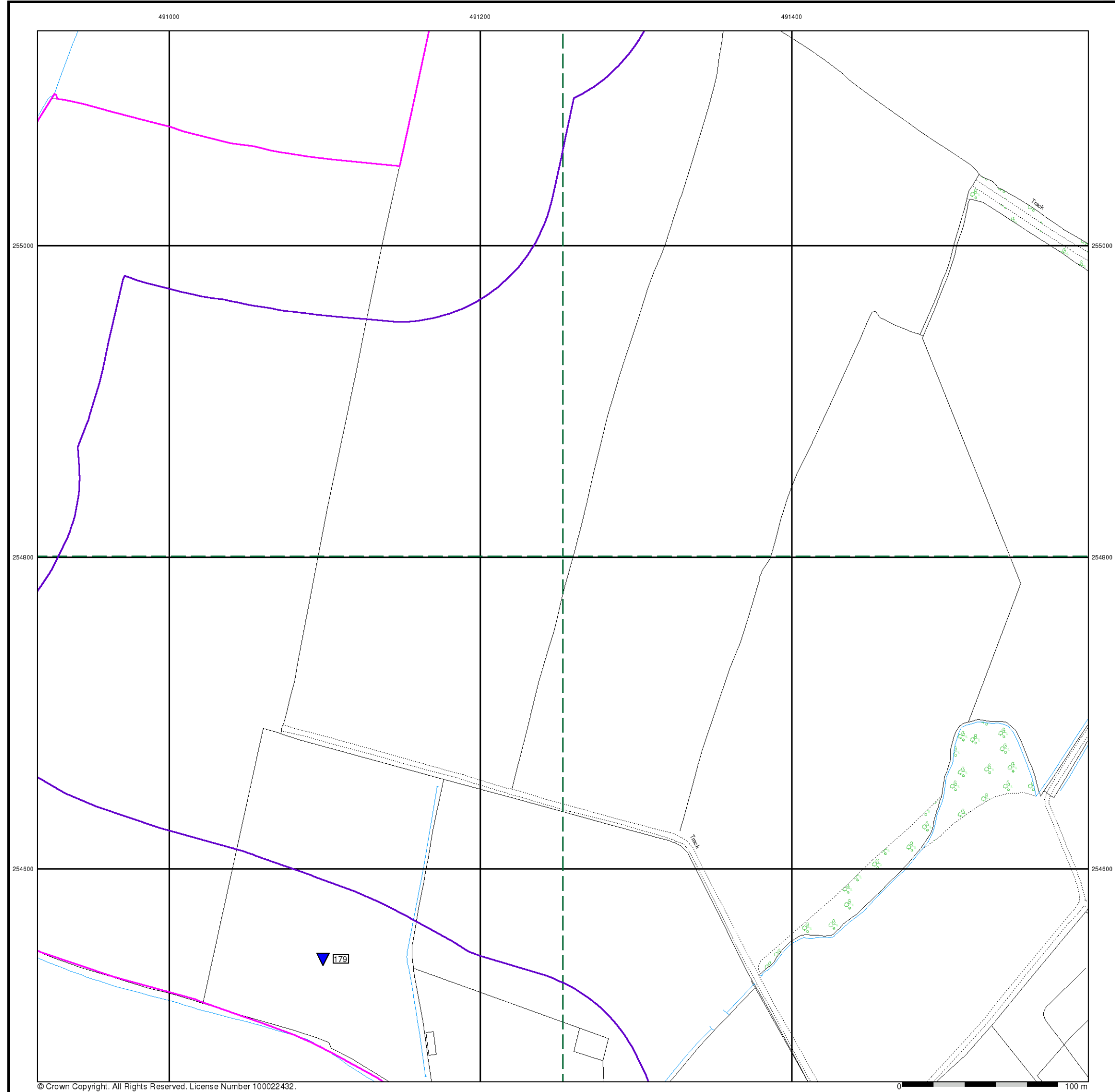












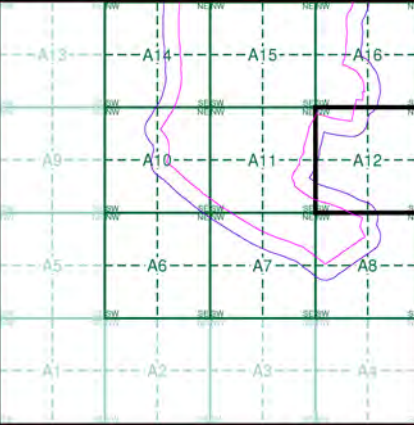
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0 100 m



- General**
- Specified Site
  - Specified Buffer(s)
  - Bearing Reference Point
  - Map ID
  - Several of Type at Location
  - Pylon
  - Overhead Transmission Line
- Agency and Hydrological**
- Contaminated Land Register Entry or Notice (Location)
  - Contaminated Land Register Entry or Notice
  - Discharge Consent
  - Enforcement or Prohibition Notice
  - Integrated Pollution Control
  - Integrated Pollution Prevention Control
  - Local Authority Integrated Pollution Prevention and Control
  - Local Authority Pollution Prevention and Control Enforcement
  - Pollution Incident to Controlled Waters
  - Prosecution Relating to Authorised Processes
  - Prosecution Relating to Controlled Waters
  - Registered Radioactive Substance
  - River Network or Water Feature
  - River Quality Sampling Point
  - Substantiated Pollution Incident Register
  - Water Abstraction
  - Water Industry Act Referral
- Hazardous Substances**
- COMAH Site
  - Explosive Site
  - NIHHS Site
  - Planning Hazardous Substance Consent
  - Planning Hazardous Substance Enforcement
  - BGS Recorded Mineral Site
- Waste**
- BGS Recorded Landfill Site (Location)
  - BGS Recorded Landfill Site
  - EA Historic Landfill (Buffered Point)
  - EA Historic Landfill (Polygon)
  - Integrated Pollution Control Registered Waste Site
  - Licensed Waste Management Facility (Landfill Boundary)
  - Licensed Waste Management Facility (Location)
  - Local Authority Recorded Landfill Site (Location)
  - Local Authority Recorded Landfill Site
  - Potentially Infilled Land (Non-water)
  - Potentially Infilled Land (Non-water)
  - Potentially Infilled Land (Non-water)
  - Potentially Infilled Land (Water)
  - Potentially Infilled Land (Water)
  - Potentially Infilled Land (Water)
  - Registered Landfill Site
  - Registered Landfill Site (Location)
  - Registered Landfill Site (Point Buffered to 100m)
  - Registered Landfill Site (Point Buffered to 250m)
  - Registered Waste Transfer Site (Location)
  - Registered Waste Transfer Site
  - Registered Waste Treatment or Disposal Site (Location)
  - Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Segment A12



**Order Details**

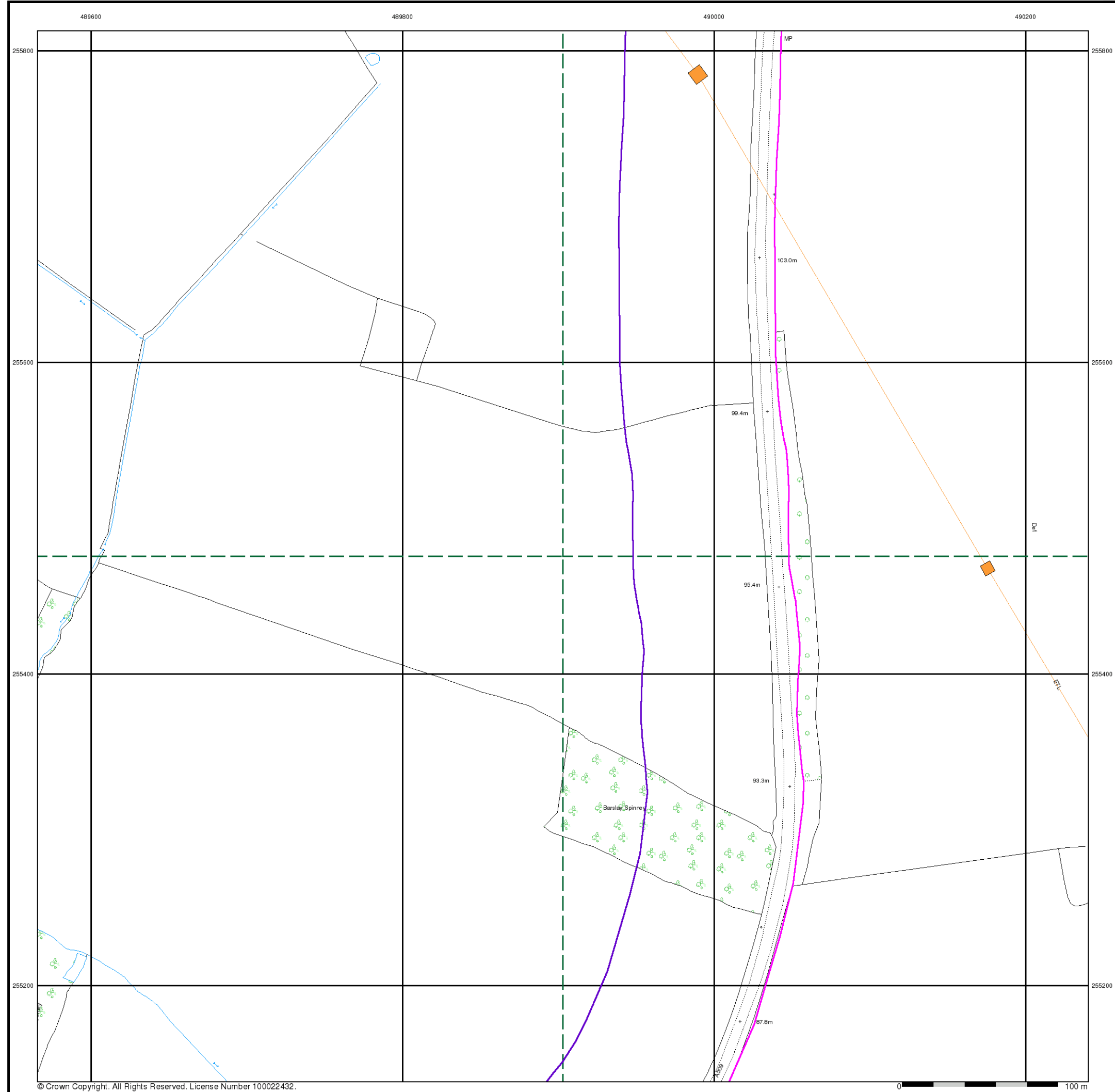
Order Number: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 490400, 254630  
Slice: A  
Site Area (Ha): 172.36  
Plot Buffer (m): 100

**Site Details**  
Meikleland



Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [Redacted]





General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location
- Pylon
- Overhead Transmission Line

Agency and Hydrological

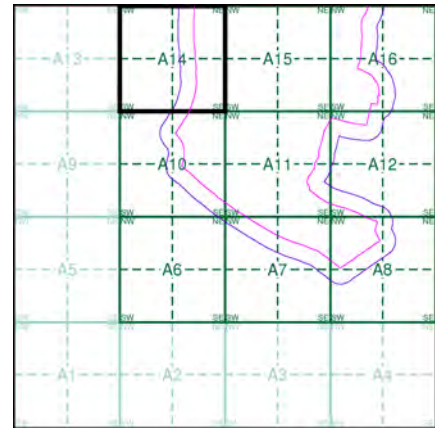
- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Local Authority Recorded Landfill Site (Location)
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement
- BGS Recorded Mineral Site
- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
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- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Geological

Site Sensitivity Map - Segment A14



Order Details

Order Number: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 490400, 254630  
Slice: A  
Site Area (Ha): 172.36  
Plot Buffer (m): 100

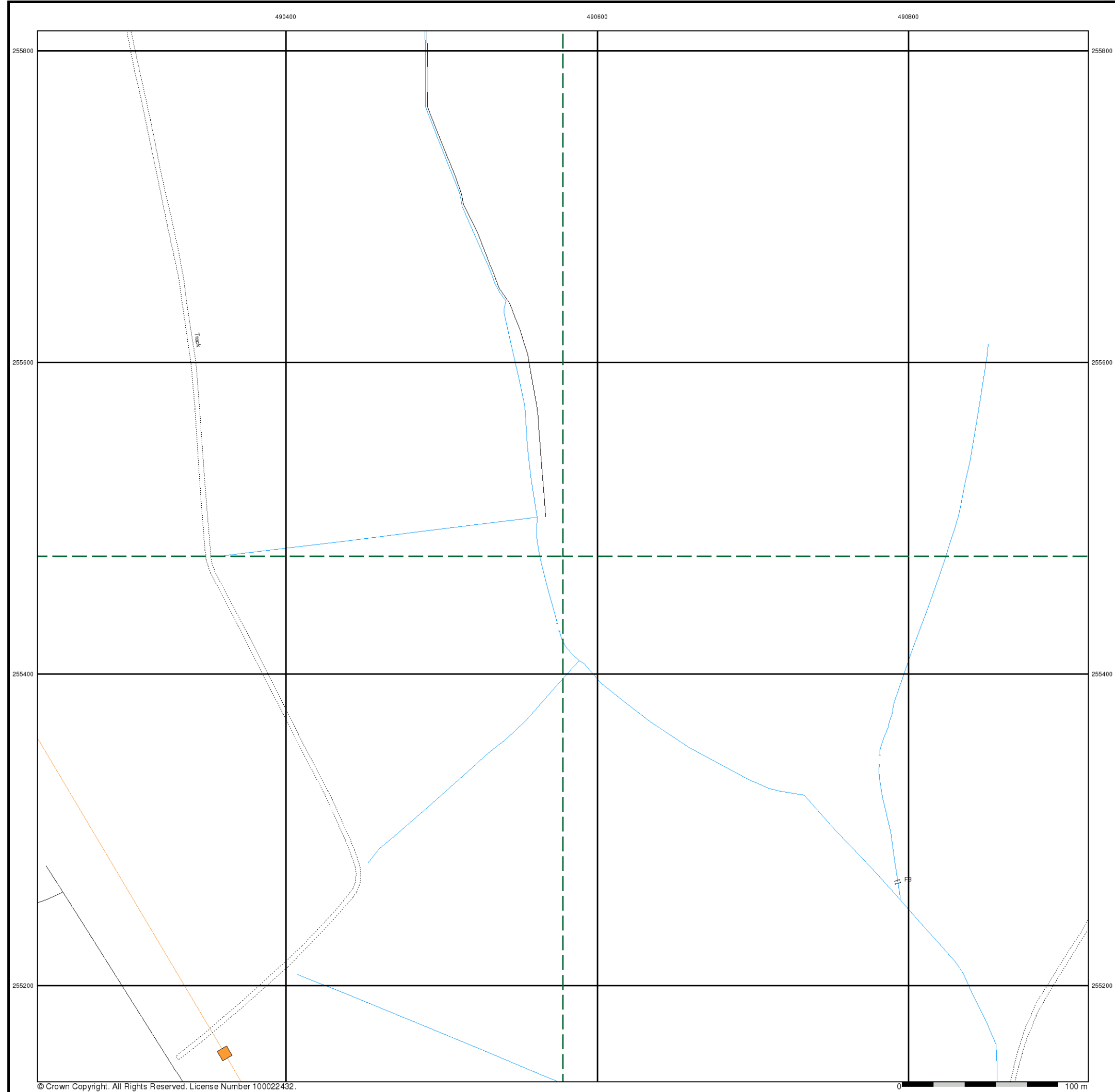
Site Details

Meikleland



Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [Redacted]





### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location
- Pylon
- Overhead Transmission Line

### Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

### Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement
- BGS Recorded Mineral Site

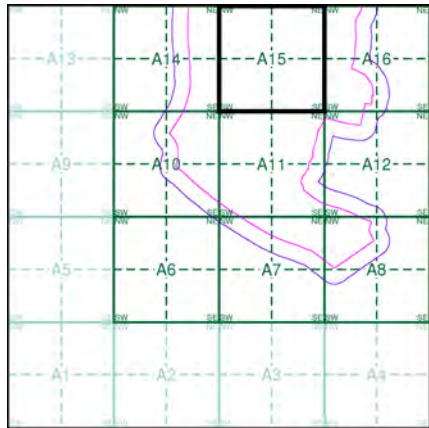
### Geological

- BGS Recorded Mineral Site

### Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

### Site Sensitivity Map - Segment A15



### Order Details

Order Number: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 490400, 254630  
Slice: A  
Site Area (Ha): 172.36  
Plot Buffer (m): 100

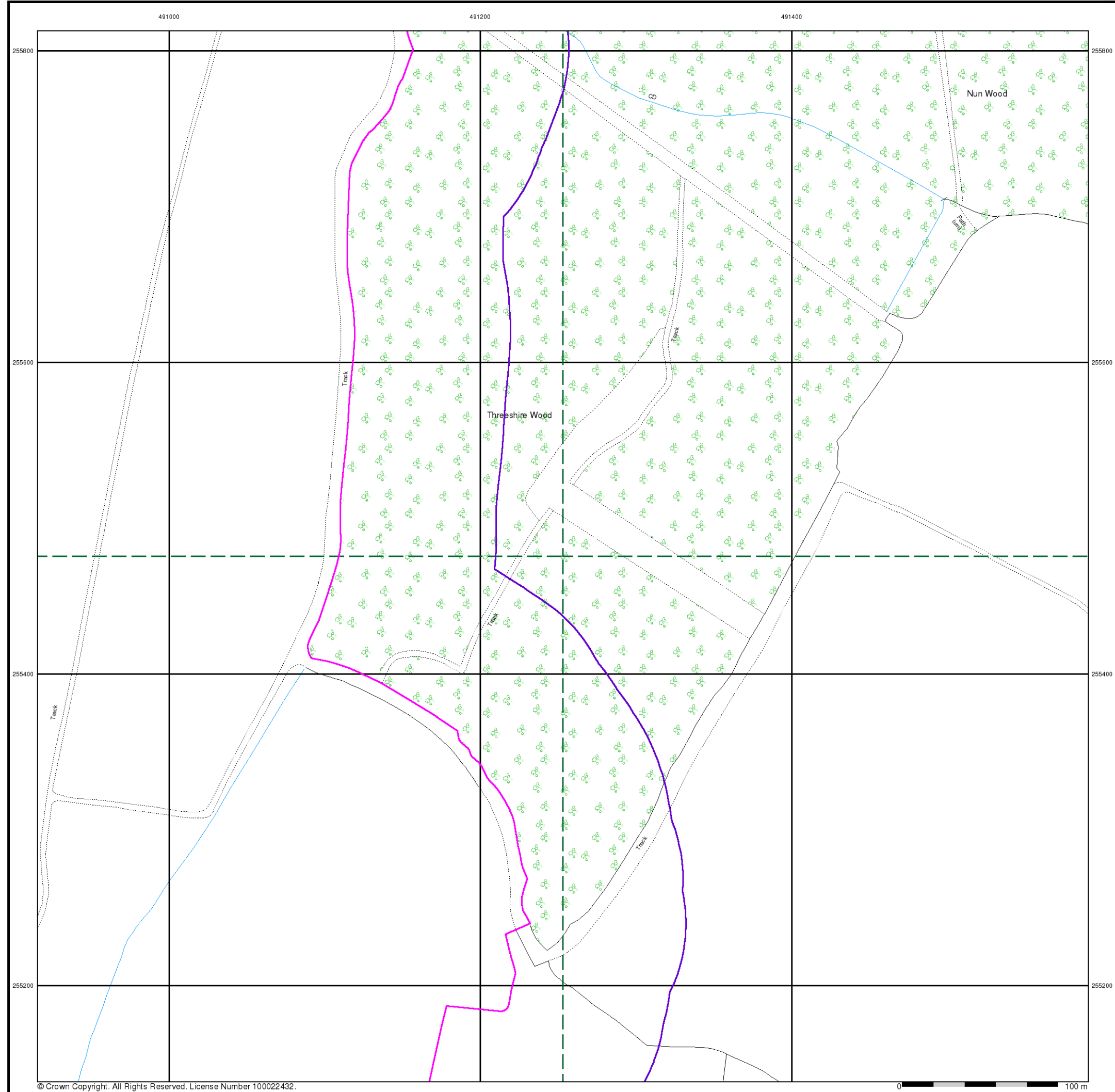
### Site Details

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Web: [Redacted]





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0 100 m



**General**

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID

**Agency and Hydrological**

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

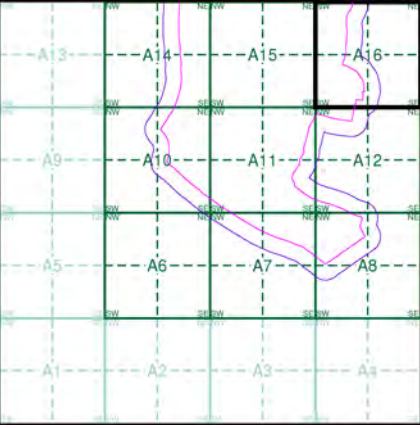
**Hazardous Substances**

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement
- BGS Recorded Mineral Site

**Waste**

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Segment A16



**Order Details**  
Order Number: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 490400, 254630  
Slice: A  
Site Area (Ha): 172.36  
Plot Buffer (m): 100

**Site Details**  
Meikleland

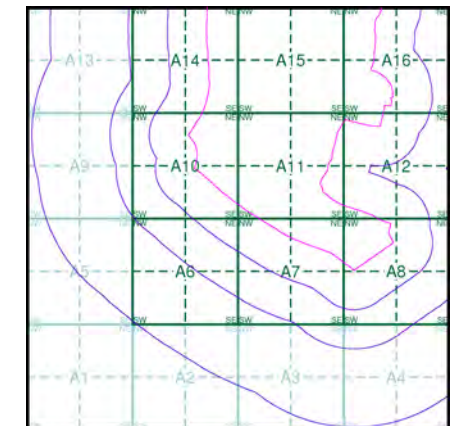
**Landmark**  
INFORMATION GROUP

Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [Redacted]



- General**
- Specified Site
  - Specified Buffer(s)
  - Bearing Reference Point
  - Map ID
  - Several of Type at Location
- Agency and Hydrological**
- Contaminated Land Register Entry or Notice (Location)
  - Contaminated Land Register Entry or Notice
  - Discharge Consent
  - Enforcement or Prohibition Notice
  - Integrated Pollution Control
  - Integrated Pollution Prevention Control
  - Local Authority Integrated Pollution Prevention and Control
  - Local Authority Pollution Prevention and Control
  - Local Authority Pollution Prevention and Control Enforcement
  - Pollution Incident to Controlled Waters
  - Prosecution Relating to Authorised Processes
  - Prosecution Relating to Controlled Waters
  - Registered Radioactive Substance
  - River Network or Water Feature
  - River Quality Sampling Point
  - Substantiated Pollution Incident Register
  - Water Abstraction
  - Water Industry Act Referral
- Hazardous Substances**
- COMAH Site
  - Explosive Site
  - NIHHS Site
  - Planning Hazardous Substance Consent
  - Planning Hazardous Substance Enforcement
  - BGS Recorded Mineral Site
- Waste**
- BGS Recorded Landfill Site (Location)
  - BGS Recorded Landfill Site
  - EA Historic Landfill (Buffered Point)
  - EA Historic Landfill (Polygon)
  - Integrated Pollution Control Registered Waste Site
  - Licensed Waste Management Facility (Landfill Boundary)
  - Licensed Waste Management Facility (Location)
  - Local Authority Recorded Landfill Site (Location)
  - Local Authority Recorded Landfill Site
  - Potentially Infilled Land (Non-water)
  - Potentially Infilled Land (Non-water)
  - Potentially Infilled Land (Non-water)
  - Potentially Infilled Land (Water)
  - Potentially Infilled Land (Water)
  - Potentially Infilled Land (Water)
  - Registered Landfill Site (Location)
  - Registered Landfill Site (Point Buffered to 100m)
  - Registered Landfill Site (Point Buffered to 250m)
  - Registered Waste Transfer Site (Location)
  - Registered Waste Transfer Site
  - Registered Waste Treatment or Disposal Site (Location)
  - Registered Waste Treatment or Disposal Site

## Site Sensitivity Map - Slice A



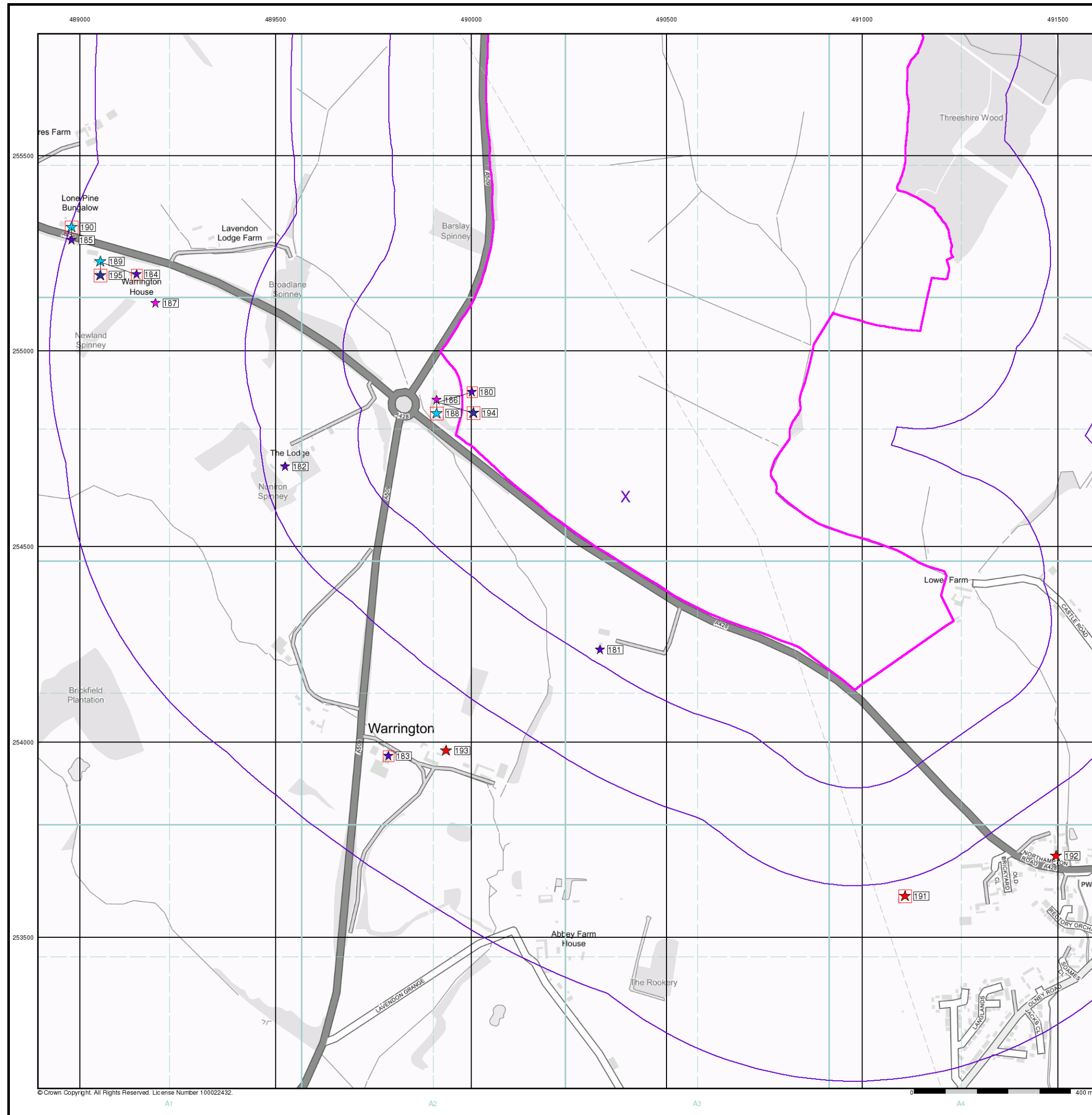
## Order Details

Order Number: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 490400, 254630  
Slice: A  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

## Site Details

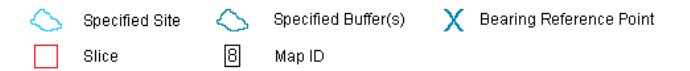
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## Industrial Land Use Map

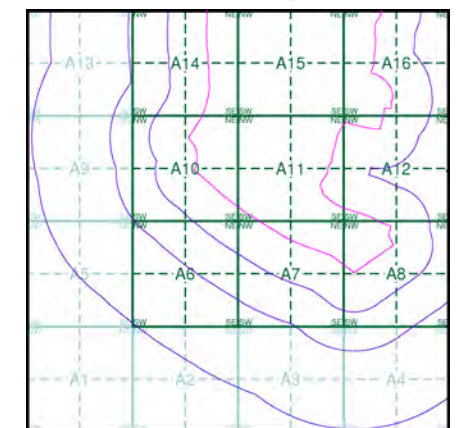
## General



## Industrial Land Use

- ★ Contemporary Trade Directory Entry
- ★ Fuel Station Entry
- ✍ Gas Pipeline
- ★ Points of Interest - Commercial Services
- ★ Points of Interest - Education and Health
- ★ Points of Interest - Manufacturing and Production
- ★ Points of Interest - Public Infrastructure
- ★ Points of Interest - Recreational and Environmental
- ✍ Underground Electrical Cables

## Industrial Land Use Map - Slice A



## Order Details

Order Number:	346936621_1_1
Customer Ref:	DS78309
National Grid Reference:	490400, 254630
Slice:	A
Site Area (Ha):	172.36
Search Buffer (m):	1000

## Site Details

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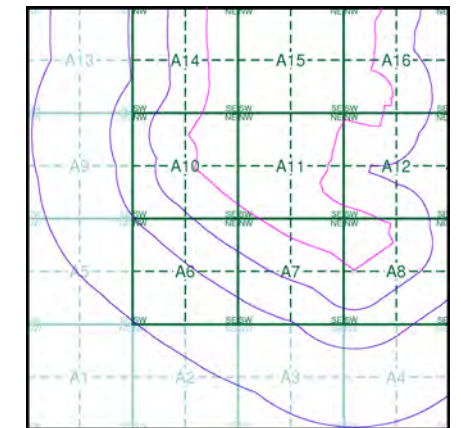
### General

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

### Agency and Hydrological (Flood)

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

### Flood Map - Slice A



### Order Details

Order Number: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 490400, 254630  
Slice: A  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

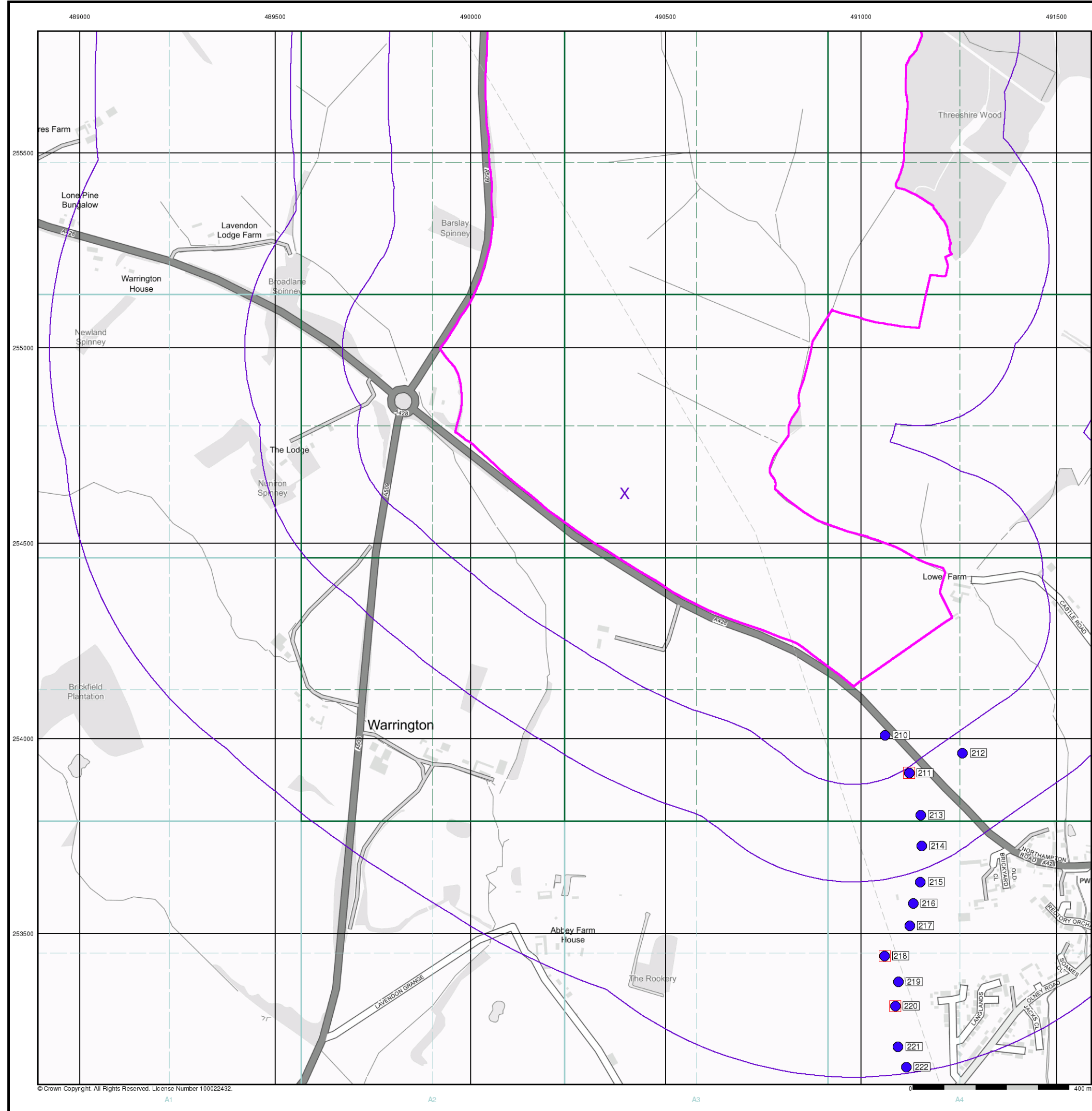
### Site Details

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### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

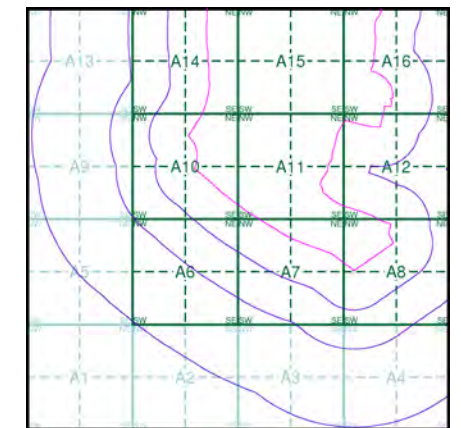
### Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of [REDACTED]

### Borehole Map - Slice A



### Order Details

Order Number: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 490400, 254630  
Slice: A  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

### Site Details




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Fax: 0844 844 9951  
Web: [REDACTED]











### General

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

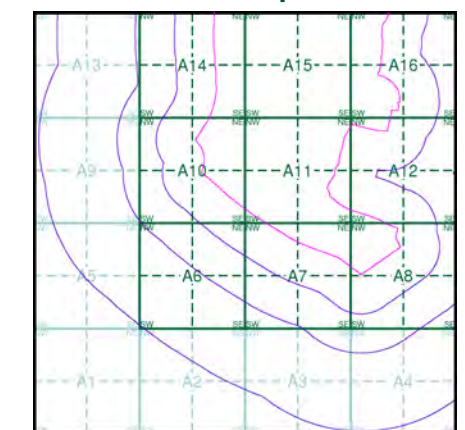
### OS Water Network Data

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

### Contours (height in meters)

- Standard Contour   
- Master Contour   
- Spot Height  167.3
-  Mean Low Water
-  Mean High Water

### OS Water Network Map - Slice A

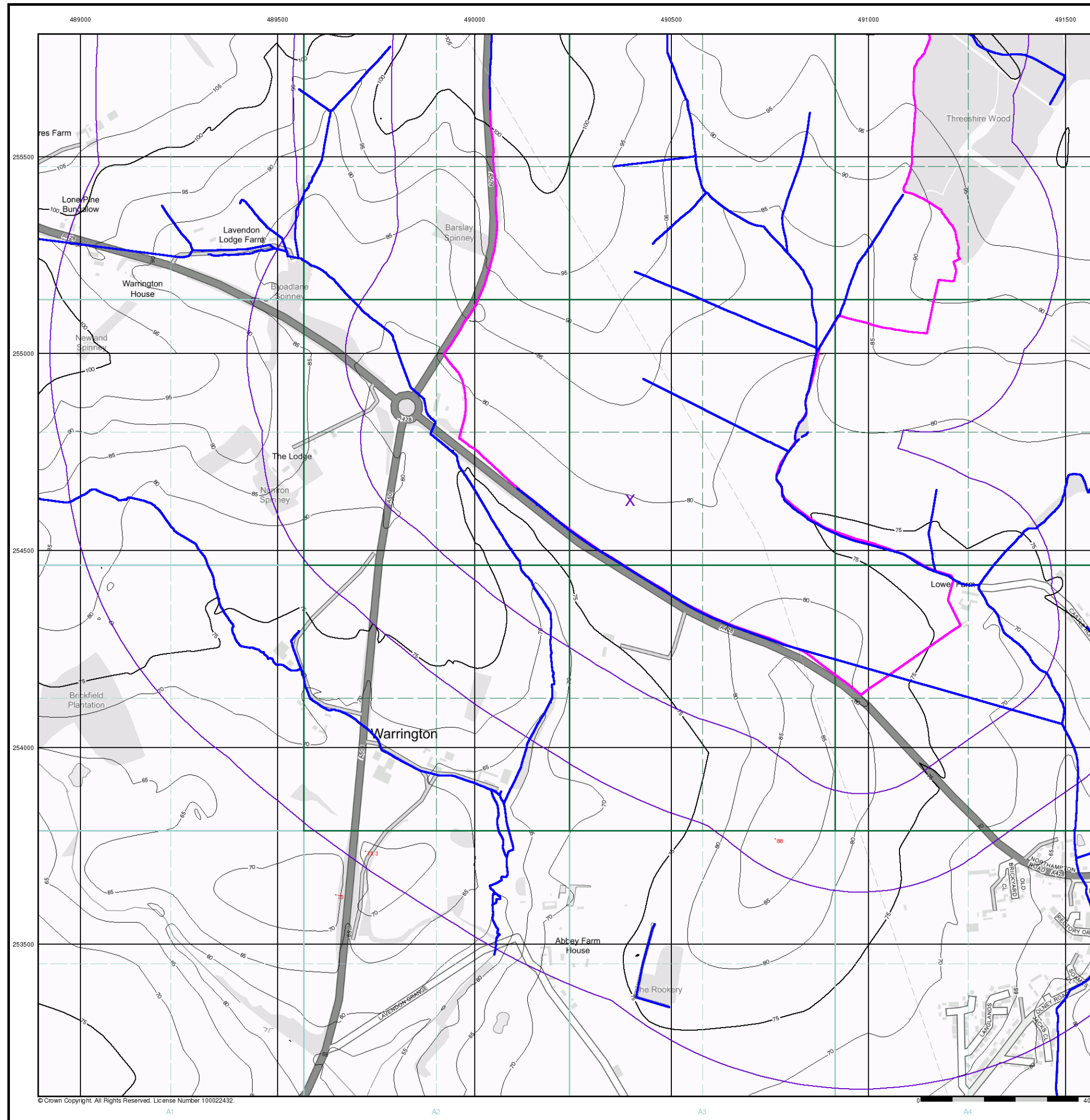


### Order Details

Order Number: 346936621\_1\_1  
 Customer Ref: DS78309  
 National Grid Reference: 490400, 254630  
 Slice: A  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

### Site Details

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### General

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

### Risk of Flooding from Surface Water

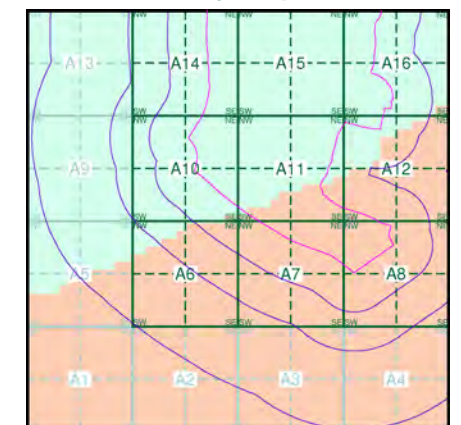
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

### Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

### EANRW Suitability Map - Slice A

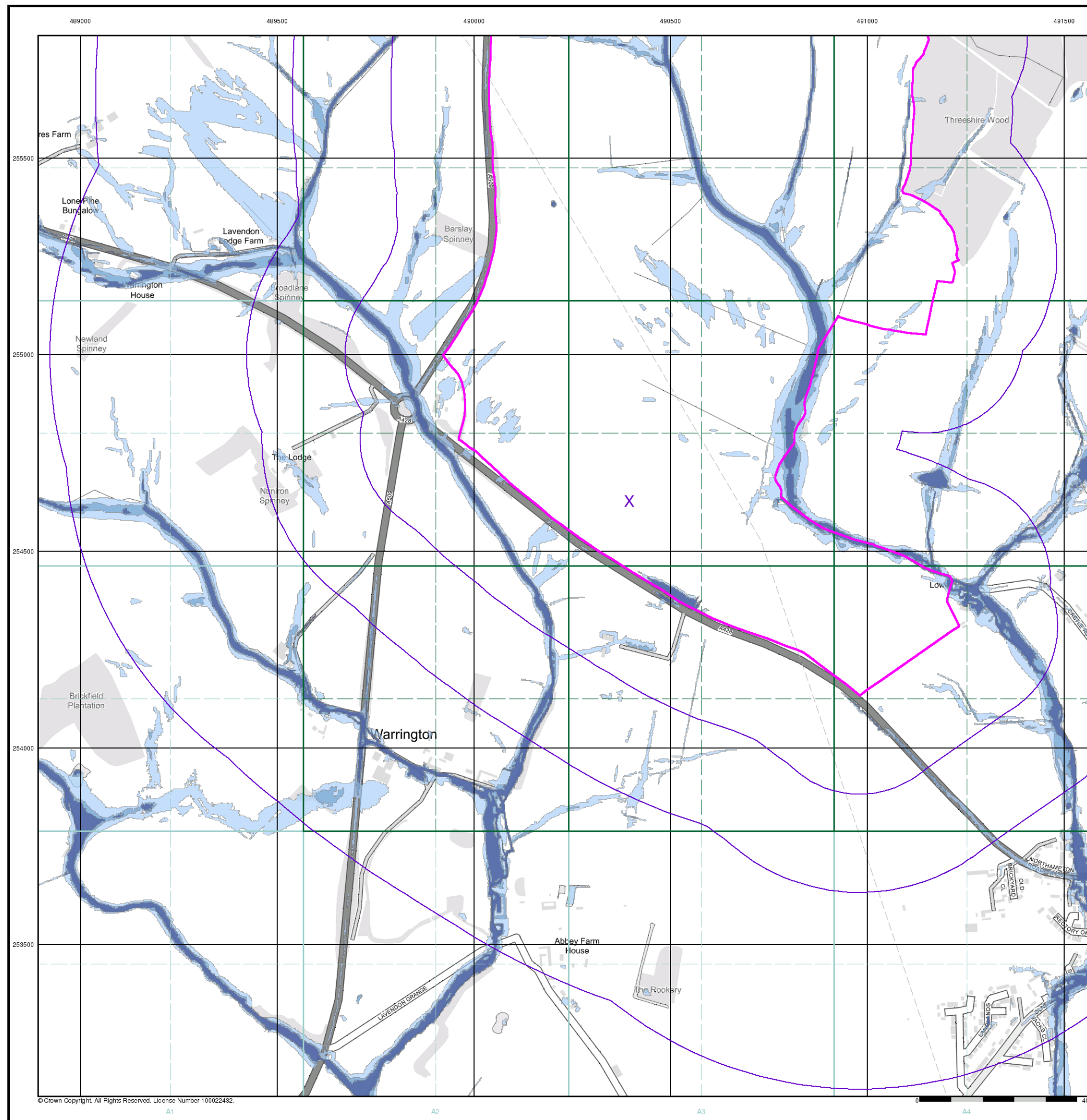


### Order Details

Order Number: 346936621\_1\_1  
 Customer Ref: DS78309  
 National Grid Reference: 490400, 254630  
 Slice: A  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

### Site Details

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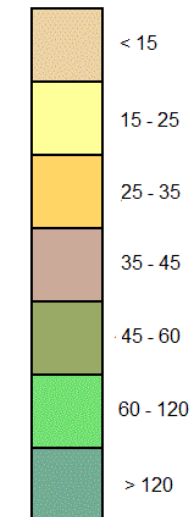


**General**

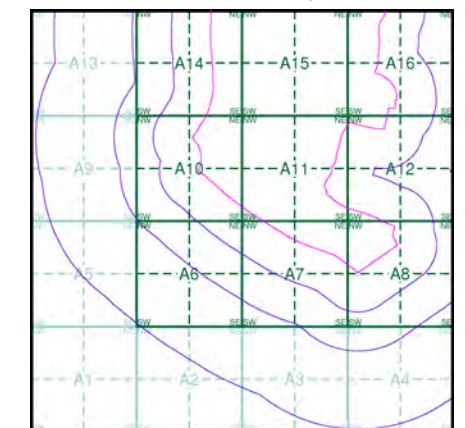
 Specified Site       Specified Buffer(s)       Bearing Reference Point

**Estimated Soil Chemistry Arsenic**

Arsenic Concentrations mg/kg



**Estimated Soil Chemistry Arsenic - Slice A**

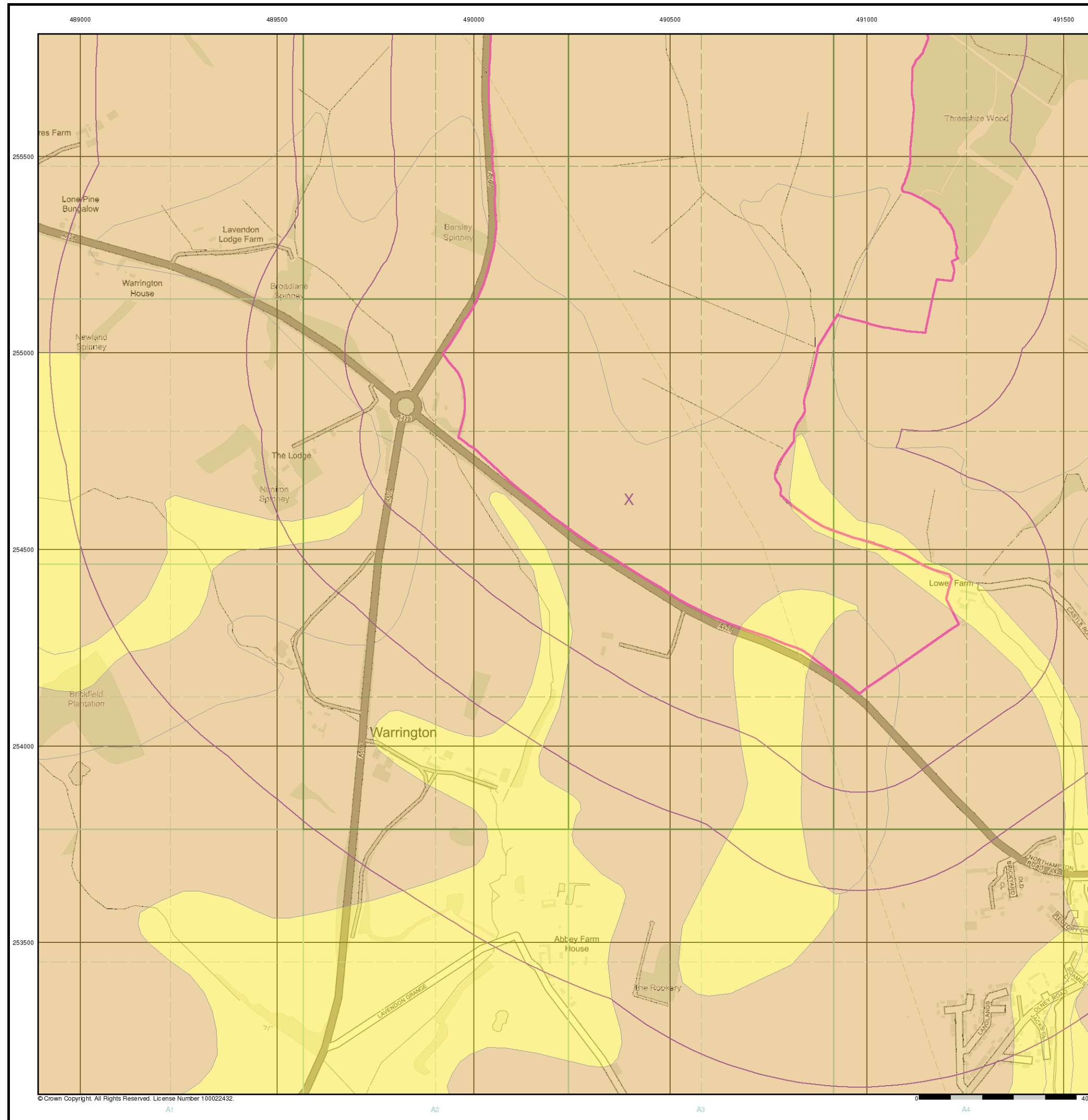


**Order Details**

Order Details: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 490400, 254630  
Slice: A  
Site Area (Ha): 172.36  
Search Buffer (m): 1000




**Site Details**

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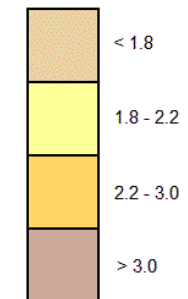


General

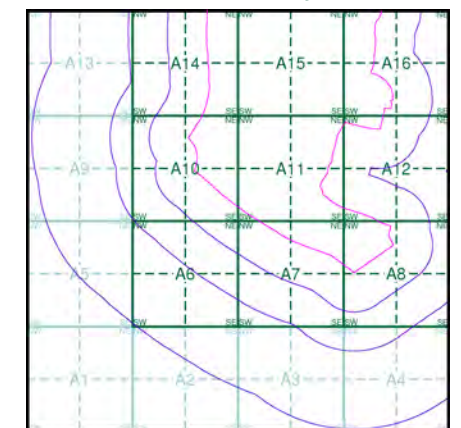
 Specified Site     Specified Buffer(s)     Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg



Estimated Soil Chemistry Cadmium - Slice A



Order Details

Order Details:	346936621_1_1
Customer Ref:	DS78309
National Grid Reference:	490400, 254630
Slice:	A
Site Area (Ha):	172.36
Search Buffer (m):	1000

Site Details

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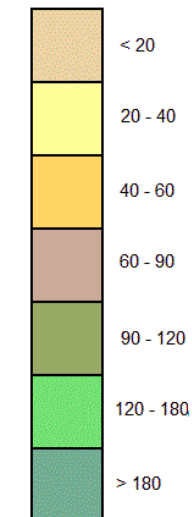


**General**

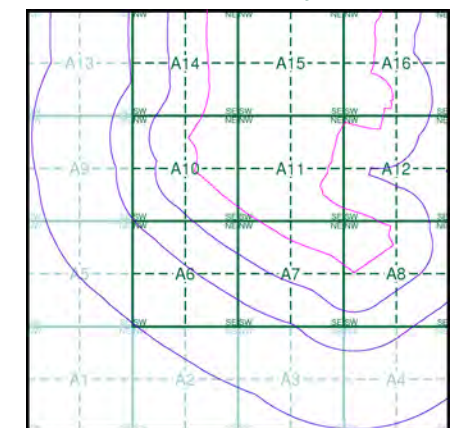
 Specified Site  Specified Buffer(s)  Bearing Reference Point

**Estimated Soil Chemistry Chromium**

Chromium Concentrations mg/kg



**Estimated Soil Chemistry Chromium - Slice A**



**Order Details**

Order Details: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 490400, 254630  
Slice: A  
Site Area (Ha): 172.36  
Search Buffer (m): 1000


**Site Details**

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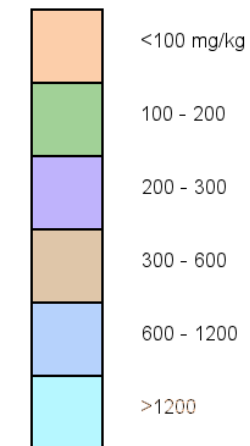


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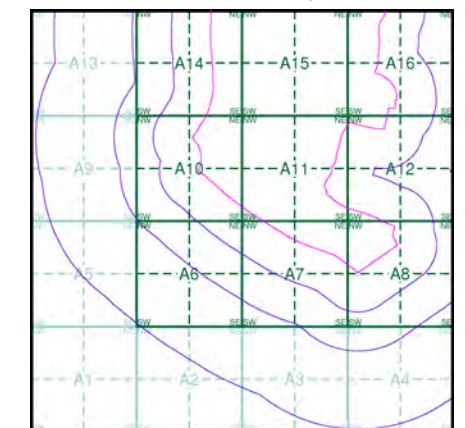
 Specified Site     Specified Buffer(s)     Bearing Reference Point

**Estimated Soil Chemistry Lead**

Lead Concentrations mg/kg



**Estimated Soil Chemistry Lead - Slice A**

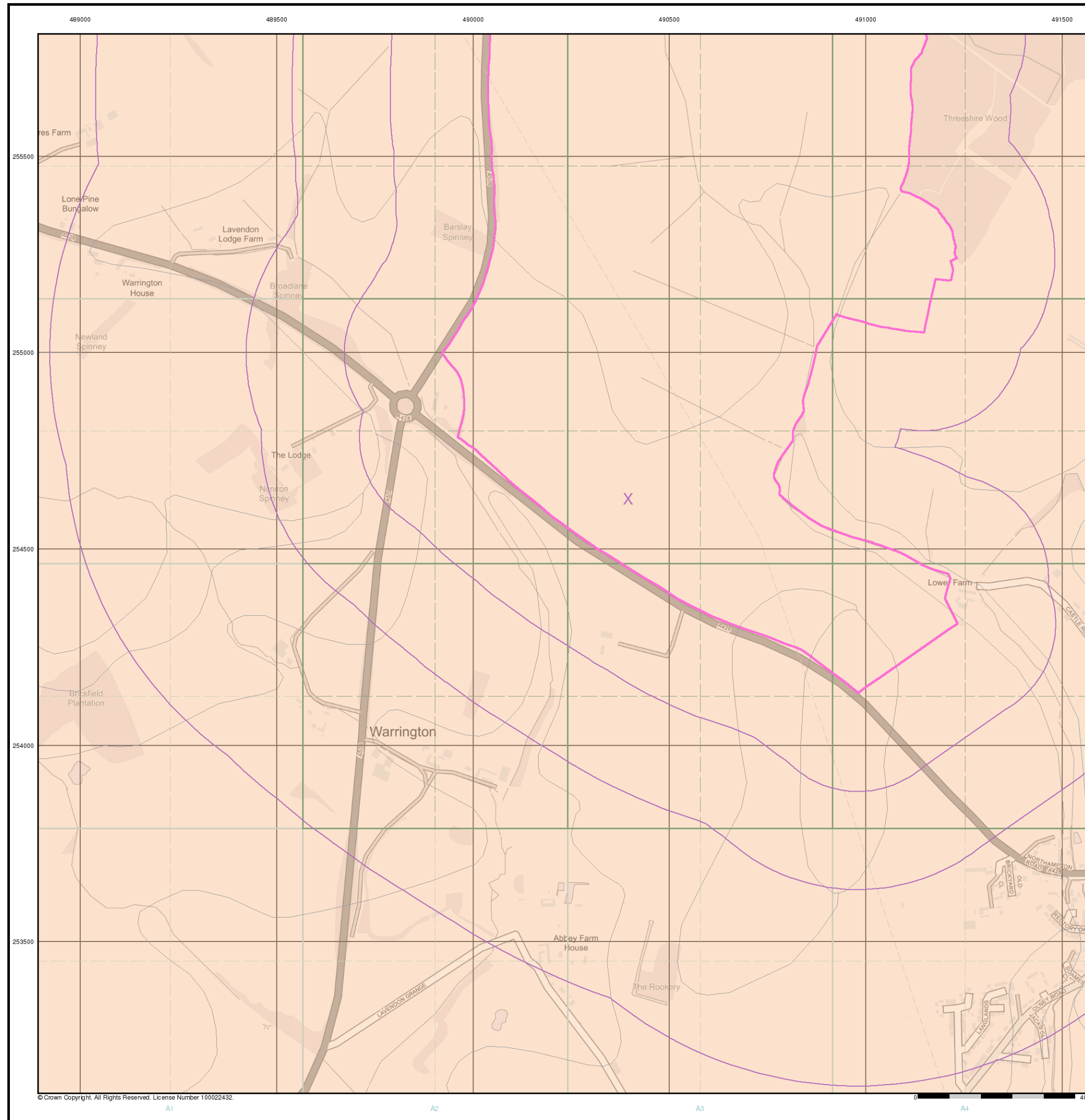


**Order Details**

Order Details: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 490400, 254630  
Slice: A  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

**Site Details**

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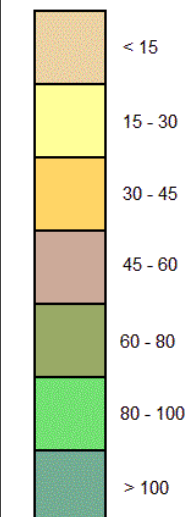


### General

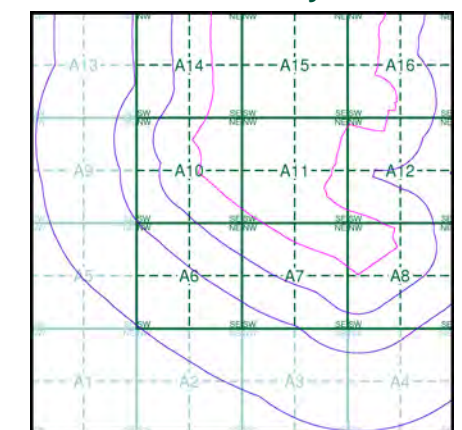
 Specified Site     Specified Buffer(s)     Bearing Reference Point

### Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg



### Estimated Soil Chemistry Nickel - Slice A

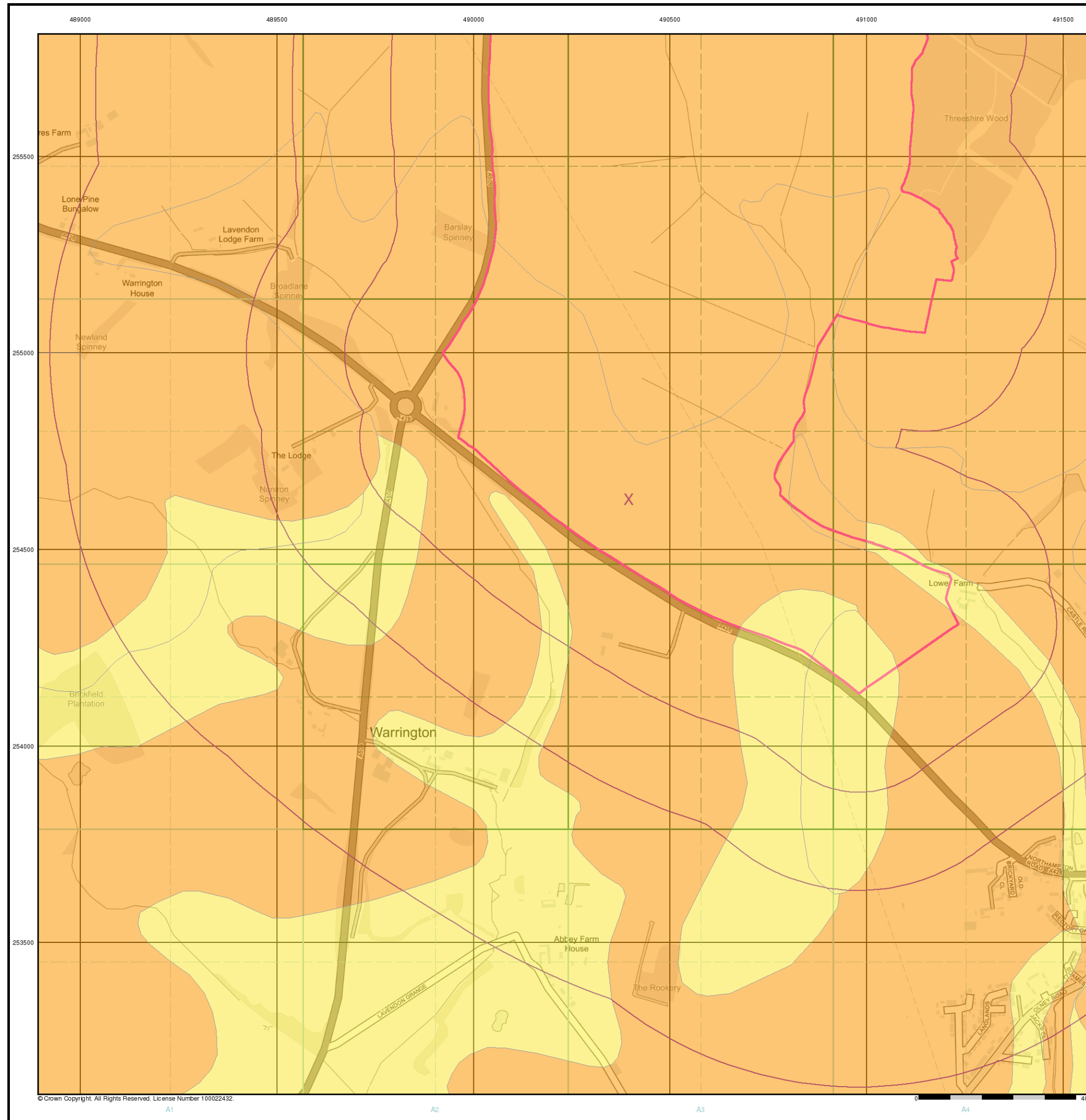


### Order Details

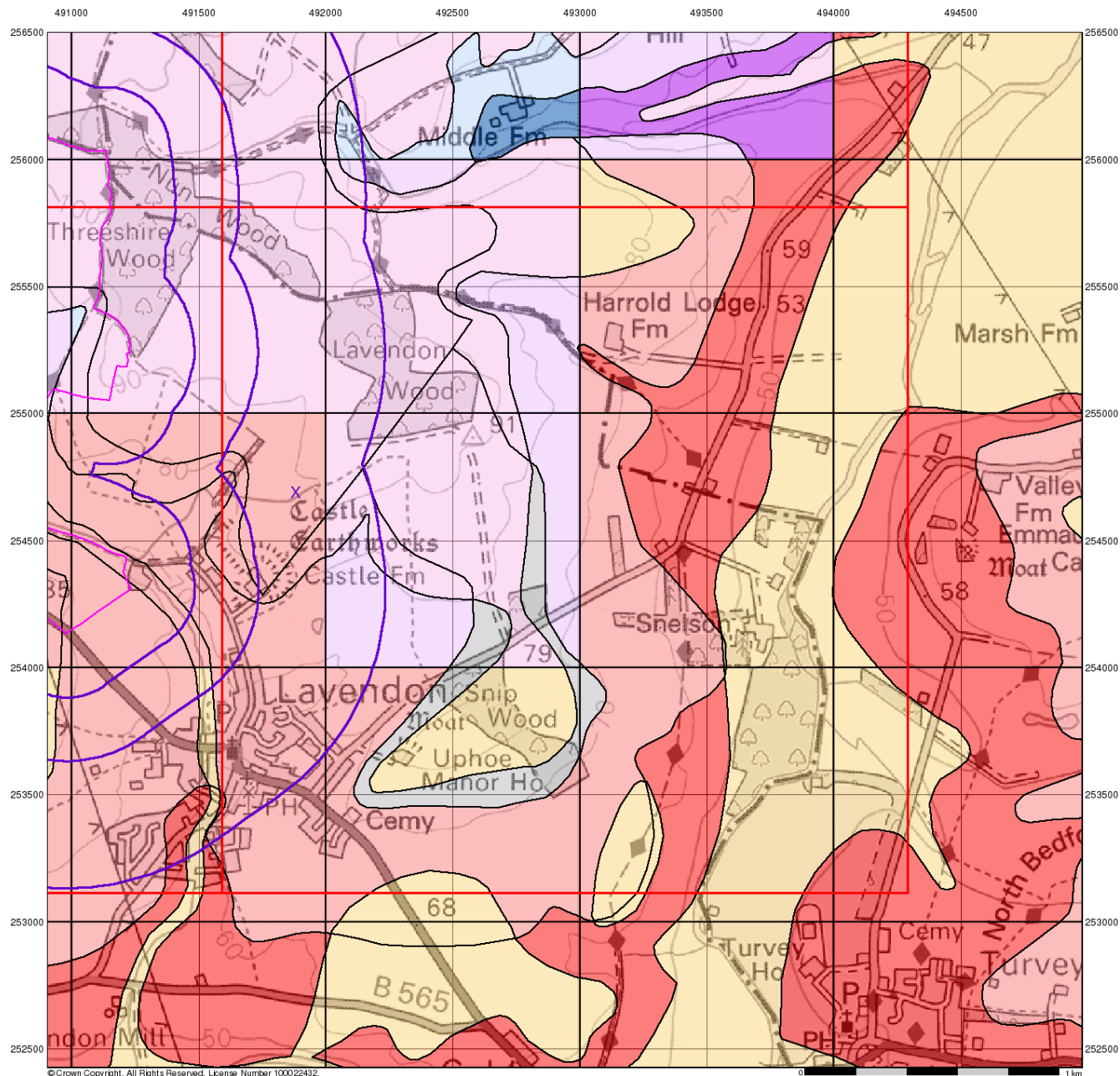
Order Details: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 490400, 254630  
Slice: A  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

### Site Details

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## Groundwater Vulnerability

### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### Agency and Hydrological

#### Bedrock Aquifers

- High Vulnerability, Principal Aquifer
- High Vulnerability, Secondary Aquifer
- Medium Vulnerability, Principal Aquifer
- Medium Vulnerability, Secondary Aquifer
- Low Vulnerability, Principal Aquifer
- Low Vulnerability, Secondary Aquifer

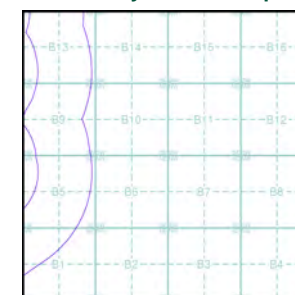
#### Superficial Aquifers

- High Vulnerability, Principal Aquifer
- High Vulnerability, Secondary Aquifer
- Medium Vulnerability, Principal Aquifer
- Medium Vulnerability, Secondary Aquifer
- Low Vulnerability, Principal Aquifer
- Low Vulnerability, Secondary Aquifer

Unproductive Aquifer

Soluble Rock

### Site Sensitivity Context Map - Slice B



### Order Details

Order Number: 346936621\_1\_1  
 Customer Ref: DS78309  
 National Grid Reference: 491880, 254690  
 Slice: B  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

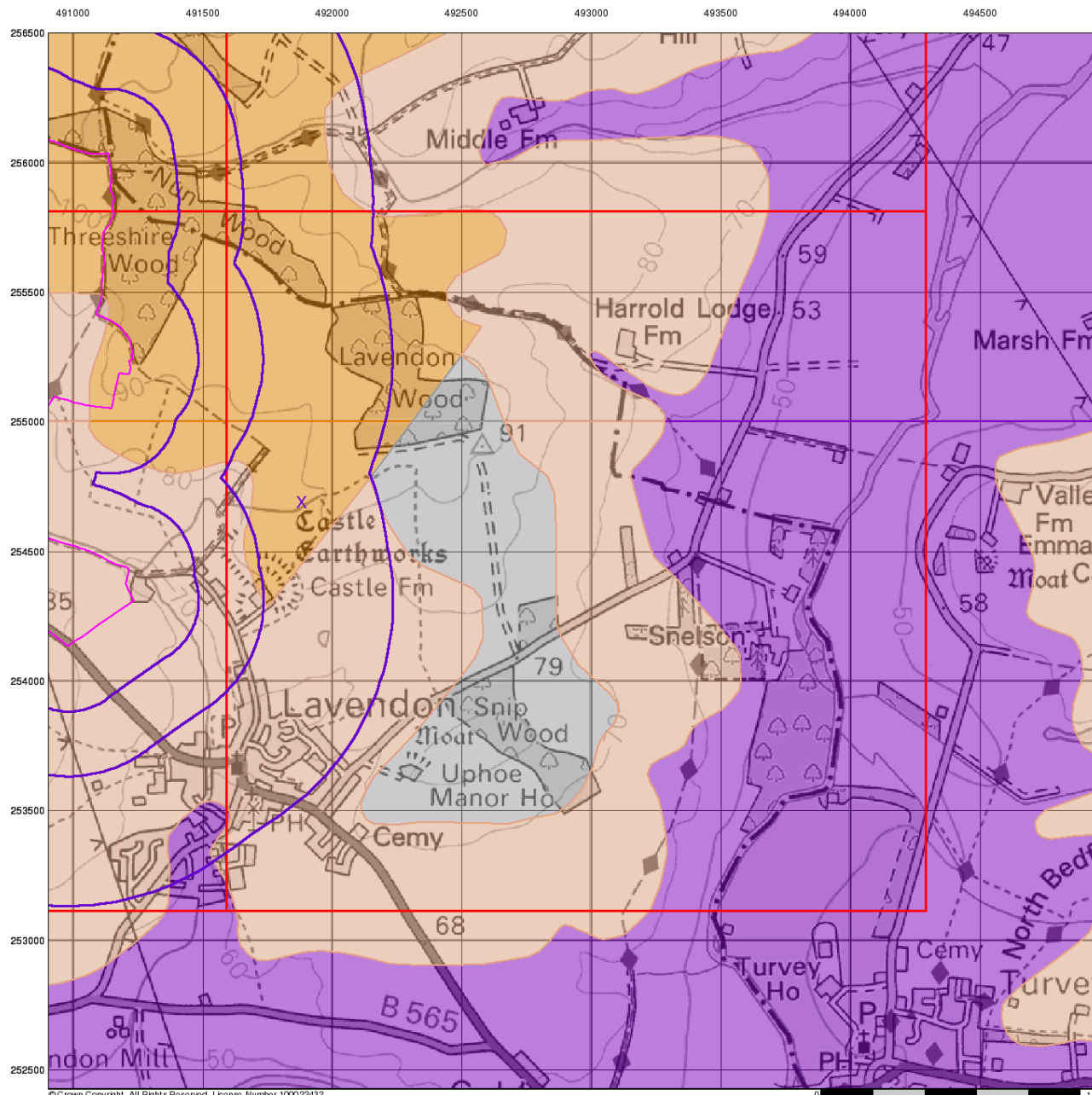
### Site Details

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**Landmark**  
 INFORMATION GROUP

Tel: 0844 844 9952  
 Fax: 0844 844 9951  
 Web: [Redacted]





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0 1 km



## Bedrock Aquifer Designation

### General

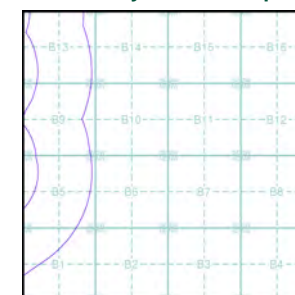
- ◊ Specified Site    ○ Specified Buffer(s)    X Bearing Reference Point
- Slice    B Map ID

### Agency and Hydrological

#### Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

### Site Sensitivity Context Map - Slice B



### Order Details

Order Number: 346936621\_1\_1  
 Customer Ref: DS78309  
 National Grid Reference: 491880, 254690  
 Slice: B  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

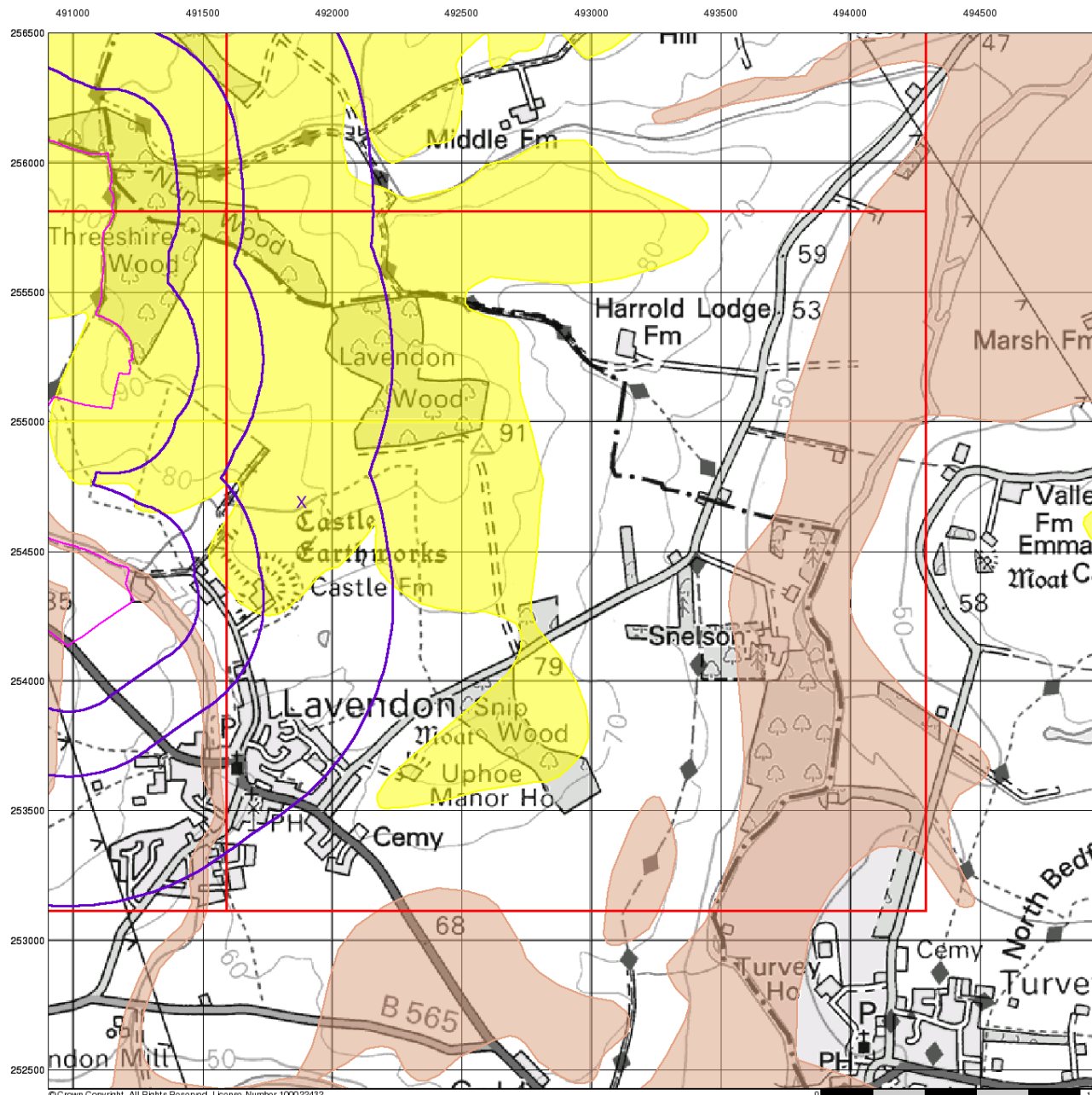
### Site Details

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 Fax: 0844 844 9951  
 Web: [www.landmarkinfo.co.uk](http://www.landmarkinfo.co.uk)





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## Superficial Aquifer Designation

### General

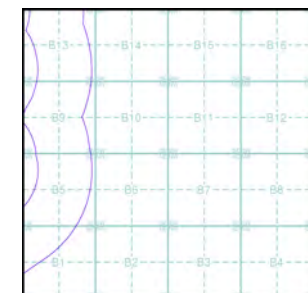
- ◇ Specified Site
- Specified Buffer(s)
- X Bearing Reference Point
- Slice
- B Map ID

### Agency and Hydrological

#### Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

### Site Sensitivity Context Map - Slice B



### Order Details

Order Number: 346936621\_1\_1  
 Customer Ref: DS78309  
 National Grid Reference: 491880, 254690  
 Slice: B  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

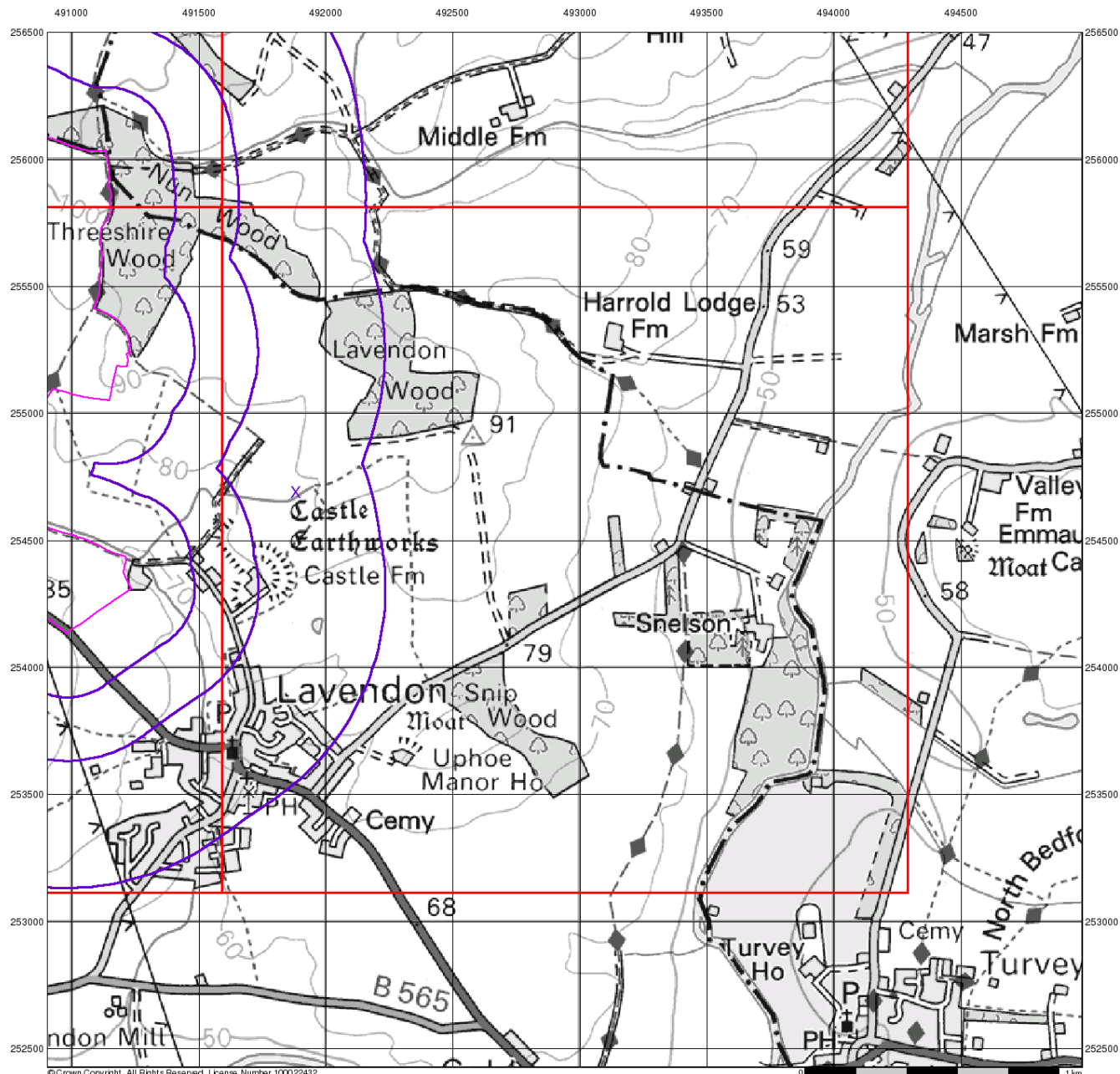
### Site Details

Meikleland



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 Fax: 0844 844 9951  
 Web: [www.landmarkinfo.co.uk](http://www.landmarkinfo.co.uk)





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## Source Protection Zones

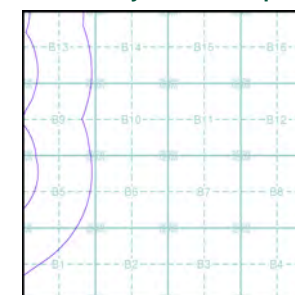
### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### Agency and Hydrological

- Inner zone (Zone 1)
- Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- Total catchment - subsurface activity only (Zone 3c)
- Special interest (Zone 4)

### Site Sensitivity Context Map - Slice B



### Order Details

Order Number: 346936621\_1\_1  
 Customer Ref: DS78309  
 National Grid Reference: 491880, 254690  
 Slice: B  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

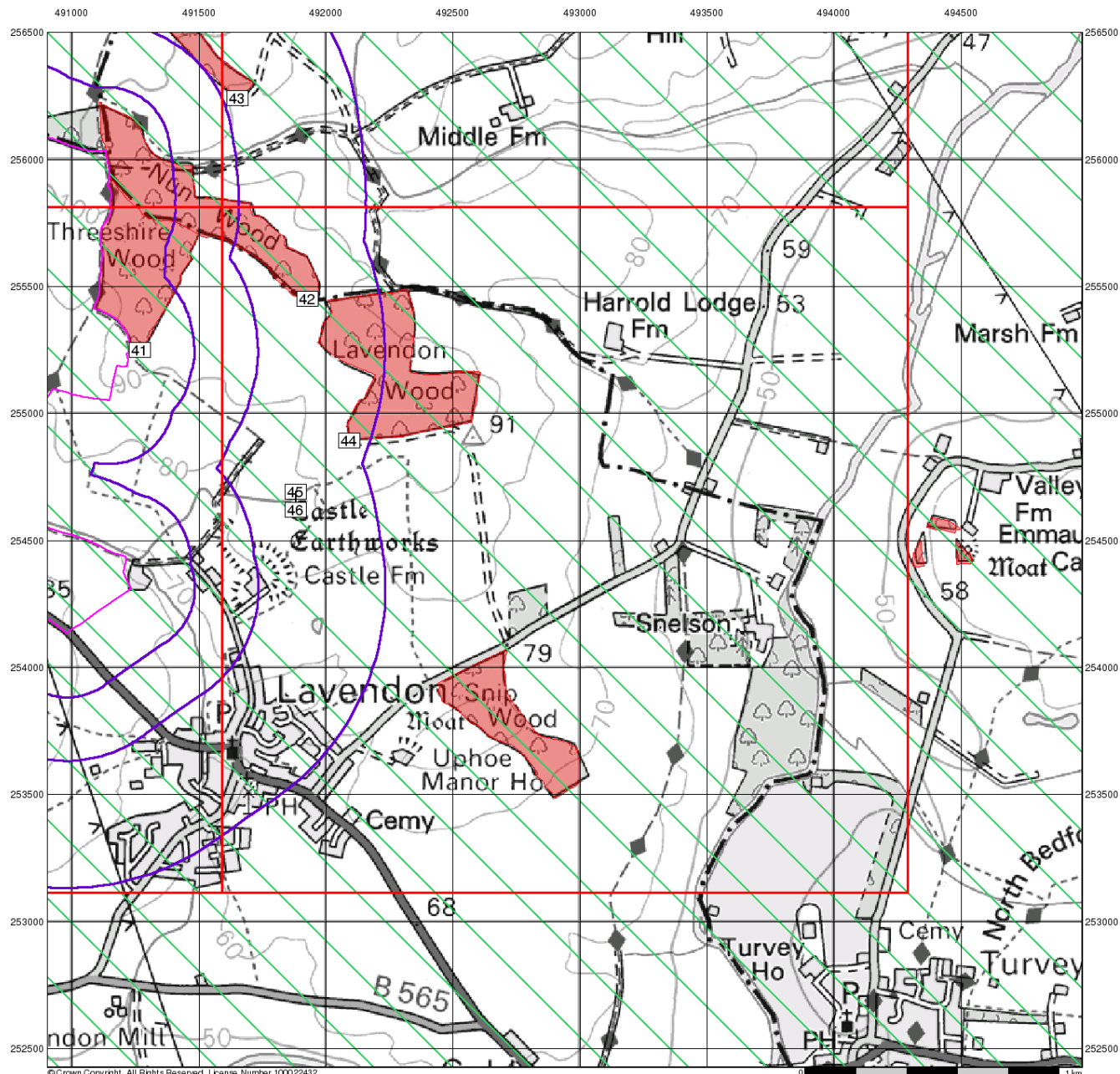
### Site Details

Meikleland



Tel: 0844 844 9952  
 Fax: 0844 844 9951  
 Web: [Redacted]





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## Sensitive Land Uses

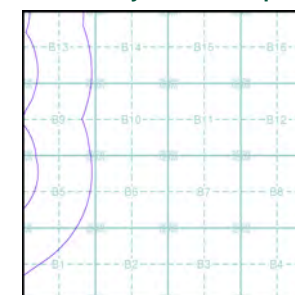
### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### Sensitive Land Uses

- Ancient Woodland
- Area of Adopted Green Belt
- Area of Unadopted Green Belt
- Area of Outstanding Natural Beauty
- Environmentally Sensitive Area
- Forest Park
- Local Nature Reserve
- Marine Nature Reserve
- National Nature Reserve
- National Park
- Nitrate Sensitive Area
- Nitrate Vulnerable Zone
- Ramsar Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area
- World Heritage Sites

### Site Sensitivity Context Map - Slice B



### Order Details

Order Number: 346936621\_1\_1  
 Customer Ref: DS78309  
 National Grid Reference: 491880, 254690  
 Slice: B  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

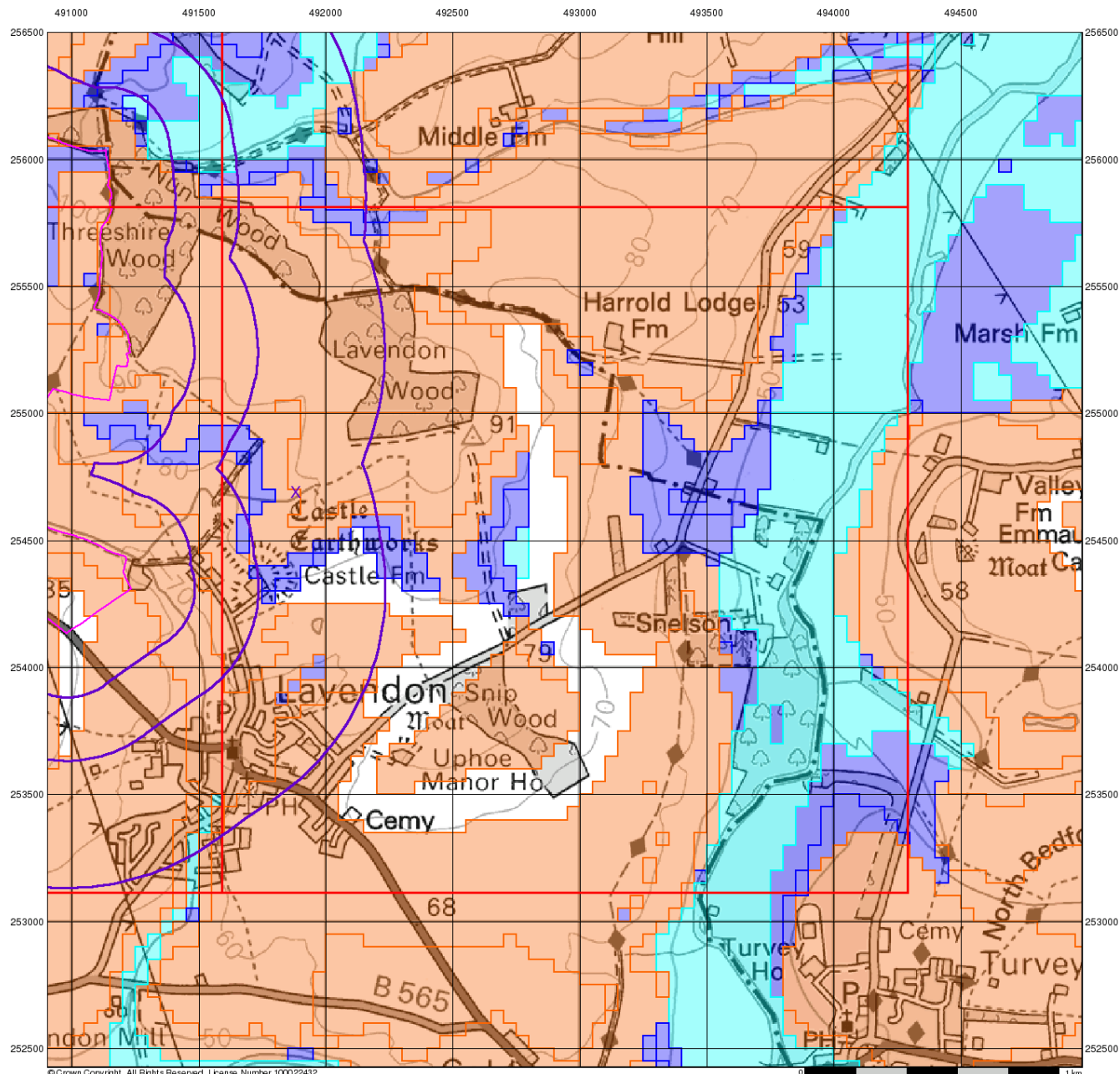
### Site Details

Meikleland

**Landmark**  
 INFORMATION GROUP

Tel: 0844 844 9952  
 Fax: 0844 844 9951  
 Web: [www.landmarkinfo.co.uk](http://www.landmarkinfo.co.uk)





## BGS Flood GFS Data

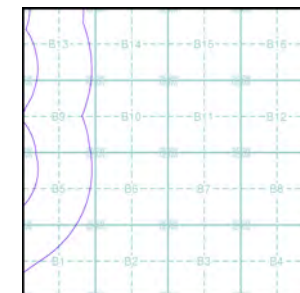
### General

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

### Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

### Site Sensitivity Context Map - Slice B



### Order Details

Order Number: 346936621\_1\_1  
 Customer Ref: DS78309  
 National Grid Reference: 491880, 254690  
 Slice: B  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

### Site Details

Meikleland



Tel: 0844 844 9952  
 Fax: 0844 844 9951  
 Web: [www.landmarkinfo.co.uk](http://www.landmarkinfo.co.uk)



## Envirocheck<sup>®</sup> Report:

### Datasheet

#### Order Details:

**Order Number:**

346936621\_1\_1

**Customer Reference:**

DS78309

**National Grid Reference:**

491880, 254690

**Slice:**

B

**Site Area (Ha):**

172.36


**Search Buffer (m):**

1000

#### Site Details:

Meikleland

#### Client Details:

  
Delta Simons  
Suite 4A  
One Portland Street  
Manchester  
M1 3BE





Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	11
Hazardous Substances	-
Geological	12
Industrial Land Use	15
Sensitive Land Use	17
Data Currency	18
Data Suppliers	24
Useful Contacts	25

#### Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination. For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client. In this datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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#### Report Version v53.0



Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
<b>Agency &amp; Hydrological</b>					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 2			1	
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls					
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 3			Yes	
Pollution Incidents to Controlled Waters	pg 3				1
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality					
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions	pg 3				1 (*1)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 3	Yes	n/a	n/a	n/a
Groundwater Vulnerability - Soluble Rock Risk	pg 7	6	n/a	n/a	n/a
Groundwater Vulnerability - Local Information			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 7	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 7	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences	pg 7	Yes		n/a	n/a
Flooding from Rivers or Sea without Defences	pg 7	Yes		n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 8			14	13



Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
<b>Waste</b>					
BGS Recorded Landfill Sites					
Historical Landfill Sites					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage	pg 11	3	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)					
Potentially Infilled Land (Water)					
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
<b>Hazardous Substances</b>					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					



Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
<b>Geological</b>					
BGS 1:625,000 Solid Geology	pg 12	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 12	Yes			Yes
BGS Recorded Mineral Sites					
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 13	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards				n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 13	Yes	Yes	n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 13	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 13	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 14	Yes	Yes	n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
<b>Industrial Land Use</b>					
Contemporary Trade Directory Entries	pg 15				6
Fuel Station Entries	pg 15				1
Points of Interest - Commercial Services	pg 15				3
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 15				2
Points of Interest - Public Infrastructure					
Points of Interest - Recreational and Environmental	pg 16				2
Gas Pipelines					
Underground Electrical Cables					



Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
<b>Sensitive Land Use</b>					
Ancient Woodland	pg 17	2			2
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 17	2			
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	0	1	491050 255000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	0	1	491150 255300
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	491200 255300
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	0	1	491000 254350
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	0	1	491000 255000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	0	1	490950 255500
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	491050 255500
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	0	1	491100 255500
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	0	1	490450 255200
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	490950 256050
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	B9NW (N)	0	1	491900 255000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	0	1	490950 254350
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW)	0	1	491350 254200
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	0	1	491500 254600
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	491400 255000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	51	1	491300 255000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B9SW (W)	52	1	491800 254691
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	B9SW (W)	64	1	491700 254691
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	102	1	491300 254850
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	109	1	491300 256000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	116	1	491200 256150
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	117	1	491300 256050



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	133	1	491300 256100
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(NW)	133	1	491250 256150
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	139	1	491750 256400
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	156	1	491500 256150
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(N)	159	1	491650 255950
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	B9SW (NW)	161	1	491882 254691
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(N)	163	1	491300 256150
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(N)	203	1	491400 255950
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	207	1	490950 256350
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	253	1	491450 255950
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	270	1	491550 255000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	302	1	491500 255950
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	344	1	491550 255850
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(N)	347	1	491700 255900
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	B13NE (N)	394	1	492050 255650
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B9SW (SW)	436	1	491700 254600
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	B5NW (S)	469	1	491882 254450
1	<b>Discharge Consents</b> Operator: [REDACTED] Property Type: [REDACTED] Location: [REDACTED] Authority: [REDACTED] Catchment Area: Not Supplied Reference: Pr1nfg0564 Permit Version: 1 Effective Date: 19th May 1963 Issued Date: 19th May 1963 Revocation Date: 20th February 1991 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Unknown Receiving Water: Unknown <b>Status:</b> Pre National Rivers Authority Legislation where issue date < 01/09/1989 Positional Accuracy: Located by supplier to within 100m	B5NW (SW)	467	2	491700 254300



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Nearest Surface Water Feature</b>	(SW)	357	-	491588 254271
2	<b>Pollution Incidents to Controlled Waters</b> Property Type: Not Given Location: Bedford District Authority: Environment Agency, Anglian Region Pollutant: Oils - Other Oil Note: Lavendon Road Incident Date: 17th March 1996 Incident Reference: 3126 Catchment Area: Not Given Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	B5SW (S)	628	2	491600 253800
3	<b>Water Abstractions</b> Operator: [REDACTED] Licence Number: 6/33/11/*G/126 Permit Version: [REDACTED] Location: [REDACTED] Authority: [REDACTED] Abstraction: Domestic & Agriculture Abstraction Type: Not Supplied Source: Well And Borehole Daily Rate (m3): 1 Yearly Rate (m3): 4550 Details: Great Oolite; Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	B5NW (S)	528	2	491760 254275
	<b>Water Abstractions</b> Operator: J Northern & Sons Licence Number: 6/33/11/*G/0089 Permit Version: 100 Location: Well Harrold Lodge Farm Authority: Environment Agency, Anglian Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Great Oolite; Status: Perpetuity Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st February 1970 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	B15SW (NE)	1870	2	493100 255300
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Bedrock Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: 40-70% Superficial Patchiness: <90% Superficial Thickness: <3m Superficial Recharge: No Data	(W)	0	3	491000 254691



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Bedrock Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: 40-70% Superficial Patchiness: <90% Superficial Thickness: <3m Superficial Recharge: Low	(SW)	0	3	491387 254194
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Bedrock Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: 3-10m Superficial Recharge: Low	(W)	0	3	490912 255000
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Bedrock Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	(NW)	0	3	491000 255261
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Mixed Dilution: <300 mm/year Baseflow Index: 40-70% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	(NW)	0	3	491000 256000



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial: >90% Patchiness: >10m Thickness: Low Superficial Recharge: Low	(N)	0	3	491882 256000
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Bedrock Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: 40-70% Superficial: <90% Patchiness: <3m Thickness: No Data Superficial Recharge: No Data	(W)	0	3	490974 254358
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Bedrock Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: 40-70% Superficial: <90% Patchiness: <3m Thickness: No Data Superficial Recharge: No Data	(W)	0	3	491000 254570
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Bedrock Aquifer - High Vulnerability Combined Vulnerability: High Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: 40-70% Superficial: <90% Patchiness: <3m Thickness: Low Superficial Recharge: Low	(SW)	0	3	491418 254268



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial: <90% Patchiness: Superficial 3-10m Thickness: Superficial Low Recharge:	(NW)	0	3	491000 255413
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial: <90% Patchiness: Superficial 3-10m Thickness: Superficial Low Recharge:	(W)	0	3	491000 255000
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial: <90% Patchiness: Superficial 3-10m Thickness: Superficial Low Recharge:	(NW)	0	3	491000 255496
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial: >90% Patchiness: Superficial >10m Thickness: Superficial Low Recharge:	(W)	0	3	491063 255000



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	B9NW (N)	0	3	491882 255000
	<b>Groundwater Vulnerability - Soluble Rock Risk</b> Classification: Significant Risk - Low Possibility	(N)	0	3	491882 256000
	<b>Groundwater Vulnerability - Soluble Rock Risk</b> Classification: Significant Risk - Problems Unlikely	(NW)	0	3	491000 256000
	<b>Groundwater Vulnerability - Soluble Rock Risk</b> Classification: Significant Risk - Low Possibility	(W)	0	3	491000 255000
	<b>Groundwater Vulnerability - Soluble Rock Risk</b> Classification: Significant Risk - Low Possibility	B9NW (N)	0	3	491882 255000
	<b>Groundwater Vulnerability - Soluble Rock Risk</b> Classification: Significant Risk - Low Possibility	(W)	0	3	491000 254691
	<b>Groundwater Vulnerability - Soluble Rock Risk</b> Classification: Significant Risk - Low Possibility	B9SW (NW)	0	3	491882 254691
	<b>Bedrock Aquifer Designations</b> Aquifer Designation: Secondary Aquifer - A	B9SE (SE)	0	3	492001 254597
	<b>Bedrock Aquifer Designations</b> Aquifer Designation: Secondary Aquifer - A	(W)	0	3	491063 255000
	<b>Bedrock Aquifer Designations</b> Aquifer Designation: Secondary Aquifer - B	B9NW (N)	0	3	491882 255000
	<b>Superficial Aquifer Designations</b> Aquifer Designation: Secondary Aquifer - Undifferentiated	B9NW (N)	0	3	491882 255000
	<b>Superficial Aquifer Designations</b> Aquifer Designation: Secondary Aquifer - A	(W)	0	3	490974 254358
	<b>Superficial Aquifer Designations</b> Aquifer Designation: Secondary Aquifer - A	(SW)	0	3	491418 254268
	<b>Extreme Flooding from Rivers or Sea without Defences</b> Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	(SW)	0	2	491387 254311
	<b>Flooding from Rivers or Sea without Defences</b> Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	(SW)	0	2	491445 254235
	<b>Areas Benefiting from Flood Defences</b> None				
	<b>Flood Water Storage Areas</b> None				
	<b>Flood Defences</b> None				



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 31.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	(SW)	357	4	491588 254271
5	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 14.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	B5NW (SW)	379	4	491607 254246
6	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 65.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	B5NW (SW)	386	4	491612 254232
7	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 52.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	B9SW (W)	406	4	491592 254681
8	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 310.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	B9NW (NW)	409	4	491703 254842
9	<b>OS Water Network Lines</b> Watercourse Form: Lake Watercourse Length: 40.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	B5NW (SW)	423	4	491691 254342
10	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 3.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	B5NW (SW)	424	4	491634 254171
11	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 7.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	B5NW (SW)	426	4	491635 254167
12	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 4.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	B5NW (SW)	431	4	491637 254160



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
13	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 178.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	B5NW (SW)	434	4	491639 254156
14	<b>OS Water Network Lines</b> Watercourse Form: Lake Watercourse Length: 45.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	B5NW (SW)	449	4	491675 254388
15	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 12.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	B9SW (W)	454	4	491604 254679
16	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 8.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	B5NW (SW)	459	4	491697 254348
17	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 368.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	B9SW (SE)	463	4	491894 254673
18	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 215.4 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	B5SW (S)	560	4	491689 253985
19	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 163.9 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	B1NW (S)	653	4	491682 253770
20	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 14.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	B1NW (S)	703	4	491682 253770
21	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 78.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	B5SW (S)	711	4	491753 253824



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
22	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 1.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	B5SW (S)	711	4	491755 253825
23	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 42.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	B5SW (S)	712	4	491788 253851
24	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 17.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	B1NW (S)	714	4	491696 253766
25	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 10.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	B5SW (S)	720	4	491797 253858
26	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 10.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	B5SW (S)	722	4	491805 253864
27	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 6.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	B5SW (S)	725	4	491810 253868
28	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 350.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	B5SE (S)	726	4	492028 253977
29	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 11.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	B5SE (S)	949	4	492129 253995
30	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 226.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	B5SE (SE)	960	4	492217 254035





Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Local Authority Landfill Coverage</b> Name: Milton Keynes Unitary Council - Has supplied landfill data		0	5	491882 254691
	<b>Local Authority Landfill Coverage</b> Name: Bedford Borough Council - Has supplied landfill data		0	7	491921 255449
	<b>Local Authority Landfill Coverage</b> Name: Bedfordshire County Council - Has no landfill data to supply		0	6	491921 255449



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS 1:625,000 Solid Geology</b> Description: Kellaways Formation And Oxford Clay Formation (Undifferentiated)	B9SW (NW)	0	1	491882 254691
	<b>BGS 1:625,000 Solid Geology</b> Description: Great Oolite Group	B9SW (W)	0	1	491745 254672
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	B9SW (W)	0	1	491646 254721
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	B9SW (NW)	0	1	491882 254691
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	B9SE (SE)	519	1	492001 254597
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	B9SE (SE)	549	1	492097 254518
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	B5NE (S)	768	1	492000 254263



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic 15 - 25 mg/kg Concentration: Cadmium <1.8 mg/kg Concentration: Chromium 60 - 90 mg/kg Concentration: Lead Concentration: <100 mg/kg Nickel 15 - 30 mg/kg Concentration:	(S)	847	1	491581 253521
	<b>BGS Measured Urban Soil Chemistry</b> No data available				
	<b>BGS Urban Soil Chemistry Averages</b> No data available				
	<b>Coal Mining Affected Areas</b> In an area that might not be affected by coal mining				
	<b>Non Coal Mining Areas of Great Britain</b> No Hazard				
	<b>Potential for Collapsible Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NW (N)	0	1	491882 255000
	<b>Potential for Collapsible Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9SW (NW)	0	1	491882 254691
	<b>Potential for Compressible Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9SW (NW)	0	1	491882 254691
	<b>Potential for Compressible Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9NW (N)	0	1	491882 255000
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	(W)	0	1	491562 254678
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NW (N)	0	1	491882 255000
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	B9SE (SE)	25	1	492103 254575
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9SW (NW)	52	1	491882 254691
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	B9SW (W)	53	1	491730 254672
	<b>Potential for Landslide Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NW (N)	0	1	491882 255000
	<b>Potential for Landslide Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9SW (NW)	0	1	491882 254691
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	(W)	0	1	491562 254678
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9NW (N)	0	1	491882 255000
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	B9SW (NW)	52	1	491882 254691



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	(W)	0	1	491562 254678
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	B9NW (N)	0	1	491882 255000
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	(SW)	25	1	491395 254327
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	B9SW (NW)	52	1	491882 254691
	<b>Radon Potential - Radon Affected Areas</b> Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	B9NW (N)	0	1	491882 255000
	<b>Radon Potential - Radon Affected Areas</b> Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	B9SW (NW)	0	1	491882 254691
	<b>Radon Potential - Radon Protection Measures</b> Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	B9NW (N)	0	1	491882 255000
	<b>Radon Potential - Radon Protection Measures</b> Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	B9SW (NW)	0	1	491882 254691



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
31	<b>Contemporary Trade Directory Entries</b> Name: Tranquility Reiki Location: 65, The Glebe, Lavendon, OLNEY, Buckinghamshire, MK46 4HF Classification: Ironing & Home Laundry Services <b>Status: Inactive</b> Positional Accuracy: Automatically positioned to the address	B5SW (S)	754	-	491818 253833
32	<b>Contemporary Trade Directory Entries</b> Name: Systemslink Two Ltd Location: 4, High Street, Lavendon, Olney, Buckinghamshire, MK46 4EX Classification: Leather Garments & Products <b>Status: Inactive</b> Positional Accuracy: Manually positioned to the address or location	B1NW (S)	808	-	491643 253612
32	<b>Contemporary Trade Directory Entries</b> Name: L W Burrows & Son Location: Lavendon Garage, 6, Olney Road, Lavendon, Olney, MK46 4EU Classification: Garage Services <b>Status: Active</b> Positional Accuracy: Automatically positioned to the address	B1NW (S)	817	-	491616 253582
33	<b>Contemporary Trade Directory Entries</b> Name: Full Steam Ahead Location: 26, Joiners Way, Lavendon, Olney, Buckinghamshire, MK46 4JF Classification: Ironing & Home Laundry Services <b>Status: Inactive</b> Positional Accuracy: Automatically positioned to the address	B1NW (S)	859	-	491840 253702
34	<b>Contemporary Trade Directory Entries</b> Name: Tusting Location: The Tannery Warehouse, 29-31, Olney Road, Lavendon, Olney, Buckinghamshire, MK46 4EU Classification: Bags, Belts & Accessories - Manufacturers & Suppliers <b>Status: Active</b> Positional Accuracy: Automatically positioned to the address	B1SW (S)	936	-	491628 253445
35	<b>Contemporary Trade Directory Entries</b> Name: The Good Food & Gift Company Location: 28, High Street, Lavendon, Olney, MK46 4HA Classification: Food Products - Manufacturers <b>Status: Inactive</b> Positional Accuracy: Automatically positioned to the address	B1NW (S)	946	-	491779 253537
36	<b>Fuel Station Entries</b> Name: Lavendon Garage Location: Olney Road , , Lavendon, Milton Keynes, MK46 4EU Brand: Obsolete Premises Type: Not Applicable <b>Status: Obsolete</b> Positional Accuracy: Automatically positioned to the address	B1NW (S)	816	-	491616 253583
37	<b>Points of Interest - Commercial Services</b> Name: L W Burrows & Son Location: Lavendon Garage 6, Olney Road, Lavendon, Olney, MK46 4EU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B1NW (S)	816	8	491616 253583
37	<b>Points of Interest - Commercial Services</b> Name: Burrows Location: 6 Olney Road, Lavendon, MK46 4EU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	B1NW (S)	817	8	491616 253582
38	<b>Points of Interest - Commercial Services</b> Name: Norman Kitchener Transport Location: 40 The Glebe, Lavendon, Olney, MK46 4HG Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	B1NW (S)	845	8	491857 253740
39	<b>Points of Interest - Manufacturing and Production</b> Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	B1NW (S)	928	8	491625 253453



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
39	<b>Points of Interest - Manufacturing and Production</b> Name: Works Location: MK46 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	B1NW (S)	928	8	491625 253453
40	<b>Points of Interest - Recreational and Environmental</b> Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	B1NW (S)	882	8	491846 253676
40	<b>Points of Interest - Recreational and Environmental</b> Name: Playground Location: Joiners Way, MK46 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	B1NW (S)	885	8	491839 253665



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
41	<b>Ancient Woodland</b> Name: Three Shire Wood Reference: 1501796 Area(m <sup>2</sup> ): 146931.81 Type: Ancient and Semi-Natural Woodland	(NW)	0	9	491270 255249
42	<b>Ancient Woodland</b> Name: Nun Wood Reference: 1475867 Area(m <sup>2</sup> ): 178825.06 Type: Ancient and Semi-Natural Woodland	B13SE (N)	0	9	491930 255450
43	<b>Ancient Woodland</b> Name: Not Supplied Reference: 1418468 Area(m <sup>2</sup> ): 53849.6 Type: Ancient and Semi-Natural Woodland	(N)	503	9	491653 256241
44	<b>Ancient Woodland</b> Name: Lavendon Wood Reference: 1503173 Area(m <sup>2</sup> ): 205906.44 Type: Ancient and Semi-Natural Woodland	B9NE (NE)	737	9	492092 254893
45	<b>Nitrate Vulnerable Zones</b> Name: Great Ouse Nvz Description: Surface Water Source: Environment Agency, Head Office	B9SW (NW)	0	3	491882 254691
46	<b>Nitrate Vulnerable Zones</b> Name: Bedford Great Oolite Description: Groundwater Source: Environment Agency, Head Office	B9SW (NW)	0	3	491882 254691



Agency & Hydrological	Version	Update Cycle
<b>Contaminated Land Register Entries and Notices</b> Bedford Borough Council - Environmental Health Department Environment Agency - Head Office Milton Keynes Council - Environmental Health Division	December 2014 November 2023 October 2017	Annual Rolling Update Annually Annual Rolling Update
<b>Discharge Consents</b> Environment Agency - Anglian Region	April 2024	Quarterly
<b>Enforcement and Prohibition Notices</b> Environment Agency - Anglian Region	March 2013	
<b>Integrated Pollution Controls</b> Environment Agency - Anglian Region	January 2009	
<b>Integrated Pollution Prevention And Control</b> Environment Agency - Anglian Region	October 2023	Quarterly
<b>Local Authority Integrated Pollution Prevention And Control</b> Milton Keynes Council - Environmental Health Department Bedford Borough Council - Environmental Health Department	June 2016 March 2015	Variable Variable
<b>Local Authority Pollution Prevention and Controls</b> Bedford Borough Council - Environmental Health Department Milton Keynes Council - Environmental Health Department	December 2020 June 2016	Annual Rolling Update Not Applicable
<b>Local Authority Pollution Prevention and Control Enforcements</b> Milton Keynes Council - Environmental Health Department Bedford Borough Council - Environmental Health Department	June 2016 March 2015	Variable Variable
<b>Nearest Surface Water Feature</b> Ordnance Survey	March 2024	
<b>Pollution Incidents to Controlled Waters</b> Environment Agency - Anglian Region	September 1999	
<b>Prosecutions Relating to Authorised Processes</b> Environment Agency - Anglian Region	July 2015	
<b>Prosecutions Relating to Controlled Waters</b> Environment Agency - Anglian Region	March 2013	
<b>Registered Radioactive Substances</b> Environment Agency - Anglian Region Environment Agency - Head Office	June 2016 May 2023	As notified Quarterly
<b>River Quality</b> Environment Agency - Head Office	November 2001	Not Applicable
<b>River Quality Biology Sampling Points</b> Environment Agency - Head Office	April 2012	
<b>River Quality Chemistry Sampling Points</b> Environment Agency - Head Office	April 2012	
<b>Substantiated Pollution Incident Register</b> Environment Agency - Anglian Region - Central Area	April 2024	Quarterly
<b>Water Abstractions</b> Environment Agency - Anglian Region	April 2024	Quarterly
<b>Water Industry Act Referrals</b> Environment Agency - Anglian Region	October 2017	
<b>Groundwater Vulnerability Map</b> Environment Agency - Head Office	June 2018	As notified
<b>Groundwater Vulnerability - Soluble Rock Risk</b> Environment Agency - Head Office	June 2018	As notified
<b>Bedrock Aquifer Designations</b> Environment Agency - Head Office	January 2018	As notified



Agency & Hydrological	Version	Update Cycle
<b>Superficial Aquifer Designations</b> Environment Agency - Head Office	January 2018	As notified
<b>Source Protection Zones</b> Environment Agency - Head Office	September 2022	Bi-Annually
<b>Extreme Flooding from Rivers or Sea without Defences</b> Environment Agency - Head Office	December 2023	Quarterly
<b>Flooding from Rivers or Sea without Defences</b> Environment Agency - Head Office	December 2023	Quarterly
<b>Areas Benefiting from Flood Defences</b> Environment Agency - Head Office	February 2023	Quarterly
<b>Flood Water Storage Areas</b> Environment Agency - Head Office	January 2024	Quarterly
<b>Flood Defences</b> Environment Agency - Head Office	August 2022	Quarterly
<b>OS Water Network Lines</b> Ordnance Survey	April 2024	Quarterly
<b>Surface Water 1 in 30 year Flood Extent</b> Environment Agency - Head Office	May 2018	Annually
<b>Surface Water 1 in 100 year Flood Extent</b> Environment Agency - Head Office	May 2018	Annually
<b>Surface Water 1 in 1000 year Flood Extent</b> Environment Agency - Head Office	May 2018	Annually
<b>Surface Water Suitability</b> Environment Agency - Head Office	February 2016	Annually
<b>BGS Groundwater Flooding Susceptibility</b> British Geological Survey - National Geoscience Information Service	May 2013	As notified



Waste	Version	Update Cycle
<b>BGS Recorded Landfill Sites</b> British Geological Survey - National Geoscience Information Service	November 2002	As notified
<b>Historical Landfill Sites</b> Environment Agency - Head Office	May 2024	Quarterly
<b>Integrated Pollution Control Registered Waste Sites</b> Environment Agency - Anglian Region	January 2009	Not Applicable
<b>Licensed Waste Management Facilities (Landfill Boundaries)</b> Environment Agency - Anglian Region - Central Area	May 2024	Quarterly
<b>Licensed Waste Management Facilities (Locations)</b> Environment Agency - Anglian Region - Central Area	January 2023	Quarterly
<b>Local Authority Landfill Coverage</b> Bedford Borough Council - Environmental Health Department Bedfordshire County Council (now part of Central Bedfordshire Council) Milton Keynes Council - Planning and Transport Department	February 2003 February 2003 February 2003	Not Applicable Not Applicable Not Applicable
<b>Local Authority Recorded Landfill Sites</b> Bedford Borough Council - Environmental Health Department Bedfordshire County Council (now part of Central Bedfordshire Council) Milton Keynes Council - Planning and Transport Department	October 2018 October 2018 October 2018	
<b>Potentially Infilled Land (Non-Water)</b> Landmark Information Group Limited	December 1999	
<b>Potentially Infilled Land (Water)</b> Landmark Information Group Limited	December 1999	
<b>Registered Landfill Sites</b> Environment Agency - Anglian Region - Central Area	March 2006	Not Applicable
<b>Registered Waste Transfer Sites</b> Environment Agency - Anglian Region - Central Area	April 2018	
<b>Registered Waste Treatment or Disposal Sites</b> Environment Agency - Anglian Region - Central Area	June 2015	
Hazardous Substances	Version	Update Cycle
<b>Control of Major Accident Hazards Sites (COMAH)</b> Health and Safety Executive	January 2024	Bi-Annually
<b>Explosive Sites</b> Health and Safety Executive	March 2017	
<b>Notification of Installations Handling Hazardous Substances (NIHHS)</b> Health and Safety Executive	August 2001	
<b>Planning Hazardous Substance Enforcements</b> Bedfordshire County Council (now part of Central Bedfordshire Council) Bedford Borough Council Milton Keynes Council - Planning and Transport Department	July 2008 March 2023 May 2023	Annual Rolling Update Variable Variable
<b>Planning Hazardous Substance Consents</b> Bedford Borough Council Milton Keynes Council - Planning and Transport Department Bedfordshire County Council (now part of Central Bedfordshire Council)	February 2016 February 2016 July 2008	Variable Variable Annual Rolling Update



<b>Geological</b>	<b>Version</b>	<b>Update Cycle</b>
<b>BGS 1:625,000 Solid Geology</b> British Geological Survey - National Geoscience Information Service	January 2009	As notified
<b>BGS Estimated Soil Chemistry</b> British Geological Survey - National Geoscience Information Service	December 2015	As notified
<b>BGS Recorded Mineral Sites</b> British Geological Survey - National Geoscience Information Service	January 2024	Bi-Annually
<b>CBSCB Compensation District</b> Cheshire Brine Subsidence Compensation Board (CBSCB) Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011 November 2020	As notified
<b>Coal Mining Affected Areas</b> The Coal Authority - Property Searches	February 2023	Annual Rolling Update
<b>Mining Instability</b> Ove Arup & Partners	June 1998	Not Applicable
<b>Non Coal Mining Areas of Great Britain</b> British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
<b>Potential for Collapsible Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	April 2020	As notified
<b>Potential for Compressible Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	As notified
<b>Potential for Ground Dissolution Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	As notified
<b>Potential for Landslide Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	As notified
<b>Potential for Running Sand Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	As notified
<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	As notified
<b>Radon Potential - Radon Affected Areas</b> British Geological Survey - National Geoscience Information Service	October 2023	Annually
<b>Radon Potential - Radon Protection Measures</b> British Geological Survey - National Geoscience Information Service	October 2023	Annually






Industrial Land Use	Version	Update Cycle
<b>Contemporary Trade Directory Entries</b> Thomson Directories	April 2024	Quarterly
<b>Fuel Station Entries</b> Catalist Ltd - Experian	February 2024	Quarterly
<b>Gas Pipelines</b> National Grid	October 2021	Bi-Annually
<b>Points of Interest - Commercial Services</b> PointX	March 2024	Quarterly
<b>Points of Interest - Education and Health</b> PointX	March 2024	Quarterly
<b>Points of Interest - Manufacturing and Production</b> PointX	March 2024	Quarterly
<b>Points of Interest - Public Infrastructure</b> PointX	March 2024	Quarterly
<b>Points of Interest - Recreational and Environmental</b> PointX	March 2024	Quarterly
<b>Underground Electrical Cables</b> National Grid	January 2024	Bi-Annually



<b>Sensitive Land Use</b>	<b>Version</b>	<b>Update Cycle</b>
<b>Ancient Woodland</b> Natural England	April 2024	Bi-Annually
<b>Areas of Adopted Green Belt</b> Bedford Borough Council Milton Keynes Council - Planning and Transport Department	February 2024 February 2024	Quarterly Quarterly
<b>Areas of Unadopted Green Belt</b> Bedford Borough Council Milton Keynes Council - Planning and Transport Department	February 2024 February 2024	Quarterly Quarterly
<b>Areas of Outstanding Natural Beauty</b> Natural England	May 2024	Bi-Annually
<b>Environmentally Sensitive Areas</b> Natural England	August 2023	
<b>Forest Parks</b> Forestry Commission	May 2023	Not Applicable
<b>Local Nature Reserves</b> Natural England	February 2024	Bi-Annually
<b>Marine Nature Reserves</b> Natural England	February 2024	Bi-Annually
<b>National Nature Reserves</b> Natural England	February 2024	Bi-Annually
<b>National Parks</b> Natural England	February 2018	Bi-Annually
<b>Nitrate Sensitive Areas</b> Natural England	April 2023	Not Applicable
<b>Nitrate Vulnerable Zones</b> Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA) Environment Agency - Head Office	April 2016 April 2024	Bi-Annually
<b>Ramsar Sites</b> Natural England	February 2024	Bi-Annually
<b>Sites of Special Scientific Interest</b> Natural England	April 2024	Bi-Annually
<b>Special Areas of Conservation</b> Natural England	April 2024	Bi-Annually
<b>Special Protection Areas</b> Natural England	April 2024	Bi-Annually



A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	 <b>British Geological Survey</b> NATURAL ENVIRONMENT RESEARCH COUNCIL
Centre for Ecology and Hydrology	 <b>Centre for Ecology &amp; Hydrology</b> NATURAL ENVIRONMENT RESEARCH COUNCIL
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Stantec UK Ltd	




Contact	Name and Address	Contact Details
1	<b>British Geological Survey - Enquiry Service</b> British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 [REDACTED]
2	<b>Environment Agency - National Customer Contact Centre (NCCC)</b> PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
3	<b>Environment Agency - Head Office</b> Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409
4	<b>Ordnance Survey</b> Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
5	<b>Milton Keynes Council - Planning and Transport Department</b> PO Box 125, Civic Offices, 1 Saxon Gate East, Milton Keynes, Buckinghamshire, MK9 3ZJ	Telephone: 01908 691691 Fax: 01908 252211 Website: www.miltonkeynes.gov.uk
6	<b>Bedfordshire County Council (now part of Central Bedfordshire Council)</b> Priory House, Monks Walk, Chicksands, Shefford, Bedfordshire, SG17 5TQ	Telephone: 0300 300 8301 Email: www.centralbedfordshire.gov.uk Website: www.centralbedfordshire.gov.uk
7	<b>Bedford Borough Council - Environmental Health Department</b> Town Hall, St Pauls Street, Bedford, Bedfordshire, MK40 1SJ	Telephone: 01234 267422 Fax: 01234 325671 Email: enquiries@bedford.gov.uk Website: www.bedford.gov.uk
8	<b>PointX</b> 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	[REDACTED]
9	<b>Natural England</b> County Hall, Spetchley Road, Worcester, WR5 2NP	Telephone: 0300 060 3900 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
-	<b>Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards</b> Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk [REDACTED]
-	<b>Landmark Information Group Limited</b> Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 [REDACTED].uk

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.









## Geology 1:50,000 Maps Legends










### Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	WGR	Worked Ground (Undivided)	Void	Not Supplied - Holocene

### Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay and Silt	Not Supplied - Holocene
	ODT	Oadby Member	Diamicton	Not Supplied - Anglian
	BIDM	Biddenham Member	Sand and Gravel	Not Supplied - Pleistocene
	FELM	Felmersham Member	Sand and Gravel	Not Supplied - Pleistocene
	STGO	Stoke Goldington Member	Sand and Gravel	Not Supplied - Pleistocene
	HEAD	Head	Clay, Silt, Sand and Gravel	Not Supplied - Quaternary

### Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	KLS	Kellaways Sand Member	Sandstone and Siltstone, Interbedded	Not Supplied - Callovian
	KLC	Kellaways Clay Member	Mudstone	Not Supplied - Callovian
	PET	Peterborough Member	Mudstone	Not Supplied - Callovian
	CB	Combrash Formation	Limestone	Not Supplied - Bathonian
	BWC	Blisworth Clay Formation	Mudstone	Not Supplied - Bathonian
	BWL	Blisworth Limestone Formation	Limestone	Not Supplied - Bathonian
	RLD	Rutland Formation	Argillaceous Rocks with Subordinate Sandstone and Limestone	Not Supplied - Bajocian
	RLD	Rutland Formation	Mudstone	Not Supplied - Bajocian
		Faults		



### Geology 1:50,000 Maps

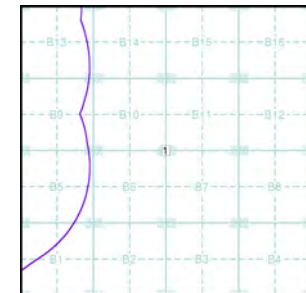
This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published paper maps.

The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page. Not all layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

### Geology 1:50,000 Maps Coverage

Map ID:	1
Map Sheet No:	203
Map Name:	Bedford
Map Date:	2010
Bedrock Geology:	Available
Superficial Geology:	Available
Artificial Geology:	Available
Faults:	Not Supplied
Landslip:	Available
Rock Segments:	Not Supplied

### Geology 1:50,000 Maps - Slice B



### Order Details:

Order Number:	346936621_1_1
Customer Reference:	DS78309
National Grid Reference:	491880, 254690
Slice:	B
Site Area (Ha):	172.36
Search Buffer (m):	1000

### Site Details:

Meikleland

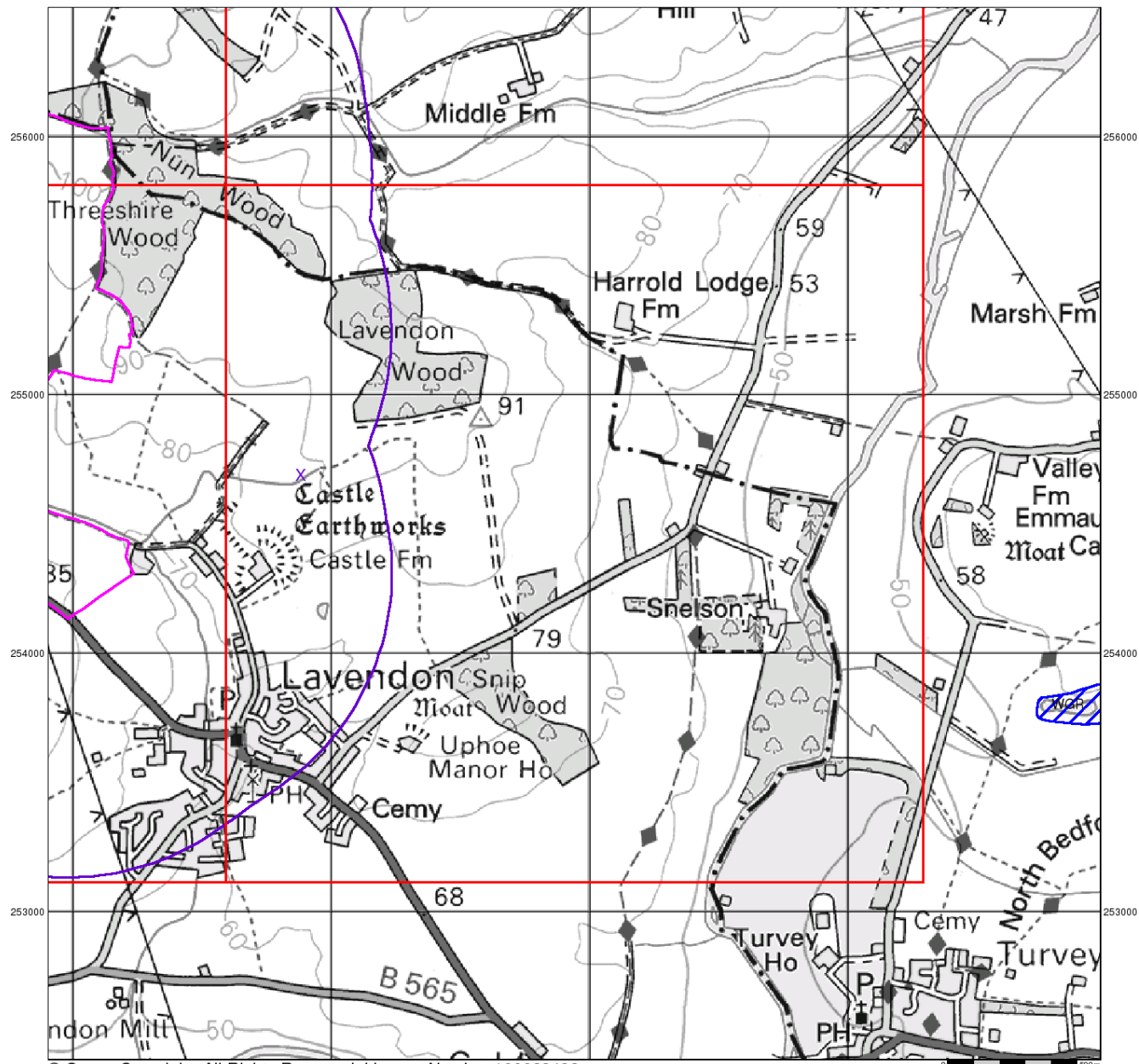


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DeltaSimons

### Artificial Ground and Landslip

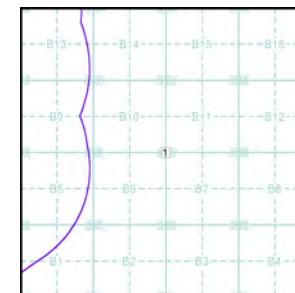
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions and unstable ground.

Artificial ground includes:

- Made ground - man-made deposits such as embankments and spoil heaps on the natural ground surface.
- Worked ground - areas where the ground has been cut away such as quarries and road cuttings.
- Infilled ground - areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground - areas where the surface has been reshaped.
- Disturbed ground - areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes foundered strata, where the ground has collapsed due to subsidence.

### Artificial Ground and Landslip Map - Slice B



### Order Details:

Order Number: 346936621\_1\_1  
 Customer Reference: DS78309  
 National Grid Reference: 491880, 254690  
 Slice: B  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

### Site Details:

Meikleland

**Landmark**  
 INFORMATION GROUP

Tel: 0844 844 9952  
 Fax: 0844 844 9951  
 Web: [Redacted]

v15.0 16-May-2024

Page 2 of 5

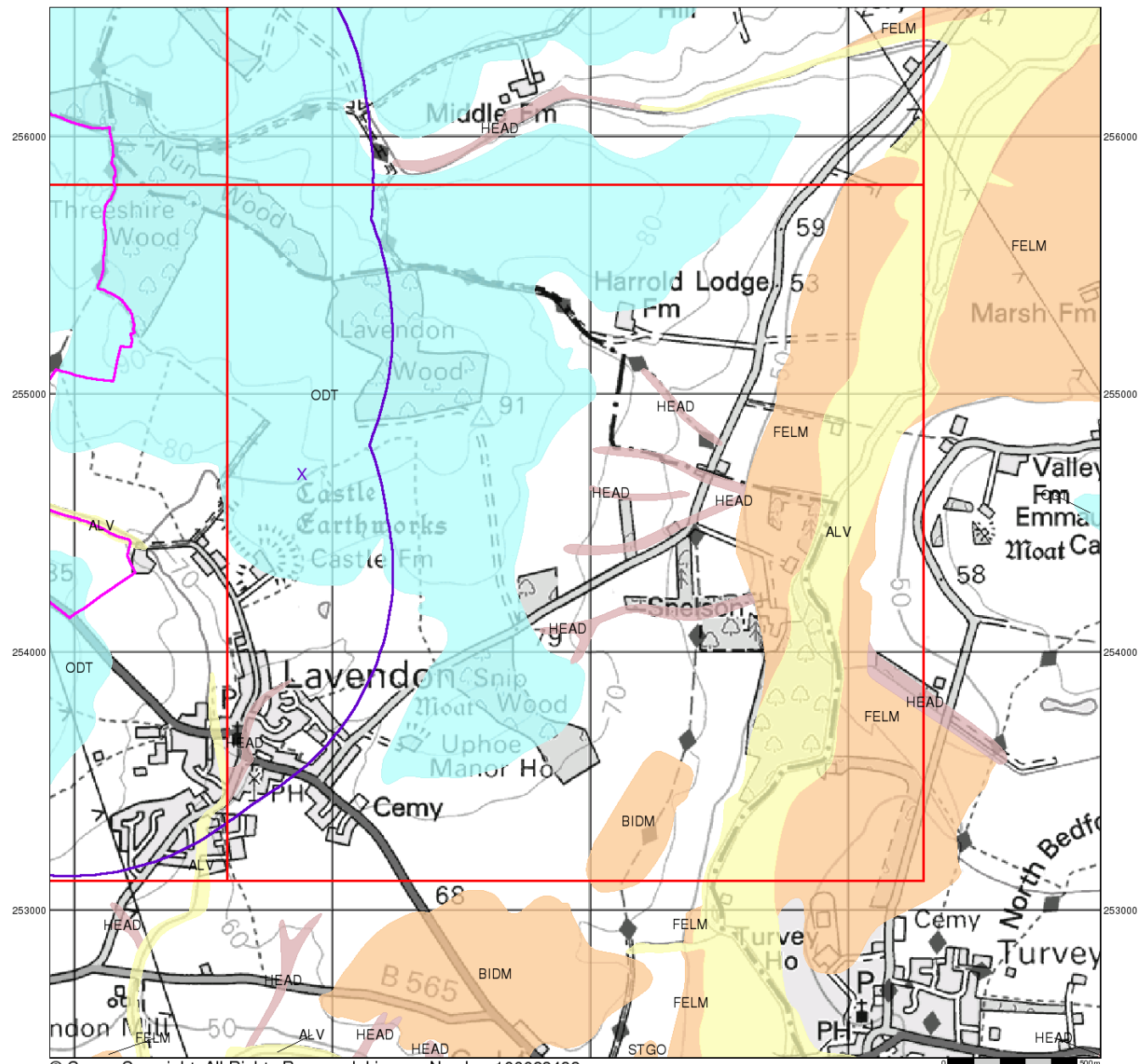


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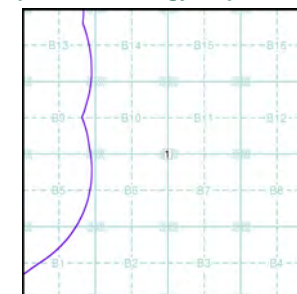
### Superficial Geology

Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, the Quaternary, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

### Superficial Geology Map - Slice B



### Order Details:

Order Number: 346936621\_1\_1  
 Customer Reference: DS78309  
 National Grid Reference: 491880, 254690  
 Slice: B  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

### Site Details:

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Tel: 0844 844 9952  
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v15.0 16-May-2024

Page 3 of 5

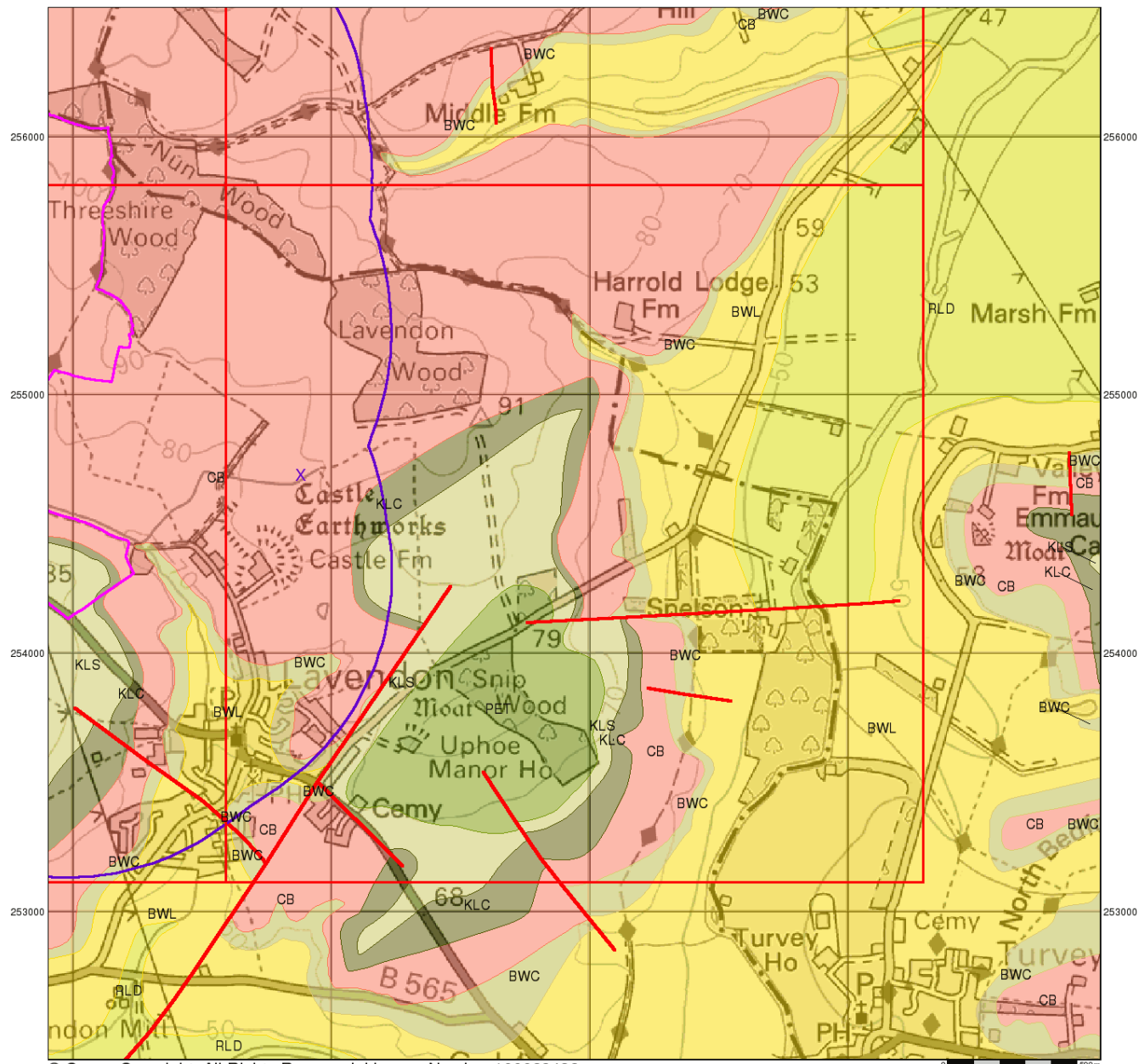


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### Bedrock and Faults

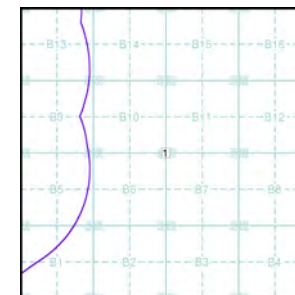
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults (e.g. normal, thrust), and thin beds mapped as lines (e.g. coal seam, gypsum bed). Some of these are linked to other particular 1:50,000 Geology datasets, for example, coal seams are part of the bedrock sequence, most faults and mineral veins primarily affect the bedrock but cut across the strata and post date its deposition.

### Bedrock and Faults Map - Slice B



### Order Details:

Order Number: 346936621\_1\_1  
 Customer Reference: DS78309  
 National Grid Reference: 491880, 254690  
 Slice: B  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

### Site Details:

Meikleland

**Landmark**  
 INFORMATION GROUP

Tel: 0844 844 9952  
 Fax: 0844 844 9951  
 Web: [Redacted]

v15.0 16-May-2024

Page 4 of 5

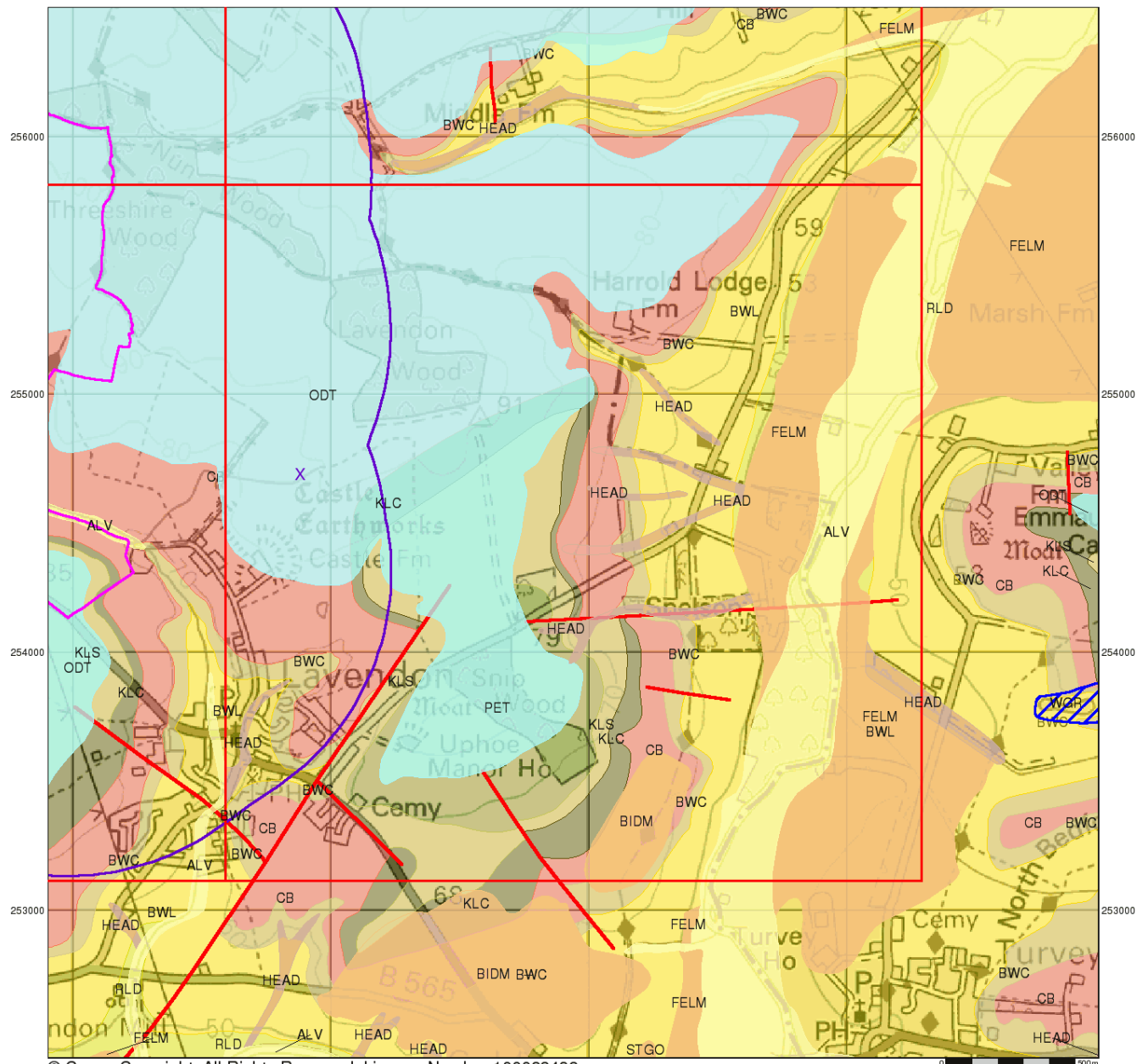


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### Combined Surface Geology

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

### Additional Information

More information on 1:50,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

### Contact

British Geological Survey  
Kingsley Dunham Centre  
Keyworth  
Nottingham  
NG12 5GG

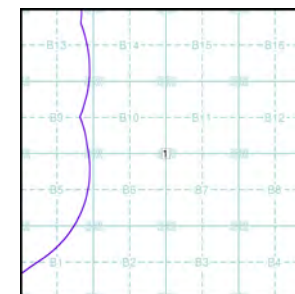
Telephone: 0115 936 3143

Fax: 0115 936 3276

email: [enquiries@bgs.ac.uk](mailto:enquiries@bgs.ac.uk)

website: [www.bgs.ac.uk](http://www.bgs.ac.uk)

### Combined Geology Map - Slice B



### Order Details:

Order Number: 346936621\_1\_1  
Customer Reference: DS78309  
National Grid Reference: 491880, 254690  
Slice: B  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

### Site Details:

Meikleland

**Landmark**  
INFORMATION GROUP






Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [www.landmark-information.co.uk](http://www.landmark-information.co.uk)

v15.0 16-May-2024

Page 5 of 5



**General**

-  Specified Site  Specified Buffer(s)  Bearing Reference Point  Map ID
-  Several of Type at Location

**Agency and Hydrological**

-  Contaminated Land Register Entry or Notice (Location)  Contaminated Land Register Entry or Notice (Location)
-  Discharge Consent  Enforcement or Prohibition Notice  Integrated Pollution Control
-  Integrated Pollution Prevention Control  Local Authority Integrated Pollution Prevention and Control
-  Local Authority Pollution Prevention and Control  Local Authority Pollution Prevention and Control Enforcement
-  Pollution Incident to Controlled Waters  Prosecution Relating to Authorised Processes
-  Prosecution Relating to Controlled Waters  Registered Radioactive Substance
-  River Network or Water Feature  River Quality Sampling Point
-  Substantiated Pollution Incident Register  Water Abstraction
-  Water Industry Act Referral
























**Hazardous Substances**

-  COMAH Site  Explosive Site
-  NIHHS Site  Planning Hazardous Substance Consent
-  Planning Hazardous Substance Enforcement

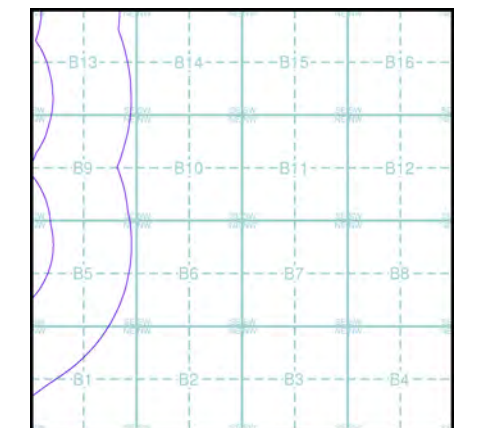
**Geological**

-  BGS Recorded Mineral Site

**Waste**

-  BGS Recorded Landfill Site (Location)  BGS Recorded Landfill Site (Location)
-  EA Historic Landfill (Buffered Point)  EA Historic Landfill (Polygon)
-  Integrated Pollution Control Registered Waste Site  Licensed Waste Management Facility (Landfill Boundary)
-  Licensed Waste Management Facility (Location)  Local Authority Recorded Landfill Site (Location)
-  Local Authority Recorded Landfill Site  Potentially Infilled Land (Non-water)
-  Potentially Infilled Land (Non-water)  Potentially Infilled Land (Non-water)
-  Potentially Infilled Land (Water)  Potentially Infilled Land (Water)
-  Potentially Infilled Land (Water)  Registered Landfill Site
-  Registered Landfill Site (Location)  Registered Landfill Site (Point Buffered to 100m)
-  Registered Landfill Site (Point Buffered to 250m)  Registered Waste Transfer Site (Location)
-  Registered Waste Transfer Site  Registered Waste Treatment or Disposal Site (Location)
-  Registered Waste Treatment or Disposal Site

**Site Sensitivity Map - Slice B**



**Order Details**

Order Number: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 491880, 254690  
Slice: B  
Site Area (Ha): 172.36  
Search Buffer (m): 1000






**Site Details**

Meikleland





## Industrial Land Use Map

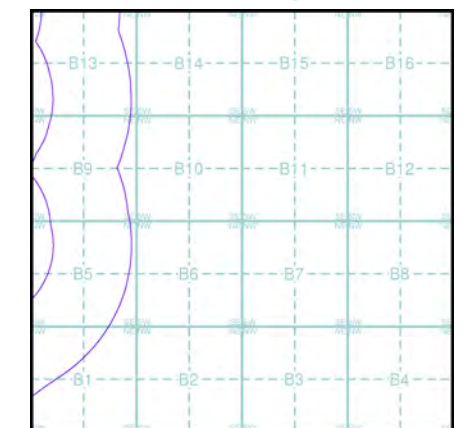
### General

-  Specified Site
-  Specified Buffer(s)
-  Bearing Reference Point
-  Slice
-  Map ID

### Industrial Land Use

-  Contemporary Trade Directory Entry
-  Fuel Station Entry
-  Gas Pipeline
-  Points of Interest - Commercial Services
-  Points of Interest - Education and Health
-  Points of Interest - Manufacturing and Production
-  Points of Interest - Public Infrastructure
-  Points of Interest - Recreational and Environmental
-  Underground Electrical Cables

## Industrial Land Use Map - Slice B



### Order Details

Order Number: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 491880, 254690  
Slice: B  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

### Site Details

Meikleland







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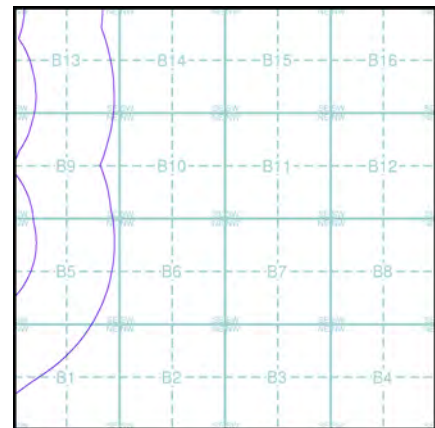
### General

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

### Agency and Hydrological (Flood)

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

### Flood Map - Slice B



### Order Details

Order Number: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 491880, 254690  
Slice: B  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

### Site Details






Meikleland








Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [Redacted]



### General

-  Specified Site
-  Specified Buffer(s)
-  Bearing Reference Point
-  Map ID
-  Several of Type at Location

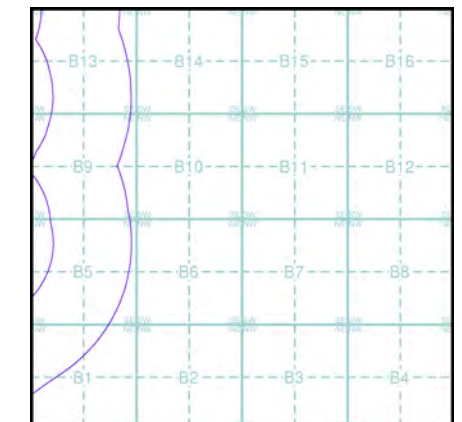
### Agency and Hydrological (Boreholes)

-  BGS Borehole Depth 0 - 10m
-  BGS Borehole Depth 10 - 30m
-  BGS Borehole Depth 30m +
-  Confidential
-  Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of [\[REDACTED\]](#)

### Borehole Map - Slice B



### Order Details




Order Number: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 491880, 254690  
Slice: B  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

### Site Details





Meikleland








### General

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

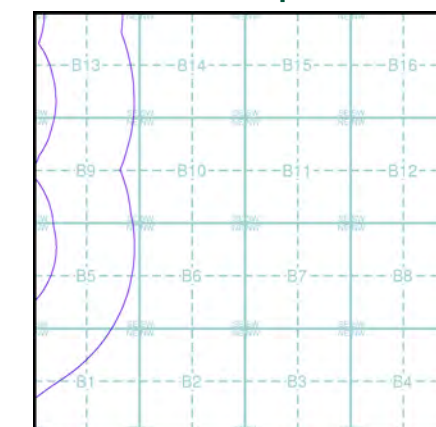
### OS Water Network Data

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

### Contours (height in meters)

- Standard Contour  105  Mean Low Water
- Master Contour  100  Mean High Water
- Spot Height  167.3

### OS Water Network Map - Slice B

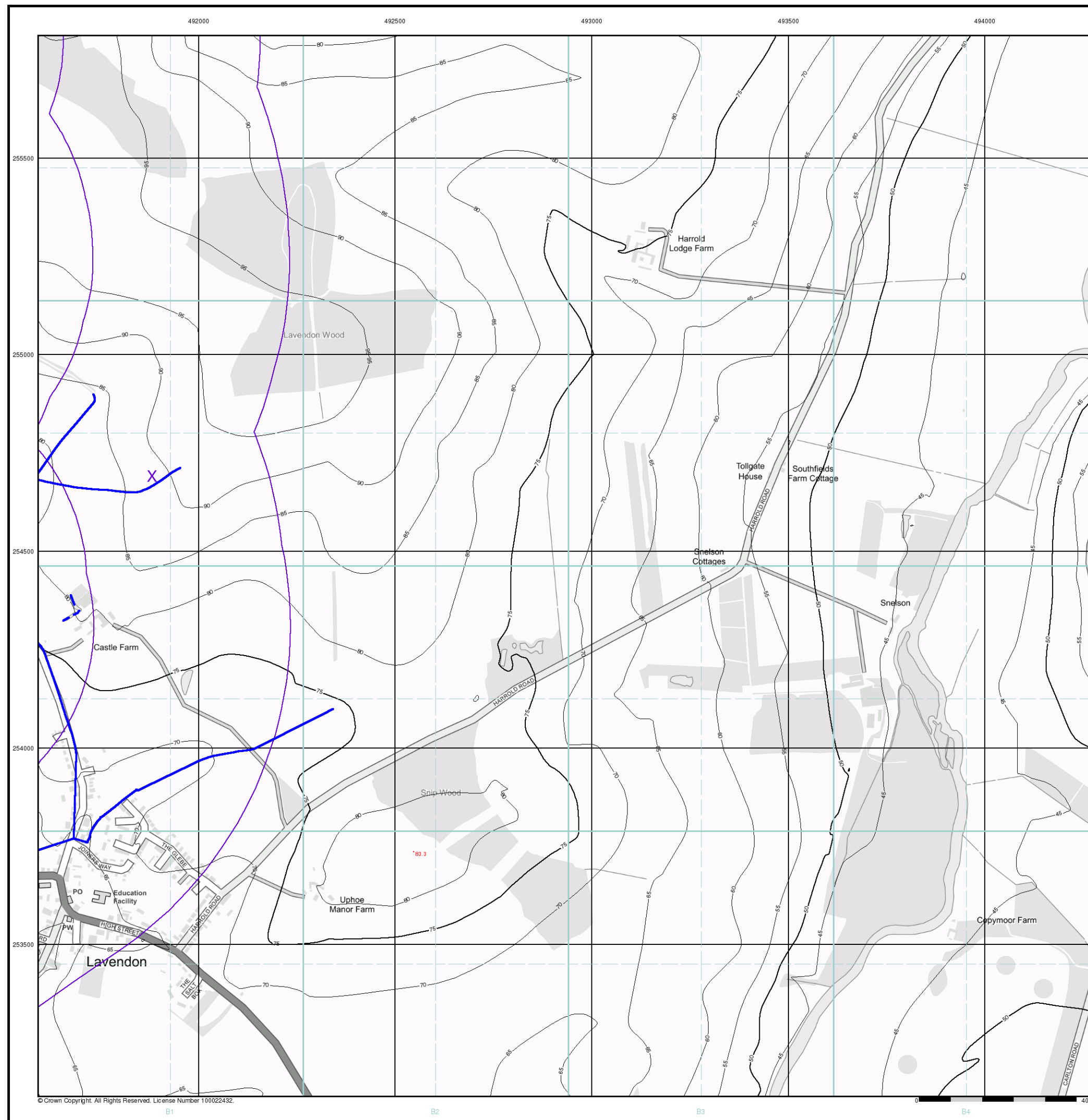


### Order Details

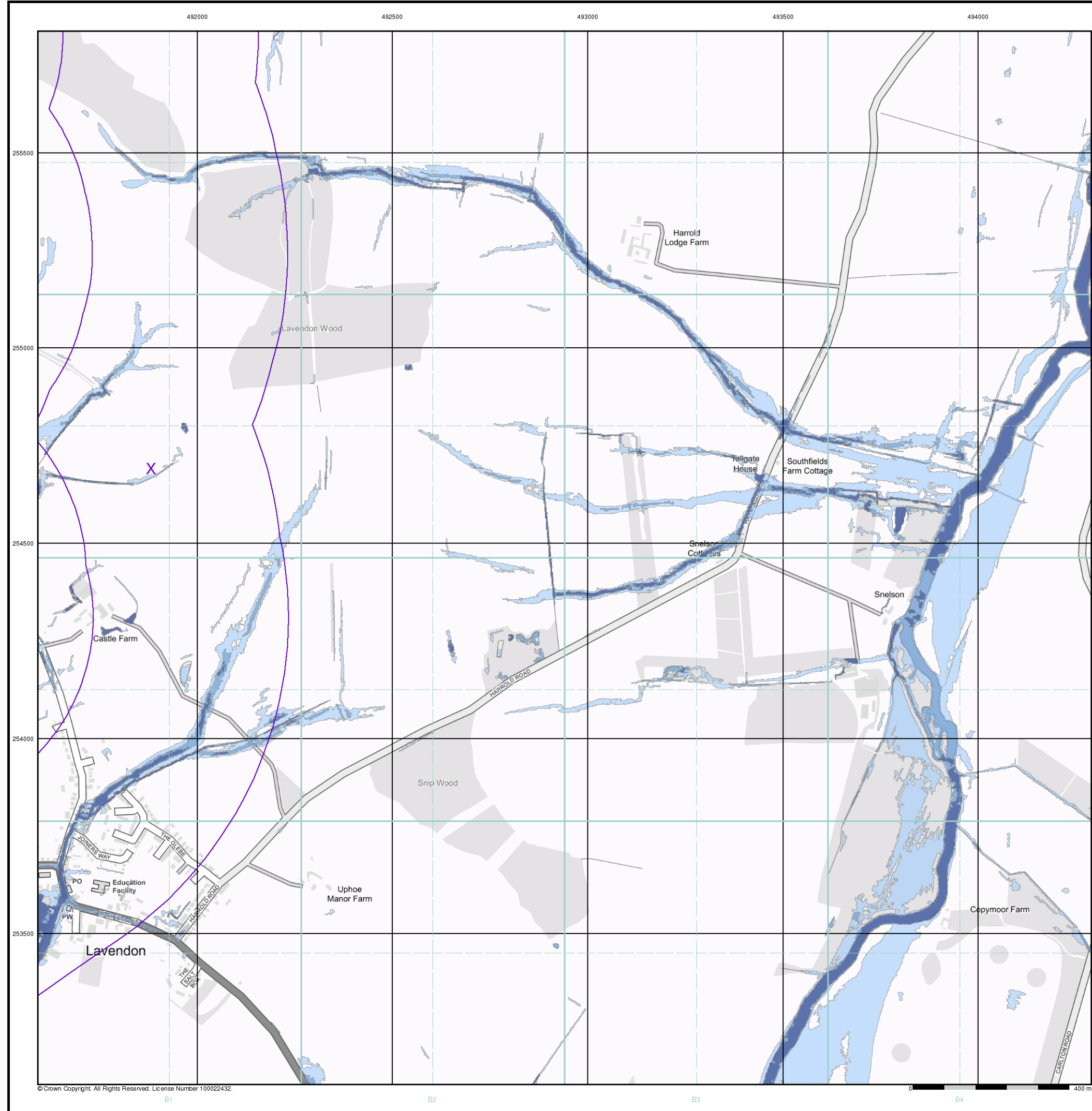
Order Number: 346936621\_1\_1  
 Customer Ref: DS78309  
 National Grid Reference: 491880, 254690  
 Slice: B  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

### Site Details

Meikleland







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### General

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

### Risk of Flooding from Surface Water

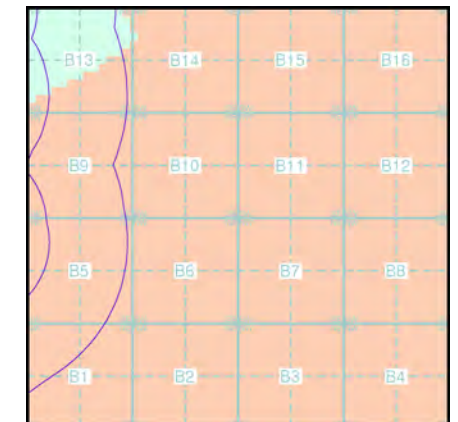
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

### Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

### EANRW Suitability Map - Slice B



### Order Details

Order Number: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 491880, 254690  
Slice: B  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

### Site Details

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Fax: 0844 844 9951  
Web: [Redacted]

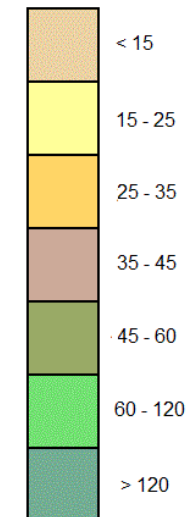


General

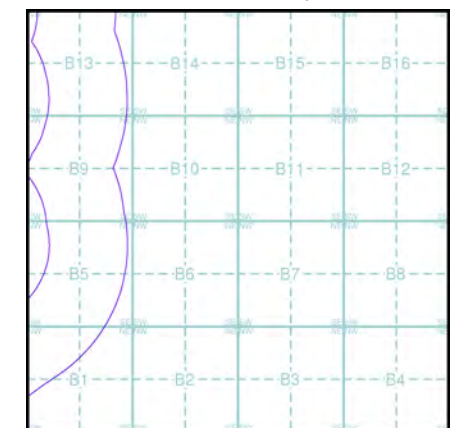
 Specified Site  Specified Buffer(s)  Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg



Estimated Soil Chemistry Arsenic - Slice B



Order Details




Order Details: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 491880, 254690  
Slice: B  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

Site Details

Meikleland

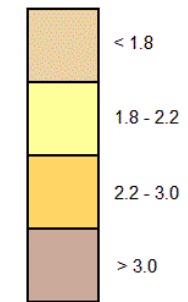


General

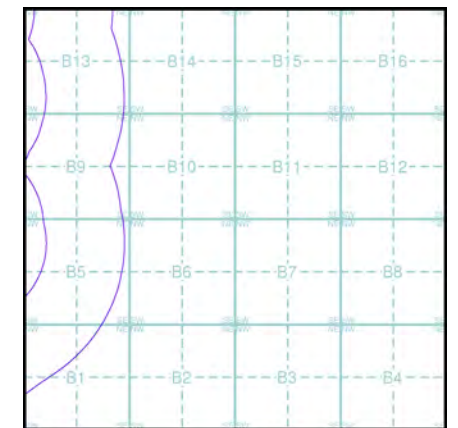
 Specified Site       Specified Buffer(s)       Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg



Estimated Soil Chemistry Cadmium - Slice B



Order Details

Order Details: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 491880, 254690  
Slice: B  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

Site Details

Meikleland

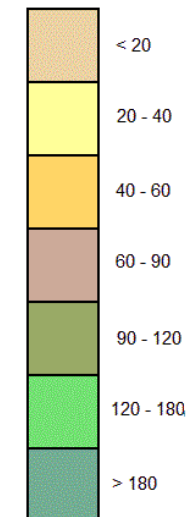


General

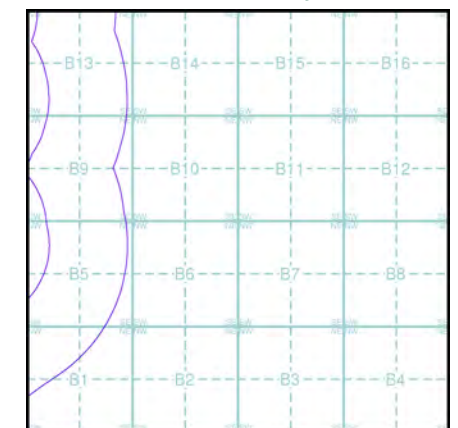
 Specified Site       Specified Buffer(s)       Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg



Estimated Soil Chemistry Chromium - Slice B



Order Details



Order Details: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 491880, 254690  
Slice: B  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

Site Details

Meikleland

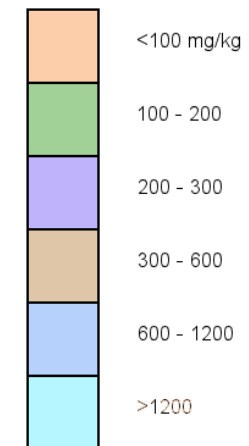


General

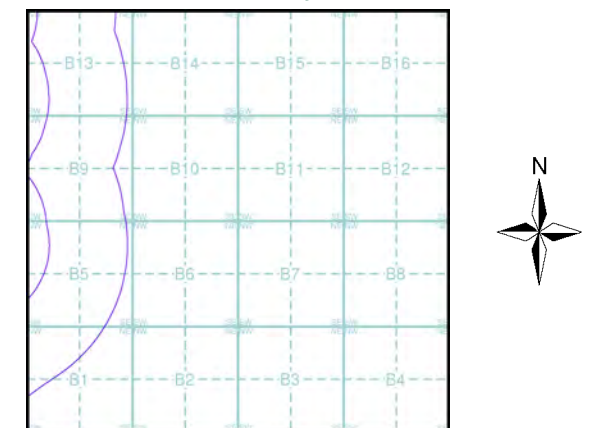
 Specified Site       Specified Buffer(s)       Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg



Estimated Soil Chemistry Lead - Slice B



Order Details



Order Details: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 491880, 254690  
Slice: B  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

Site Details

Meikleland

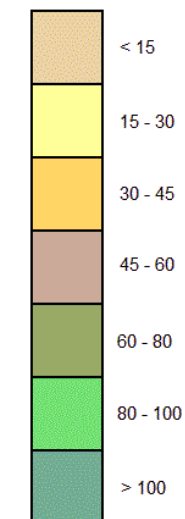


### General

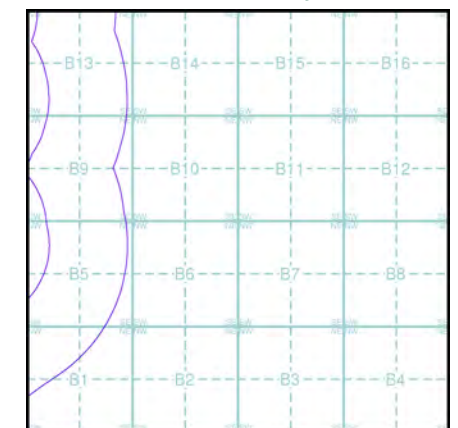
 Specified Site  Specified Buffer(s)  Bearing Reference Point

### Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg



### Estimated Soil Chemistry Nickel - Slice B



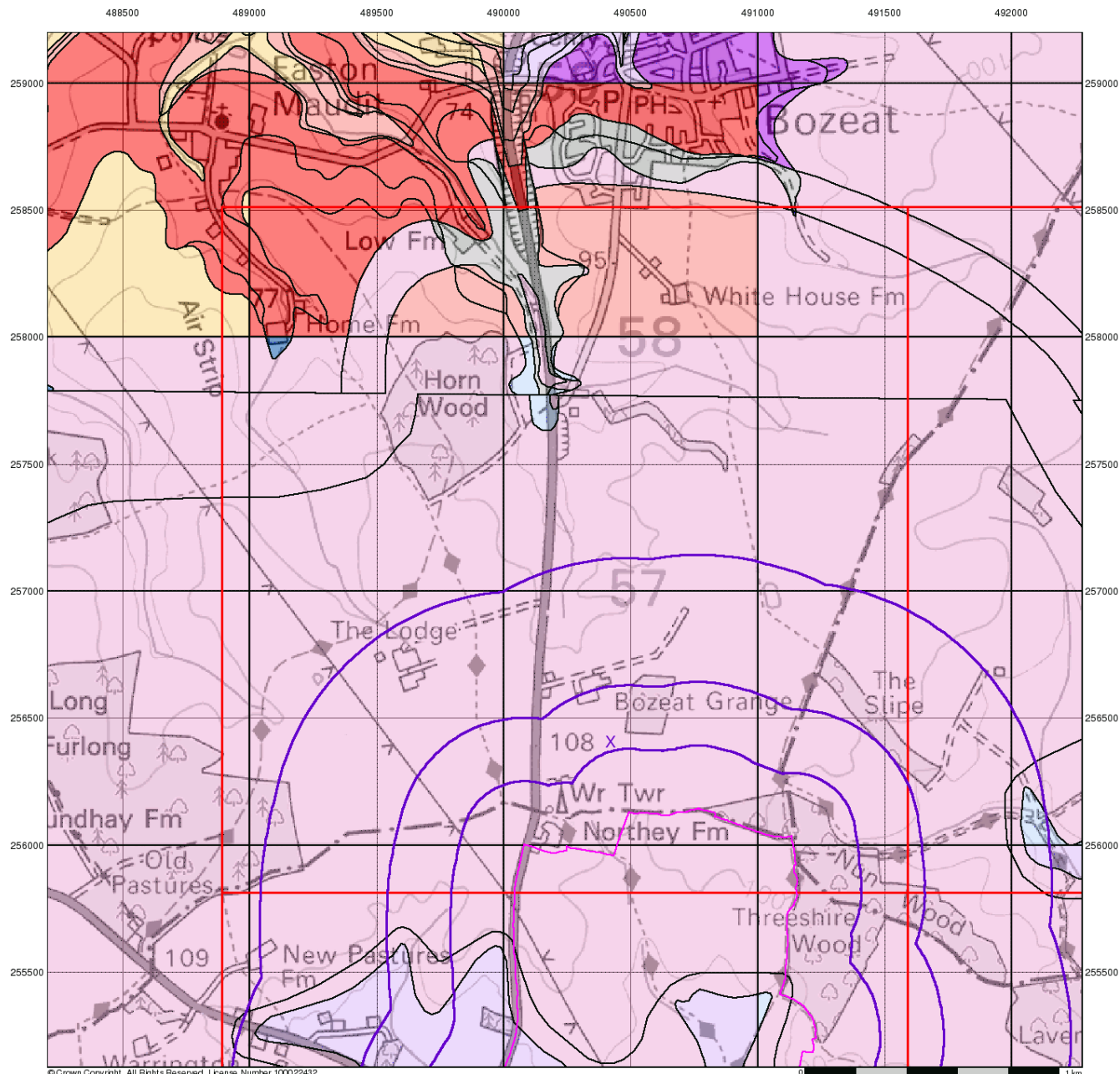
### Order Details

Order Details: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 491880, 254690  
Slice: B  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

### Site Details

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## Groundwater Vulnerability

### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### Agency and Hydrological

#### Bedrock Aquifers

- High Vulnerability, Principal Aquifer
- High Vulnerability, Secondary Aquifer
- Medium Vulnerability, Principal Aquifer
- Medium Vulnerability, Secondary Aquifer
- Low Vulnerability, Principal Aquifer
- Low Vulnerability, Secondary Aquifer

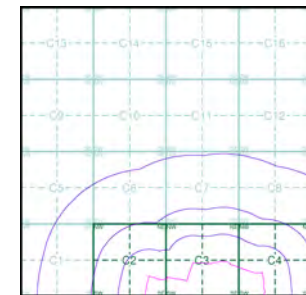
#### Superficial Aquifers

- High Vulnerability, Principal Aquifer
- High Vulnerability, Secondary Aquifer
- Medium Vulnerability, Principal Aquifer
- Medium Vulnerability, Secondary Aquifer
- Low Vulnerability, Principal Aquifer
- Low Vulnerability, Secondary Aquifer

Unproductive Aquifer

Soluble Rock

### Site Sensitivity Context Map - Slice C



### Order Details

Order Number: 346936621\_1\_1  
 Customer Ref: DS78309  
 National Grid Reference: 490420, 256410  
 Slice: C  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

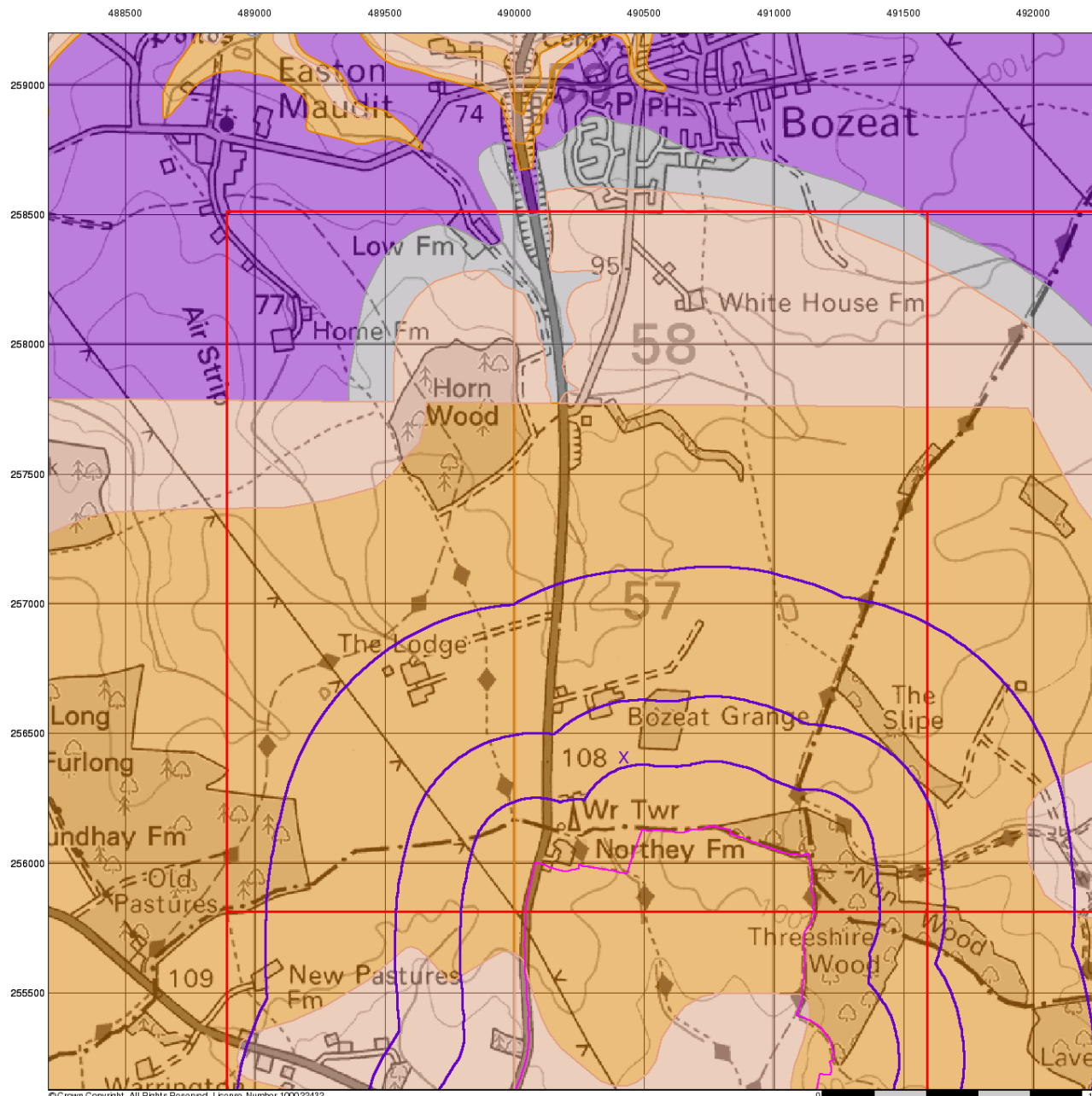
### Site Details

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## Bedrock Aquifer Designation

### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### Agency and Hydrological

#### Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

### Site Sensitivity Context Map - Slice C



### Order Details

Order Number: 346936621\_1\_1  
 Customer Ref: DS78309  
 National Grid Reference: 490420, 256410  
 Slice: C  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

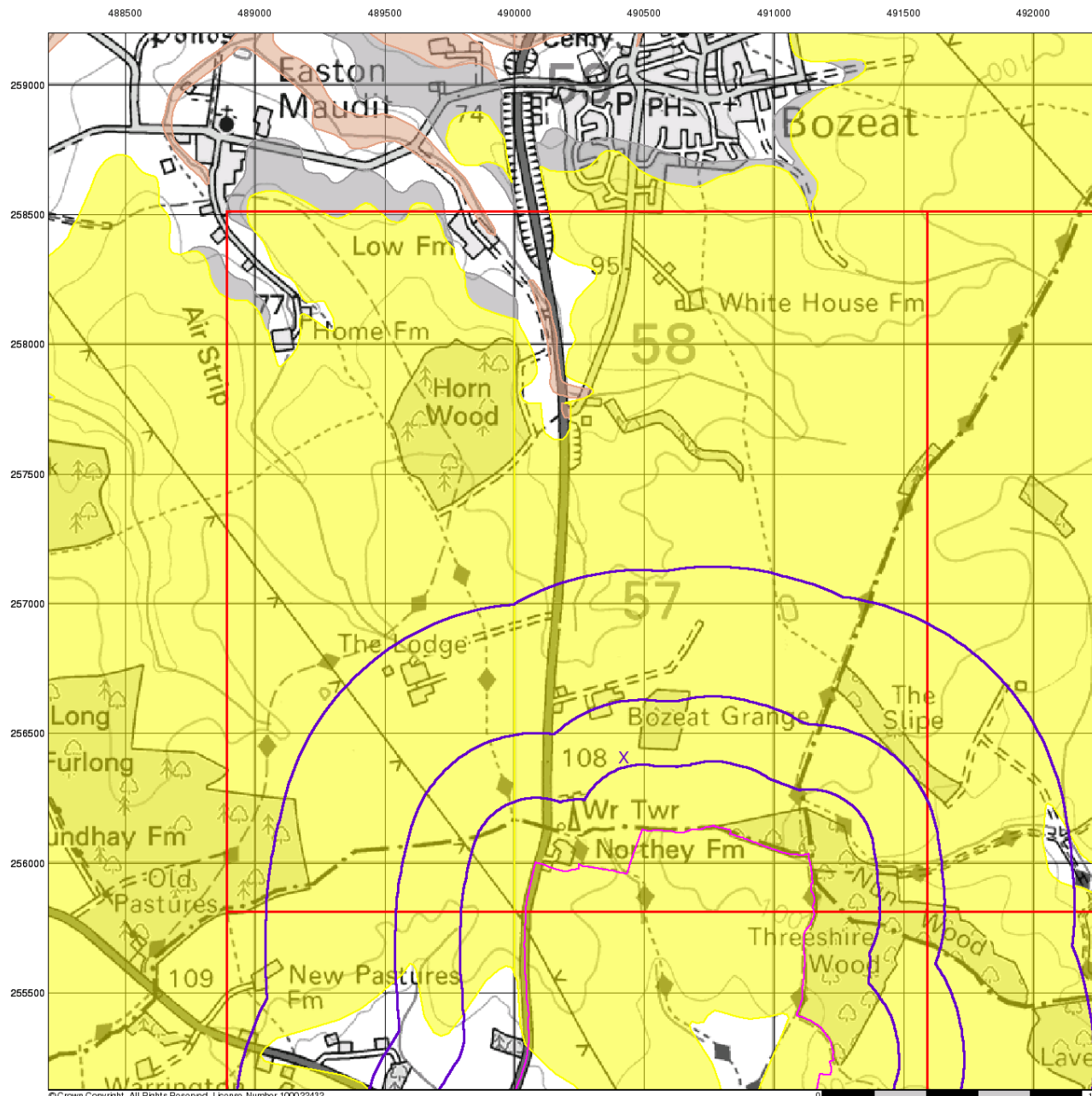
### Site Details

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## Superficial Aquifer Designation

### General

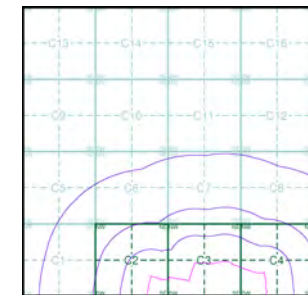
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### Agency and Hydrological

#### Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

### Site Sensitivity Context Map - Slice C



### Order Details

Order Number: 346936621\_1\_1  
 Customer Ref: DS78309  
 National Grid Reference: 490420, 256410  
 Slice: C  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

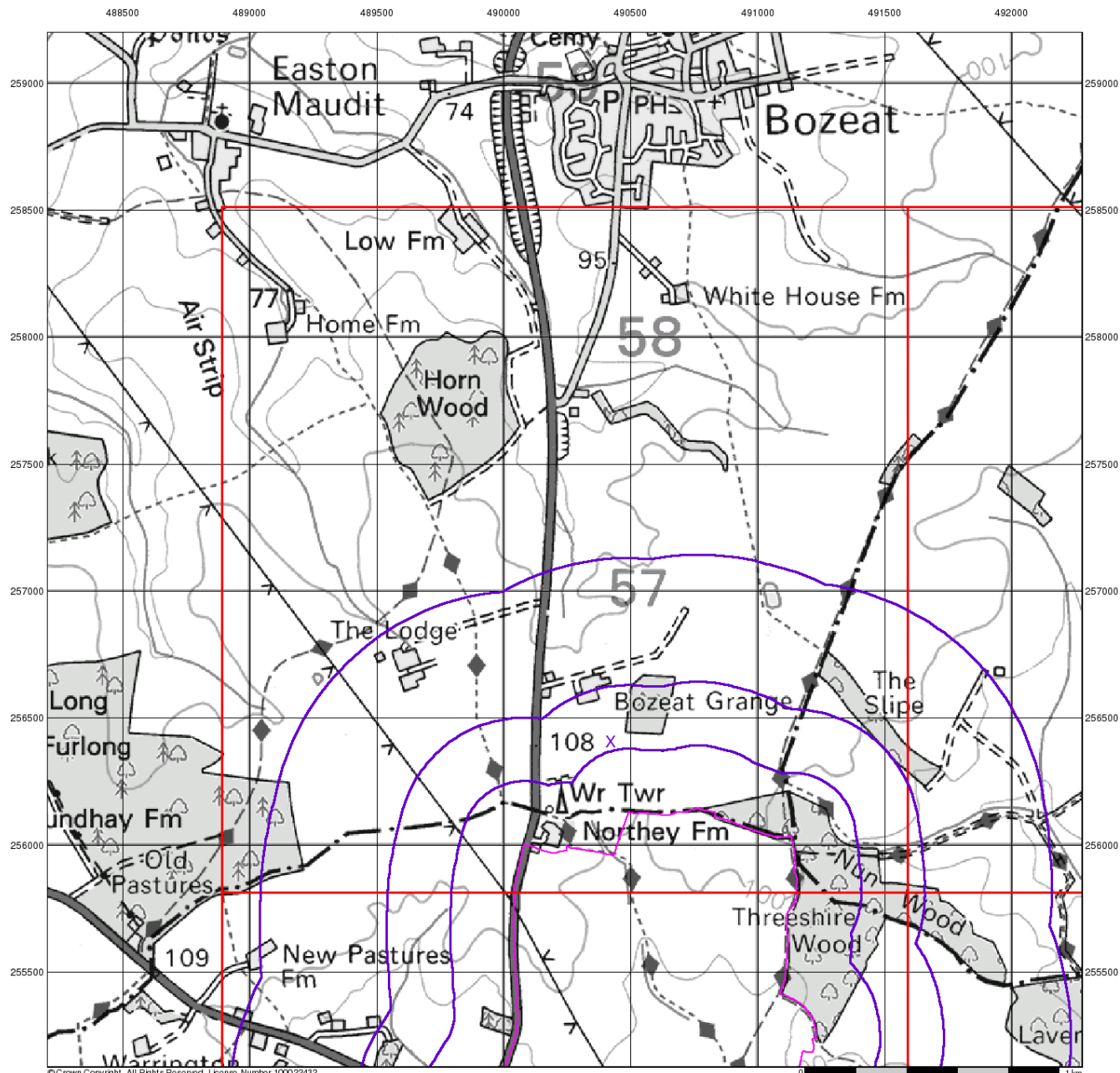
### Site Details

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 Web: [Redacted]





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## Source Protection Zones

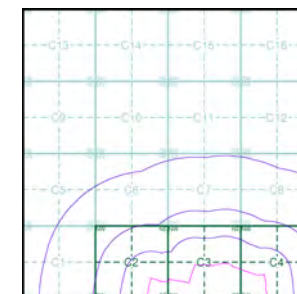
### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### Agency and Hydrological

- Inner zone (Zone 1)
- Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- Total catchment - subsurface activity only (Zone 3c)
- Special interest (Zone 4)

### Site Sensitivity Context Map - Slice C



### Order Details

Order Number: 346936621\_1\_1  
 Customer Ref: DS78309  
 National Grid Reference: 490420, 256410  
 Slice: C  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

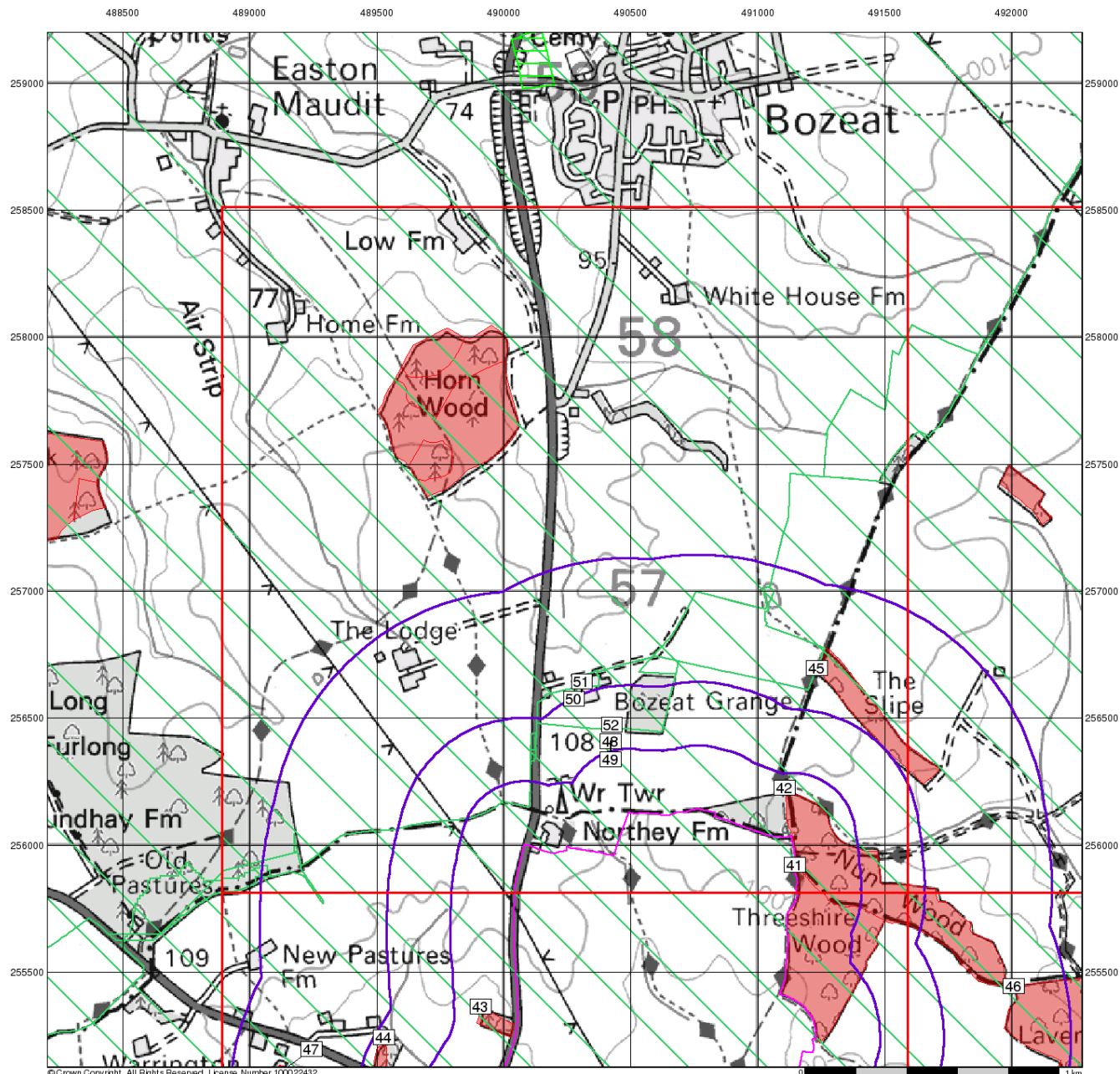
### Site Details

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## Sensitive Land Uses

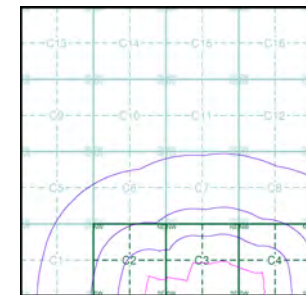
### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### Sensitive Land Uses

- Ancient Woodland
- Area of Adopted Green Belt
- Area of Unadopted Green Belt
- Area of Outstanding Natural Beauty
- Environmentally Sensitive Area
- Forest Park
- Local Nature Reserve
- Marine Nature Reserve
- National Nature Reserve
- National Park
- Nitrate Sensitive Area
- Nitrate Vulnerable Zone
- Ramsar Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area
- World Heritage Sites

### Site Sensitivity Context Map - Slice C



### Order Details

Order Number: 346936621\_1\_1  
 Customer Ref: DS78309  
 National Grid Reference: 490420, 256410  
 Slice: C  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

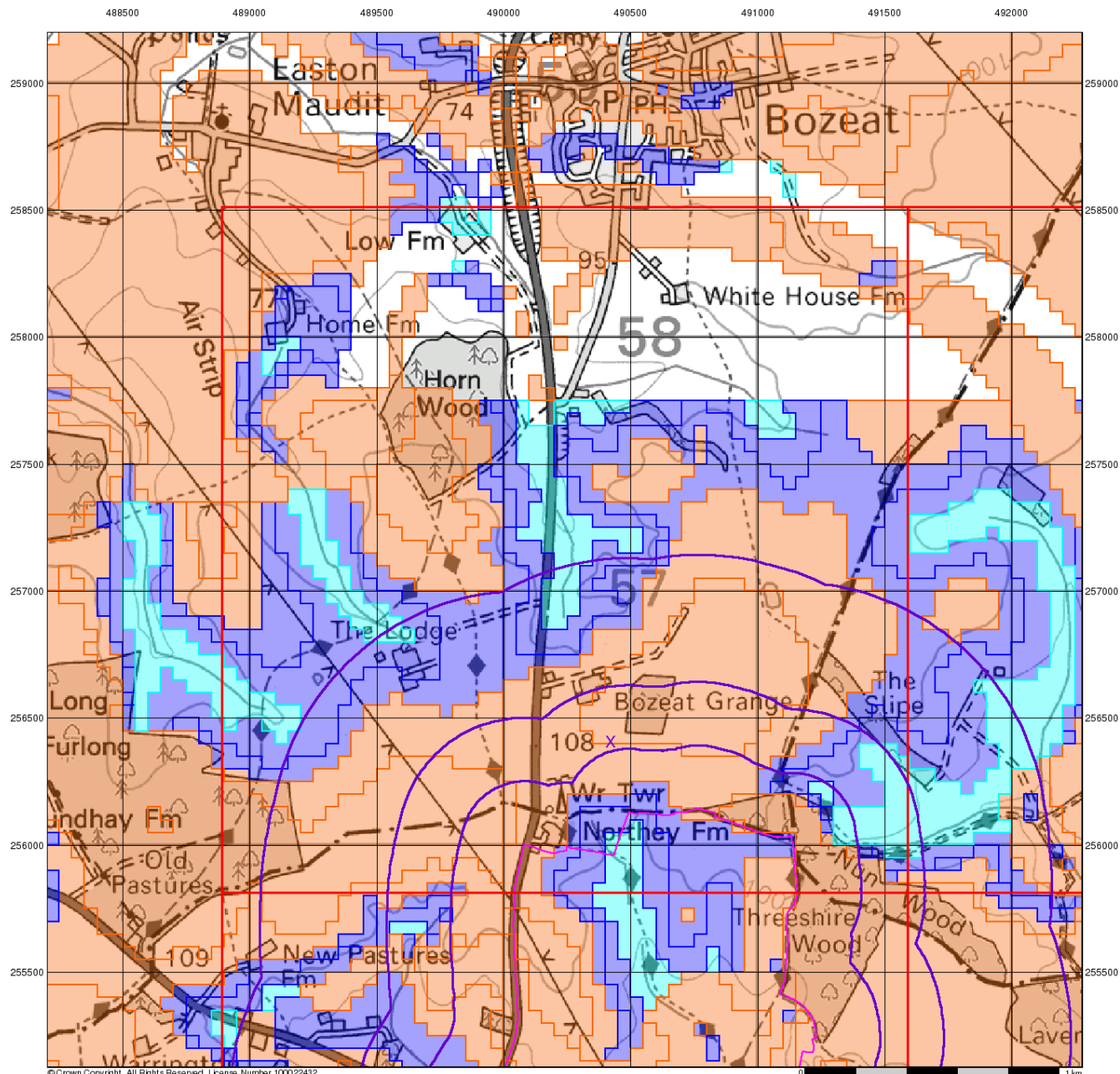
### Site Details

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 Fax: 0844 844 9951  
 Web: [www.landmarkinfo.co.uk](http://www.landmarkinfo.co.uk)





## BGS Flood GFS Data

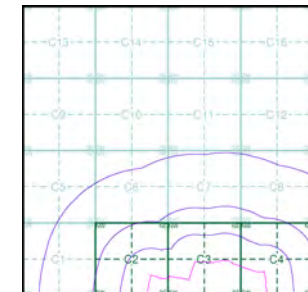
### General

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

### Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

## Site Sensitivity Context Map - Slice C



## Order Details

Order Number: 346936621\_1\_1  
 Customer Ref: DS78309  
 National Grid Reference: 490420, 256410  
 Slice: C  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

## Site Details

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 Fax: 0844 844 9951  
 Web: [www.landmarkinfo.co.uk](http://www.landmarkinfo.co.uk)



## Envirocheck<sup>®</sup> Report:

### Datasheet

#### Order Details:

**Order Number:**

346936621\_1\_1

**Customer Reference:**

DS78309

**National Grid Reference:**

490420, 256410

**Slice:**

C

**Site Area (Ha):**

172.36


**Search Buffer (m):**

1000

#### Site Details:

Meikleland

#### Client Details:

  
Delta Simons  
Suite 4A  
One Portland Street  
Manchester  
M1 3BE





Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	13
Hazardous Substances	-
Geological	14
Industrial Land Use	16
Sensitive Land Use	17
Data Currency	18
Data Suppliers	25
Useful Contacts	26

#### Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination. For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client. In this datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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#### Report Version v53.0



Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
<b>Agency &amp; Hydrological</b>					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 4	1	3		1
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls					
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 5	Yes			
Pollution Incidents to Controlled Waters	pg 5				1
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality					
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions	pg 5				(*1)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 5	Yes	n/a	n/a	n/a
Groundwater Vulnerability - Soluble Rock Risk	pg 8	5	n/a	n/a	n/a
Groundwater Vulnerability - Local Information			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 8	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 8	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 9	10	4	2	14



Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
<b>Waste</b>					
BGS Recorded Landfill Sites					
Historical Landfill Sites					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage	pg 13	5	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)					
Potentially Infilled Land (Water)					
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
<b>Hazardous Substances</b>					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					



Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
<b>Geological</b>					
BGS 1:625,000 Solid Geology	pg 14	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 14	Yes			
BGS Recorded Mineral Sites					
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 14	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards				n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 14	Yes	Yes	n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 14	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 14	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 15	Yes	Yes	n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
<b>Industrial Land Use</b>					
Contemporary Trade Directory Entries					
Fuel Station Entries					
Points of Interest - Commercial Services					
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 16		1	1	3
Points of Interest - Public Infrastructure					
Points of Interest - Recreational and Environmental					
Gas Pipelines					
Underground Electrical Cables					



Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
<b>Sensitive Land Use</b>					
Ancient Woodland	pg 17	2	1	1	3
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 17	2	3		
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SE)	0	1	490850 255500
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(S)	0	1	490421 255450
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding to Occur at Surface	C3SW (S)	0	1	490500 256100
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(S)	0	1	490750 255300
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SE)	0	1	491100 255350
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SE)	0	1	491150 255350
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(S)	0	1	490700 255500
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	C3NW (SE)	0	1	490500 256250
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	C4SW (SE)	0	1	490950 255950
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SE)	0	1	491050 255550
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(S)	0	1	490250 255800
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(S)	0	1	490400 255700
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	C3NW (S)	0	1	490421 256200
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	C3NW (S)	0	1	490421 256400
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW)	0	1	490100 255750
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(S)	0	1	490421 255700
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	C3SE (SE)	0	1	490900 256100
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(S)	0	1	490450 255350
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(S)	0	1	490800 255250
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	C3SE (SE)	0	1	490850 256150
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(S)	0	1	490100 255550
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(SE)	0	1	490800 255600



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	C3NW (S)	0	1	490500 256200
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW)	0	1	489950 255450
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(S)	0	1	490050 255150
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(S)	0	1	490350 255750
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(S)	0	1	490400 255750
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SE)	0	1	490700 255750
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW)	0	1	490050 255650
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SE)	0	1	491100 255300
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SW)	23	1	489600 255500
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	C2NE (SW)	31	1	490050 256250
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(S)	32	1	490000 255350
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	C2SE (SW)	39	1	489950 255900
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW)	40	1	490000 255650
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	C2NE (W)	48	1	490000 256300
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	C4SW (SE)	109	1	491250 256050
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	C4NW (E)	116	1	491150 256200
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	C4SW (E)	117	1	491250 256100
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	C4SW (E)	133	1	491250 256150
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	C4NW (E)	133	1	491200 256200
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	C4NW (E)	139	1	491000 256300
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	C4NW (E)	156	1	491050 256250
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding to Occur at Surface	C4SE (E)	159	1	491300 256150



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding to Occur at Surface	C4NW (E)	163	1	491200 256250
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW)	190	1	489850 255650
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	C2SW (SW)	193	1	489850 255850
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	C4SE (SE)	203	1	491350 256000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	C3NW (NE)	207	1	490421 256407
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW)	223	1	489550 255200
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SW)	239	1	489800 255750
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SW)	242	1	489800 255800
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	C4SE (SE)	253	1	491400 256000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SW)	290	1	489750 255650
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	C4SE (E)	302	1	491450 256000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	C2NE (W)	309	1	490000 256407
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(SW)	339	1	489700 255700
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW)	340	1	489700 255650
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SW)	341	1	489700 255800
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	C4SE (SE)	344	1	491500 255900
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	C4SE (SE)	347	1	491500 255950
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW)	373	1	489500 255100
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SW)	390	1	489650 255650
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	C4SE (SE)	394	1	491550 255900



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	<b>Discharge Consents</b> Operator: [REDACTED] Property Type: [REDACTED] Location: [REDACTED]  Authority: Environment Agency, Anglian Region Catchment Area: Upper River Ouse Newport-Bedford Reference: Pr1nf1776 Permit Version: 1 Effective Date: 30th January 1985 Issued Date: 30th January 1985 Revocation Date: 24th March 1992 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Trib Lavendon Brook <b>Status: Pre National Rivers Authority Legislation where issue date &lt; 01/09/1989</b> Positional Accuracy: Located by supplier to within 100m	C3SW (S)	0	2	490300 255900
2	<b>Discharge Consents</b> Operator: [REDACTED] Property Type: [REDACTED] Location: [REDACTED]  Authority: Catchment Area: Upper River Ouse Newport-Bedford Reference: Pr1nf1776 Permit Version: 2 Effective Date: 25th March 1992 Issued Date: 25th March 1992 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Trib Lavenden Brook <b>Status: Post National Rivers Authority Legislation where issue date &gt; 31/08/1989</b> Positional Accuracy: Located by supplier to within 10m	2SE (SW)	14	2	490116 256008
3	<b>Discharge Consents</b> Operator: [REDACTED] Property Type: [REDACTED] Location: [REDACTED] Authority: Catchment Area: Upper River Ouse Newport-Bedford Reference: Pr1nf1777 Permit Version: 2 Effective Date: 25th March 1992 Issued Date: 25th March 1992 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Trib Lavendon Brook <b>Status: Post National Rivers Authority Legislation where issue date &gt; 31/08/1989</b> Positional Accuracy: Located by supplier to within 100m	C3SW (S)	18	2	490300 256000
3	<b>Discharge Consents</b> Operator: [REDACTED] Property Type: [REDACTED] Location: [REDACTED] Authority: Catchment Area: Not Supplied Reference: Pr1nf1777 Permit Version: 1 Effective Date: 30th January 1985 Issued Date: 30th January 1985 Revocation Date: 24th March 1992 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Freshwater Stream/River Environment: Receiving Water: Trib Lavendon Brook <b>Status: Pre National Rivers Authority Legislation where issue date &lt; 01/09/1989</b> Positional Accuracy: Located by supplier to within 100m	C3SW (S)	18	2	490300 256000



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	<b>Discharge Consents</b> Operator: Compton Estates Co(C V Hill Manager) Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: Easton Lodge Farm, Easton Maudit, Nr Bozeat Authority: Environment Agency, Anglian Region Catchment Area: Not Supplied Reference: Pr5nf2238p Permit Version: 1 Effective Date: 8th May 1963 Issued Date: 8th May 1963 Revocation Date: 11th June 1991 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge: Not Supplied Environment: Receiving Water: Not Supplied <b>Status: Pre National Rivers Authority Legislation where issue date &lt; 01/09/1989</b> Positional Accuracy: Located by supplier to within 100m	C6SW (NW)	933	2	489600 256800
	<b>Nearest Surface Water Feature</b>	C3SW (S)	0	-	490484 255935
5	<b>Pollution Incidents to Controlled Waters</b> Property Type: Road Location: Kettering District Authority: Environment Agency, Anglian Region Pollutant: Oils - Diesel (Including Agricultural) Note: Tributary Gendon Brook Incident Date: 6th December 1998 Incident Reference: 3601 Catchment Area: Not Given Receiving Water: Potential River Cause of Incident: Collision Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	C6SE (NW)	554	2	490200 256600
	<b>Water Abstractions</b> Operator: G Green Bozeat Ltd Licence Number: 5/32/09/*G/0157 Permit Version: 100 Location: Well At Bozeat Authority: Environment Agency, Anglian Region Abstraction: General Farming And Domestic Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Northampton Sanstone; Status: Perpetuity Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st January 1966 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	C15SE (N)	1964	2	490600 258100
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Bedrock Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: 40-70% Superficial Patchiness: <90% Superficial Thickness: >10m Superficial Recharge: Low	(SW)	0	3	489990 255596



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Bedrock Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial: <90% Patchiness: 3-10m Superficial Thickness: Low Superficial Recharge: Low	(SW)	0	3	490000 255573
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Bedrock Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial: <90% Patchiness: 3-10m Superficial Thickness: Low Superficial Recharge: Low	(S)	0	3	490772 255431
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Bedrock Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial: >90% Patchiness: >10m Superficial Thickness: Low Superficial Recharge: Low	(SE)	0	3	491000 255413
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Mixed Dilution: <300 mm/year Baseflow Index: 40-70% Superficial: >90% Patchiness: >10m Superficial Thickness: Low Superficial Recharge: Low	C3NW (NE)	0	3	490421 256407



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial: >90% Patchiness: >10m Superficial Thickness: Low Superficial Recharge:	C4NW (E)	0	3	491000 256407
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial: <90% Patchiness: 3-10m Superficial Thickness: Low Superficial Recharge:	(SW)	0	3	490011 255649
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial: <90% Patchiness: 3-10m Superficial Thickness: Low Superficial Recharge:	(SE)	0	3	491000 255261
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial: <90% Patchiness: 3-10m Superficial Thickness: Low Superficial Recharge:	C3SW (S)	0	3	490421 256000



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial: >90% Patchiness: Superficial >10m Thickness: Superficial Low Recharge:	(SE)	0	3	491000 255496
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial: >90% Patchiness: Superficial >10m Thickness: Superficial Low Recharge:	C4SW (SE)	0	3	491000 256000
	<b>Groundwater Vulnerability - Soluble Rock Risk</b> Classification: Significant Risk - Low Possibility	C4NW (E)	0	3	491000 256407
	<b>Groundwater Vulnerability - Soluble Rock Risk</b> Classification: Significant Risk - Problems Unlikely	C3NW (NE)	0	3	490421 256407
	<b>Groundwater Vulnerability - Soluble Rock Risk</b> Classification: Significant Risk - Low Possibility	C2SE (SW)	0	3	490000 256000
	<b>Groundwater Vulnerability - Soluble Rock Risk</b> Classification: Significant Risk - Low Possibility	C3SW (S)	0	3	490421 256000
	<b>Groundwater Vulnerability - Soluble Rock Risk</b> Classification: Significant Risk - Low Possibility	C4SW (SE)	0	3	491000 256000
	<b>Bedrock Aquifer Designations</b> Aquifer Designation: Secondary Aquifer - A	(SW)	0	3	490000 255653
	<b>Bedrock Aquifer Designations</b> Aquifer Designation: Secondary Aquifer - A	(SW)	0	3	490011 255649
	<b>Bedrock Aquifer Designations</b> Aquifer Designation: Secondary Aquifer - B	C3NW (NE)	0	3	490421 256407
	<b>Superficial Aquifer Designations</b> Aquifer Designation: Secondary Aquifer - Undifferentiated	C3NW (NE)	0	3	490421 256407
	<b>Extreme Flooding from Rivers or Sea without Defences</b> None				
	<b>Flooding from Rivers or Sea without Defences</b> None				
	<b>Areas Benefiting from Flood Defences</b> None				
	<b>Flood Water Storage Areas</b> None				
	<b>Flood Defences</b> None				



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 448.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	C3SW (S)	0	4	490484 255935
7	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 261.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	C3SE (SE)	0	4	490793 255917
8	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 53.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	C3SW (S)	0	4	490437 255953
9	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 111.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	C3SW (S)	0	4	490519 256040
10	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 12.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	C3SW (S)	0	4	490431 255964
11	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 167.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	C3SW (S)	0	4	490364 255967
12	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 5.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	C3SW (S)	0	4	490521 256045
13	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 68.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	C3SW (S)	0	4	490541 256111
14	<b>OS Water Network Lines</b> Watercourse Form: Lake Watercourse Length: 4.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	C3SW (S)	0	4	490542 256115



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
15	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 316.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	C2SE (SW)	0	4	490087 256020
16	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 512.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	C4SW (SE)	1	4	491149 255923
17	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 190.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	C3SW (S)	5	4	490337 256124
18	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 453.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	C4NW (E)	155	4	491127 256216
19	<b>OS Water Network Lines</b> Watercourse Form: Lake Watercourse Length: 6.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	C4NW (E)	182	4	491121 256219
20	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 4.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	C4SE (E)	327	4	491473 255976
21	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 189.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	C4SE (E)	331	4	491477 255976
22	<b>OS Water Network Lines</b> Watercourse Form: Lake Watercourse Length: 12.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 1	C6NE (NW)	802	4	490166 256862
23	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 79.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 1	C6NE (NW)	813	4	490167 256874



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
24	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 22.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 1	C7NW (N)	817	4	490243 256908
25	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 51.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 1	C1SE (SW)	817	4	489229 255866
26	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 13.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 1	C6NE (N)	836	4	490229 256923
27	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 2.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 1	C7NW (N)	839	4	490241 256930
28	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 7.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 1	C6NE (N)	841	4	490240 256932
29	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 344.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 1	C1NW (W)	848	4	489146 256258
30	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 9.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 1	C1SW (W)	848	4	489203 255919
31	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 449.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 1	C6NE (N)	849	4	490238 256940
32	<b>OS Water Network Lines</b> Watercourse Form: Lake Watercourse Length: 13.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 1	C6SW (NW)	897	4	489644 256784



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
33	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 6.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 1	C6SW (NW)	909	4	489642 256797
34	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 210.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 1	C6SW (NW)	916	4	489638 256803
35	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 268.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Nene Primacy: 1	C1NW (W)	971	4	489146 256258



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Local Authority Landfill Coverage</b> Name: Northamptonshire County Council - Has supplied landfill data		0	6	490421 256407
	<b>Local Authority Landfill Coverage</b> Name: Wellingborough Borough Council - Has no landfill data to supply		0	5	490421 256407
	<b>Local Authority Landfill Coverage</b> Name: Milton Keynes Unitary Council - Has supplied landfill data		0	9	490416 256145
	<b>Local Authority Landfill Coverage</b> Name: Bedford Borough Council - Has supplied landfill data		0	8	491083 256305
	<b>Local Authority Landfill Coverage</b> Name: Bedfordshire County Council - Has no landfill data to supply		0	7	491083 256305



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS 1:625,000 Solid Geology</b> Description: Kellaways Formation And Oxford Clay Formation (Undifferentiated)	C3NW (NE)	0	1	490421 256407
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	C3NW (NE)	0	1	490421 256407
	<b>BGS Measured Urban Soil Chemistry</b> No data available				
	<b>BGS Urban Soil Chemistry Averages</b> No data available				
	<b>Coal Mining Affected Areas</b> In an area that might not be affected by coal mining				
	<b>Non Coal Mining Areas of Great Britain</b> No Hazard				
	<b>Potential for Collapsible Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	C2NE (W)	0	1	490000 256407
	<b>Potential for Collapsible Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	C3NW (NE)	0	1	490421 256407
	<b>Potential for Compressible Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C3NW (NE)	0	1	490421 256407
	<b>Potential for Compressible Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C2NE (W)	0	1	490000 256407
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	C3SE (SE)	0	1	490865 256122
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	C3SW (S)	0	1	490429 255818
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	C3NW (NE)	0	1	490421 256407
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	C2NE (W)	39	1	490000 256407
	<b>Potential for Landslide Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	C2NE (W)	0	1	490000 256407
	<b>Potential for Landslide Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	C3NW (NE)	0	1	490421 256407
	<b>Potential for Landslide Ground Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	C3SE (SE)	0	1	490858 256116
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	C3NW (NE)	0	1	490421 256407
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	C2NE (W)	39	1	490000 256407



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	C3NW (NE)	0	1	490421 256407
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	C2NE (W)	39	1	490000 256407
	<b>Radon Potential - Radon Affected Areas</b> Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	C3NW (NE)	0	1	490421 256407
	<b>Radon Potential - Radon Affected Areas</b> Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	C2NE (W)	0	1	490000 256407
	<b>Radon Potential - Radon Protection Measures</b> Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	C3NW (NE)	0	1	490421 256407
	<b>Radon Potential - Radon Protection Measures</b> Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	C2NE (W)	0	1	490000 256407



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
36	<b>Points of Interest - Manufacturing and Production</b> Name: Tank Location: NN29 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	C2SE (SW)	20	10	490227 255993
37	<b>Points of Interest - Manufacturing and Production</b> Name: Solar Panels Location: NN29 Category: Industrial Features Class Code: Energy Production Positional Accuracy: Positioned to an adjacent address or location	C7SW (NW)	462	10	490299 256550
38	<b>Points of Interest - Manufacturing and Production</b> Name: B W Howkins & Sons Location: Bozeat Grange Cottage, London Road, Bozeat, NN29 7NP Category: Farming Class Code: Arable Farming Positional Accuracy: Positioned to address or location	C7SW (N)	707	10	490265 256799
39	<b>Points of Interest - Manufacturing and Production</b> Name: P E B Skinner Location: Easton Lodge Farm, London Road, Bozeat, NN29 7NP Category: Farming Class Code: Arable Farming Positional Accuracy: Positioned to address or location	C6SW (NW)	863	10	489650 256749
40	<b>Points of Interest - Manufacturing and Production</b> Name: P E B Skinner Location: Easton Lodge Farm, London Road, Bozeat, Wellingborough, NN29 7NP Category: Farming Class Code: Arable Farming Positional Accuracy: Positioned to address or location	C5SE (W)	916	10	489550 256748



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
41	<b>Ancient Woodland</b> Name: Three Shire Wood Reference: 1501796 Area(m <sup>2</sup> ): 146931.81 Type: Ancient and Semi-Natural Woodland	C4SW (SE)	0	11	491147 255921
42	<b>Ancient Woodland</b> Name: Nun Wood Reference: 1475867 Area(m <sup>2</sup> ): 178825.06 Type: Ancient and Semi-Natural Woodland	C4NW (E)	0	11	491106 256226
43	<b>Ancient Woodland</b> Name: Not Supplied Reference: 1503163 Area(m <sup>2</sup> ): 8567.12 Type: Ancient and Semi-Natural Woodland	(SW)	14	11	489912 255364
44	<b>Ancient Woodland</b> Name: Not Supplied Reference: 1503162 Area(m <sup>2</sup> ): 3956.69 Type: Ancient and Semi-Natural Woodland	(SW)	407	11	489530 255244
45	<b>Ancient Woodland</b> Name: Not Supplied Reference: 1418468 Area(m <sup>2</sup> ): 53849.6 Type: Ancient and Semi-Natural Woodland	C8SW (E)	503	11	491234 256696
46	<b>Ancient Woodland</b> Name: Lavendon Wood Reference: 1503173 Area(m <sup>2</sup> ): 205906.44 Type: Ancient and Semi-Natural Woodland	(SE)	737	11	492007 255444
47	<b>Ancient Woodland</b> Name: Not Supplied Reference: 1503141 Area(m <sup>2</sup> ): 5081.6 Type: Ancient and Semi-Natural Woodland	(SW)	789	11	489144 255126
48	<b>Nitrate Vulnerable Zones</b> Name: Great Ouse Nvz Description: Surface Water Source: Environment Agency, Head Office	C3NW (NE)	0	3	490421 256407
49	<b>Nitrate Vulnerable Zones</b> Name: Bedford Great Oolite Description: Groundwater Source: Environment Agency, Head Office	C3NW (NE)	0	3	490421 256407
50	<b>Nitrate Vulnerable Zones</b> Name: Thrapstone Lake Eutrophic Lake Nvz Description: Eutrophic Water Source: Environment Agency, Head Office	C7SW (NW)	147	3	490275 256575
51	<b>Nitrate Vulnerable Zones</b> Name: Northampton Sands Description: Groundwater Source: Environment Agency, Head Office	C7SW (NW)	147	3	490308 256604
52	<b>Nitrate Vulnerable Zones</b> Name: River Nene Nvz Description: Surface Water Source: Environment Agency, Head Office	C3NW (N)	147	3	490425 256452



Agency & Hydrological	Version	Update Cycle
<b>Contaminated Land Register Entries and Notices</b> Wellingborough Borough Council (now part of North Northamptonshire Council) - Environmental Health Department Bedford Borough Council - Environmental Health Department North Northamptonshire Council West Northamptonshire Council Environment Agency - Head Office Milton Keynes Council - Environmental Health Division South Northamptonshire Council (now part of West Northamptonshire Council) - Environment Division	August 2013  December 2014 December 2019 December 2019 November 2023 October 2017 September 2017	Annual Rolling Update  Annual Rolling Update Annual Rolling Update Annual Rolling Update Annually Annual Rolling Update Annual Rolling Update
<b>Discharge Consents</b> Environment Agency - Anglian Region	April 2024	Quarterly
<b>Enforcement and Prohibition Notices</b> Environment Agency - Anglian Region	March 2013	
<b>Integrated Pollution Controls</b> Environment Agency - Anglian Region	January 2009	
<b>Integrated Pollution Prevention And Control</b> Environment Agency - Anglian Region	October 2023	Quarterly
<b>Local Authority Integrated Pollution Prevention And Control</b> South Northamptonshire Council (now part of West Northamptonshire Council) - Environmental Health Department Wellingborough Borough Council (now part of North Northamptonshire Council) - Environmental Health Department North Northamptonshire Council West Northamptonshire Council Milton Keynes Council - Environmental Health Department Bedford Borough Council - Environmental Health Department	December 2014  December 2020  February 2015 February 2015 June 2016 March 2015	Variable  Variable  Variable Variable Variable Variable
<b>Local Authority Pollution Prevention and Controls</b> South Northamptonshire Council (now part of West Northamptonshire Council) - Environmental Health Department Bedford Borough Council - Environmental Health Department Wellingborough Borough Council (now part of North Northamptonshire Council) - Environmental Health Department North Northamptonshire Council West Northamptonshire Council Milton Keynes Council - Environmental Health Department	December 2014  December 2020 December 2020  February 2015 February 2015 June 2016	Annual Rolling Update  Annual Rolling Update Annual Rolling Update  Annual Rolling Update Annual Rolling Update Not Applicable
<b>Local Authority Pollution Prevention and Control Enforcements</b> South Northamptonshire Council (now part of West Northamptonshire Council) - Environmental Health Department Wellingborough Borough Council (now part of North Northamptonshire Council) - Environmental Health Department North Northamptonshire Council West Northamptonshire Council Milton Keynes Council - Environmental Health Department Bedford Borough Council - Environmental Health Department	December 2014  December 2014  February 2015 February 2015 June 2016 March 2015	Variable  Variable  Variable Variable Variable Variable
<b>Nearest Surface Water Feature</b> Ordnance Survey	March 2024	
<b>Pollution Incidents to Controlled Waters</b> Environment Agency - Anglian Region	September 1999	
<b>Prosecutions Relating to Authorised Processes</b> Environment Agency - Anglian Region	July 2015	
<b>Prosecutions Relating to Controlled Waters</b> Environment Agency - Anglian Region	March 2013	



Agency & Hydrological	Version	Update Cycle
<b>Registered Radioactive Substances</b> Environment Agency - Anglian Region Environment Agency - Head Office	June 2016 May 2023	As notified Quarterly
<b>River Quality</b> Environment Agency - Head Office	November 2001	Not Applicable
<b>River Quality Biology Sampling Points</b> Environment Agency - Head Office	April 2012	
<b>River Quality Chemistry Sampling Points</b> Environment Agency - Head Office	April 2012	
<b>Substantiated Pollution Incident Register</b> Environment Agency - Anglian Region - Central Area Environment Agency - Anglian Region - Northern Area	April 2024 April 2024	Quarterly Quarterly
<b>Water Abstractions</b> Environment Agency - Anglian Region	April 2024	Quarterly
<b>Water Industry Act Referrals</b> Environment Agency - Anglian Region	October 2017	
<b>Groundwater Vulnerability Map</b> Environment Agency - Head Office	June 2018	As notified
<b>Groundwater Vulnerability - Soluble Rock Risk</b> Environment Agency - Head Office	June 2018	As notified
<b>Bedrock Aquifer Designations</b> Environment Agency - Head Office	January 2018	As notified
<b>Superficial Aquifer Designations</b> Environment Agency - Head Office	January 2018	As notified
<b>Source Protection Zones</b> Environment Agency - Head Office	September 2022	Bi-Annually
<b>Extreme Flooding from Rivers or Sea without Defences</b> Environment Agency - Head Office	December 2023	Quarterly
<b>Flooding from Rivers or Sea without Defences</b> Environment Agency - Head Office	December 2023	Quarterly
<b>Areas Benefiting from Flood Defences</b> Environment Agency - Head Office	February 2023	Quarterly
<b>Flood Water Storage Areas</b> Environment Agency - Head Office	January 2024	Quarterly
<b>Flood Defences</b> Environment Agency - Head Office	August 2022	Quarterly
<b>OS Water Network Lines</b> Ordnance Survey	April 2024	Quarterly
<b>Surface Water 1 in 30 year Flood Extent</b> Environment Agency - Head Office	May 2018	Annually
<b>Surface Water 1 in 100 year Flood Extent</b> Environment Agency - Head Office	May 2018	Annually
<b>Surface Water 1 in 1000 year Flood Extent</b> Environment Agency - Head Office	May 2018	Annually
<b>Surface Water Suitability</b> Environment Agency - Head Office	February 2016	Annually
<b>BGS Groundwater Flooding Susceptibility</b> British Geological Survey - National Geoscience Information Service	May 2013	As notified



Waste	Version	Update Cycle
<b>BGS Recorded Landfill Sites</b> British Geological Survey - National Geoscience Information Service	November 2002	As notified
<b>Historical Landfill Sites</b> Environment Agency - Head Office	May 2024	Quarterly
<b>Integrated Pollution Control Registered Waste Sites</b> Environment Agency - Anglian Region	January 2009	Not Applicable
<b>Licensed Waste Management Facilities (Landfill Boundaries)</b> Environment Agency - Anglian Region - Central Area Environment Agency - Anglian Region - Northern Area	May 2024 May 2024	Quarterly Quarterly
<b>Licensed Waste Management Facilities (Locations)</b> Environment Agency - Anglian Region - Central Area Environment Agency - Anglian Region - Northern Area	January 2023 January 2023	Quarterly Quarterly
<b>Local Authority Landfill Coverage</b> Bedford Borough Council - Environmental Health Department Bedfordshire County Council (now part of Central Bedfordshire Council) Milton Keynes Council - Planning and Transport Department Northamptonshire County Council South Northamptonshire Council (now part of West Northamptonshire Council) - Environmental Health Department Wellingborough Borough Council (now part of North Northamptonshire Council) North Northamptonshire Council West Northamptonshire Council	February 2003 February 2003 February 2003 February 2003 February 2003 February 2003 May 2000 May 2000	Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable
<b>Local Authority Recorded Landfill Sites</b> North Northamptonshire Council West Northamptonshire Council Bedford Borough Council - Environmental Health Department Bedfordshire County Council (now part of Central Bedfordshire Council) Milton Keynes Council - Planning and Transport Department Northamptonshire County Council South Northamptonshire Council (now part of West Northamptonshire Council) - Environmental Health Department Wellingborough Borough Council (now part of North Northamptonshire Council)	August 2006 August 2006 October 2018 October 2018 October 2018 October 2018 October 2018 October 2018	
<b>Potentially Infilled Land (Non-Water)</b> Landmark Information Group Limited	December 1999	
<b>Potentially Infilled Land (Water)</b> Landmark Information Group Limited	December 1999	
<b>Registered Landfill Sites</b> Environment Agency - Anglian Region - Central Area Environment Agency - Anglian Region - Northern Area	March 2006 March 2006	Not Applicable Not Applicable
<b>Registered Waste Transfer Sites</b> Environment Agency - Anglian Region - Central Area Environment Agency - Anglian Region - Northern Area	April 2018 April 2018	
<b>Registered Waste Treatment or Disposal Sites</b> Environment Agency - Anglian Region - Central Area Environment Agency - Anglian Region - Northern Area	June 2015 June 2015	



Hazardous Substances	Version	Update Cycle
<b>Control of Major Accident Hazards Sites (COMAH)</b> Health and Safety Executive	January 2024	Bi-Annually
<b>Explosive Sites</b> Health and Safety Executive	March 2017	
<b>Notification of Installations Handling Hazardous Substances (NIHHS)</b> Health and Safety Executive	August 2001	
<b>Planning Hazardous Substance Enforcements</b> North Northamptonshire Council Wellingborough Borough Council (now part of North Northamptonshire Council) Bedfordshire County Council (now part of Central Bedfordshire Council) Bedford Borough Council Northamptonshire County Council Milton Keynes Council - Planning and Transport Department South Northamptonshire Council (now part of West Northamptonshire Council) West Northamptonshire Council	February 2016 February 2016 July 2008 March 2023 May 2013 May 2023 May 2023 May 2023	Variable Variable Annual Rolling Update Variable Annual Rolling Update Variable Variable Variable
<b>Planning Hazardous Substance Consents</b> Northamptonshire County Council Bedford Borough Council Milton Keynes Council - Planning and Transport Department North Northamptonshire Council South Northamptonshire Council (now part of West Northamptonshire Council) Wellingborough Borough Council (now part of North Northamptonshire Council) West Northamptonshire Council Bedfordshire County Council (now part of Central Bedfordshire Council)	December 2014 February 2016 February 2016 February 2016 February 2016 February 2016 February 2016 July 2008	Annual Rolling Update Variable Variable Variable Variable Variable Variable Annual Rolling Update



<b>Geological</b>	<b>Version</b>	<b>Update Cycle</b>
<b>BGS 1:625,000 Solid Geology</b> British Geological Survey - National Geoscience Information Service	January 2009	As notified
<b>BGS Estimated Soil Chemistry</b> British Geological Survey - National Geoscience Information Service	December 2015	As notified
<b>BGS Recorded Mineral Sites</b> British Geological Survey - National Geoscience Information Service	January 2024	Bi-Annually
<b>CBSCB Compensation District</b> Cheshire Brine Subsidence Compensation Board (CBSCB) Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011 November 2020	As notified
<b>Coal Mining Affected Areas</b> The Coal Authority - Property Searches	February 2023	Annual Rolling Update
<b>Mining Instability</b> Ove Arup & Partners	June 1998	Not Applicable
<b>Non Coal Mining Areas of Great Britain</b> British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
<b>Potential for Collapsible Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	April 2020	As notified
<b>Potential for Compressible Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	As notified
<b>Potential for Ground Dissolution Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	As notified
<b>Potential for Landslide Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	As notified
<b>Potential for Running Sand Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	As notified
<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	As notified
<b>Radon Potential - Radon Affected Areas</b> British Geological Survey - National Geoscience Information Service	October 2023	Annually
<b>Radon Potential - Radon Protection Measures</b> British Geological Survey - National Geoscience Information Service	October 2023	Annually



Industrial Land Use	Version	Update Cycle
<b>Contemporary Trade Directory Entries</b> Thomson Directories	April 2024	Quarterly
<b>Fuel Station Entries</b> Catalist Ltd - Experian	February 2024	Quarterly
<b>Gas Pipelines</b> National Grid	October 2021	Bi-Annually
<b>Points of Interest - Commercial Services</b> PointX	March 2024	Quarterly
<b>Points of Interest - Education and Health</b> PointX	March 2024	Quarterly
<b>Points of Interest - Manufacturing and Production</b> PointX	March 2024	Quarterly
<b>Points of Interest - Public Infrastructure</b> PointX	March 2024	Quarterly
<b>Points of Interest - Recreational and Environmental</b> PointX	March 2024	Quarterly
<b>Underground Electrical Cables</b> National Grid	January 2024	Bi-Annually



<b>Sensitive Land Use</b>	<b>Version</b>	<b>Update Cycle</b>
<b>Ancient Woodland</b> Natural England	April 2024	Bi-Annually
<b>Areas of Adopted Green Belt</b> Bedford Borough Council Milton Keynes Council - Planning and Transport Department North Northamptonshire Council South Northamptonshire Council (now part of West Northamptonshire Council) Wellingborough Borough Council (now part of North Northamptonshire Council) West Northamptonshire Council	February 2024 February 2024 February 2024 February 2024 February 2024 February 2024	Quarterly Quarterly Quarterly Quarterly Quarterly Quarterly
<b>Areas of Unadopted Green Belt</b> Bedford Borough Council Milton Keynes Council - Planning and Transport Department North Northamptonshire Council South Northamptonshire Council (now part of West Northamptonshire Council) Wellingborough Borough Council (now part of North Northamptonshire Council) West Northamptonshire Council	February 2024 February 2024 February 2024 February 2024 February 2024 February 2024	Quarterly Quarterly Quarterly Quarterly Quarterly Quarterly
<b>Areas of Outstanding Natural Beauty</b> Natural England	May 2024	Bi-Annually
<b>Environmentally Sensitive Areas</b> Natural England	August 2023	
<b>Forest Parks</b> Forestry Commission	May 2023	Not Applicable
<b>Local Nature Reserves</b> Natural England	February 2024	Bi-Annually
<b>Marine Nature Reserves</b> Natural England	February 2024	Bi-Annually
<b>National Nature Reserves</b> Natural England	February 2024	Bi-Annually
<b>National Parks</b> Natural England	February 2018	Bi-Annually
<b>Nitrate Sensitive Areas</b> Natural England	April 2023	Not Applicable
<b>Nitrate Vulnerable Zones</b> Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA) Environment Agency - Head Office	April 2016 April 2024	Bi-Annually
<b>Ramsar Sites</b> Natural England	February 2024	Bi-Annually
<b>Sites of Special Scientific Interest</b> Natural England	April 2024	Bi-Annually
<b>Special Areas of Conservation</b> Natural England	April 2024	Bi-Annually
<b>Special Protection Areas</b> Natural England	April 2024	Bi-Annually



A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
Centre for Ecology and Hydrology	 Centre for Ecology & Hydrology NATURAL ENVIRONMENT RESEARCH COUNCIL
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Stantec UK Ltd	










Contact	Name and Address	Contact Details
1	<b>British Geological Survey - Enquiry Service</b> British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 [REDACTED]
2	<b>Environment Agency - National Customer Contact Centre (NCCC)</b> PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
3	<b>Environment Agency - Head Office</b> Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409
4	<b>Ordnance Survey</b> Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
5	<b>Wellingborough Borough Council (now part of North Northamptonshire Council)</b> Croyland Abbey, Tithe Barn Road, Wellingborough, Northamptonshire, NN8 1BJ	Telephone: 01933 229777 Fax: 01933 441375 Website: www.wellingborough.gov.uk
6	<b>Northamptonshire County Council</b> County Hall, Northampton, Northamptonshire, NN1 1DN	Telephone: 0300 126 1000 Website: www.northamptonshire.gov.uk
7	<b>Bedfordshire County Council (now part of Central Bedfordshire Council)</b> Priory House, Monks Walk, Chicksands, Shefford, Bedfordshire, SG17 5TQ	Telephone: 0300 300 8301 Email: www.centralbedfordshire.gov.uk Website: www.centralbedfordshire.gov.uk
8	<b>Bedford Borough Council - Environmental Health Department</b> Town Hall, St Pauls Street, Bedford, Bedfordshire, MK40 1SJ	Telephone: 01234 267422 Fax: 01234 325671 Email: enquiries@bedford.gov.uk Website: www.bedford.gov.uk
9	<b>Milton Keynes Council - Planning and Transport Department</b> PO Box 125, Civic Offices, 1 Saxon Gate East, Milton Keynes, Buckinghamshire, MK9 3ZJ	Telephone: 01908 691691 Fax: 01908 252211 Website: www.miltonkeynes.gov.uk
10	<b>PointX</b> 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	[REDACTED]
11	<b>Natural England</b> County Hall, Spetchley Road, Worcester, WR5 2NP	Telephone: 0300 060 3900 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
-	<b>Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards</b> Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk [REDACTED]
-	<b>Landmark Information Group Limited</b> Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 [REDACTED] info.co.uk

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.











## Geology 1:50,000 Maps Legends

### Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay and Silt	Not Supplied - Holocene
	ODT	Oadby Member	Diamicton	Not Supplied - Anglian
	GFDMP	Glaciofluvial Deposits, Mid Pleistocene	Sand and Gravel	Not Supplied - Cromerian
	HEAD	Head	Clay, Silt, Sand and Gravel	Not Supplied - Quaternary
	BOZE	Bozeat Till	Diamicton	Not Supplied - Quaternary
	MLTS	Milton Sand	Sand and Gravel	Not Supplied - Quaternary
	MLTS	Milton Sand	Sand and Gravel	Not Supplied - Quaternary

### Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	KLB	Kellaways Formation	Sandstone, Siltstone and Mudstone	Not Supplied - Callovian
	CB	Cornbrash Formation	Limestone	Not Supplied - Bathonian
	BWC	Blisworth Clay Formation	Mudstone	Not Supplied - Bathonian
	BWL	Blisworth Limestone Formation	Limestone	Not Supplied - Bathonian
	WBRO	Wellingborough Limestone Member	Limestone and Mudstone, Interbedded	Not Supplied - Bathonian
	RLD	Rutland Formation	Mudstone	Not Supplied - Bajocian
	STAM	Stamford Member	Sandstone and Siltstone, Interbedded	Not Supplied - Bajocian
	WHM	Whitby Mudstone Formation	Mudstone	Not Supplied - Toarcian



### Geology 1:50,000 Maps

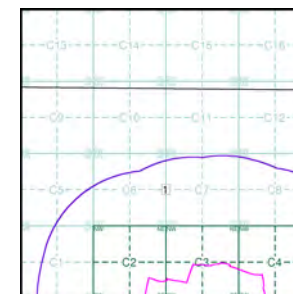
This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published paper maps.

The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page. Not all layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

### Geology 1:50,000 Maps Coverage

Map ID:	1
Map Sheet No:	203
Map Name:	Bedford
Map Date:	2010
Bedrock Geology:	Available
Superficial Geology:	Available
Artificial Geology:	Available
Faults:	Not Supplied
Landslip:	Available
Rock Segments:	Not Supplied

### Geology 1:50,000 Maps - Slice C



### Order Details:

Order Number:	346936621_1_1
Customer Reference:	DS78309
National Grid Reference:	490420, 256410
Slice:	C
Site Area (Ha):	172.36
Search Buffer (m):	1000

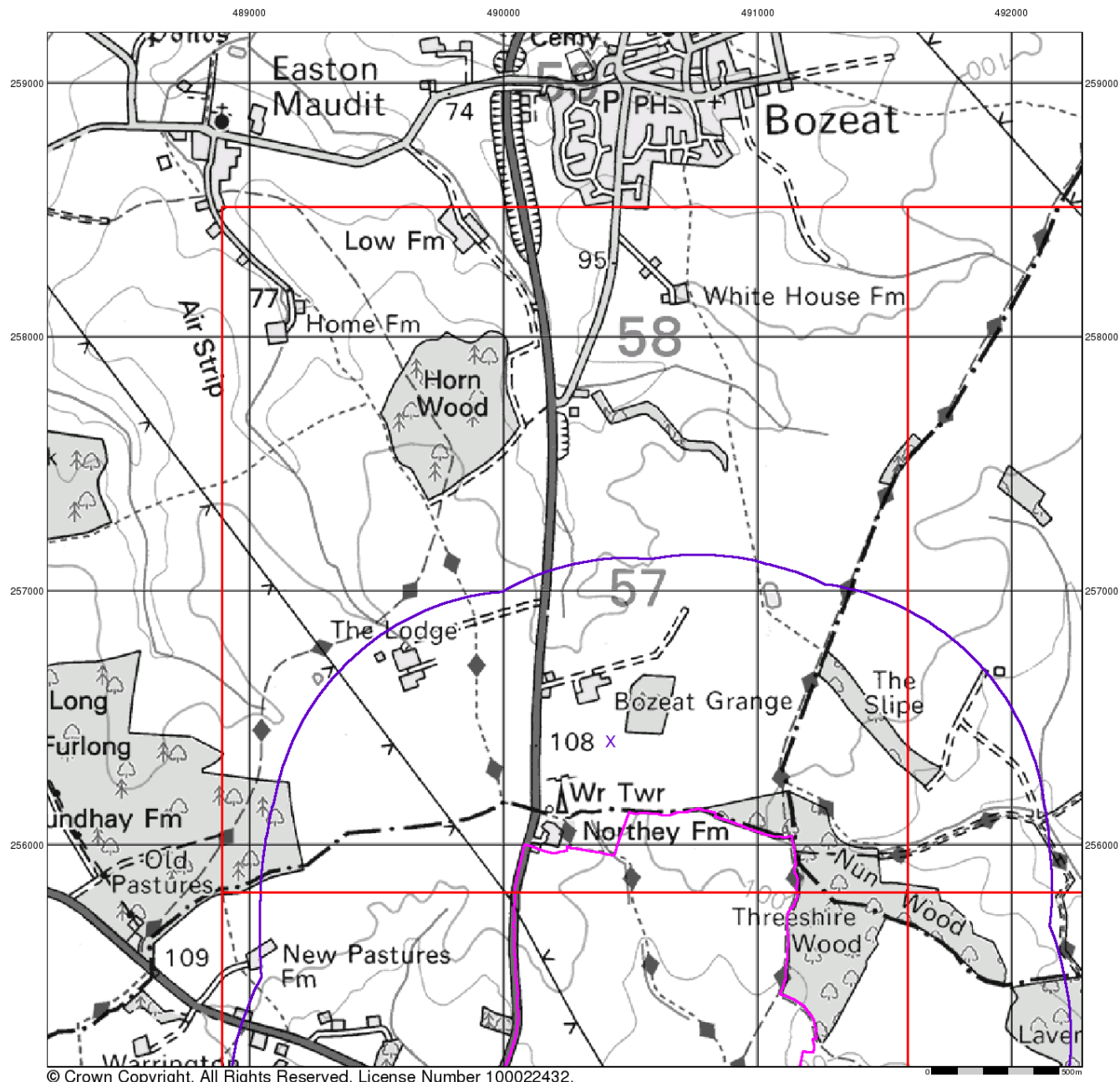
### Site Details:

Meikleland



Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: 





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### Artificial Ground and Landslip

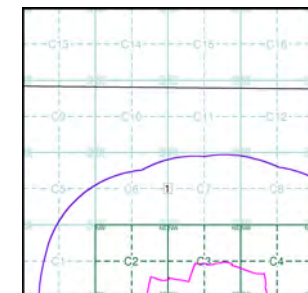
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions and unstable ground.

Artificial ground includes:

- Made ground - man-made deposits such as embankments and spoil heaps on the natural ground surface.
- Worked ground - areas where the ground has been cut away such as quarries and road cuttings.
- Infilled ground - areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground - areas where the surface has been reshaped.
- Disturbed ground - areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes foundered strata, where the ground has collapsed due to subsidence.

### Artificial Ground and Landslip Map - Slice C



### Order Details:

Order Number: 346936621\_1\_1  
 Customer Reference: DS78309  
 National Grid Reference: 490420, 256410  
 Slice: C  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

### Site Details:

Meikleland

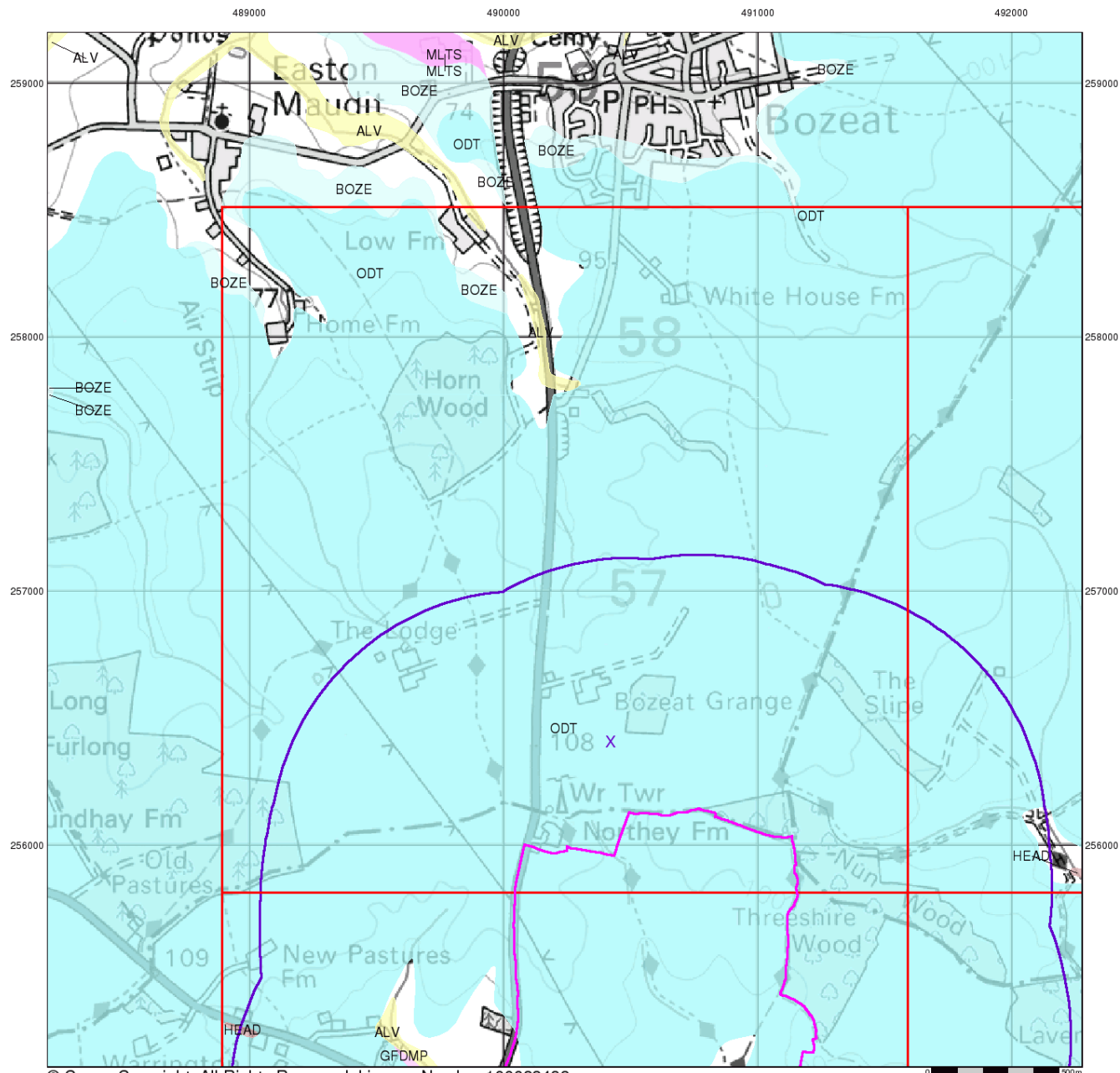
**Landmark**  
 INFORMATION GROUP

Tel: 0844 844 9952  
 Fax: 0844 844 9951  
 Web: [Redacted]

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Page 2 of 5





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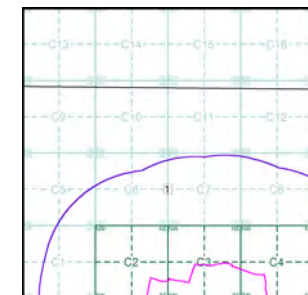
### Superficial Geology

Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, the Quaternary, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

### Superficial Geology Map - Slice C



### Order Details:

Order Number: 346936621\_1\_1  
 Customer Reference: DS78309  
 National Grid Reference: 490420, 256410  
 Slice: C  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

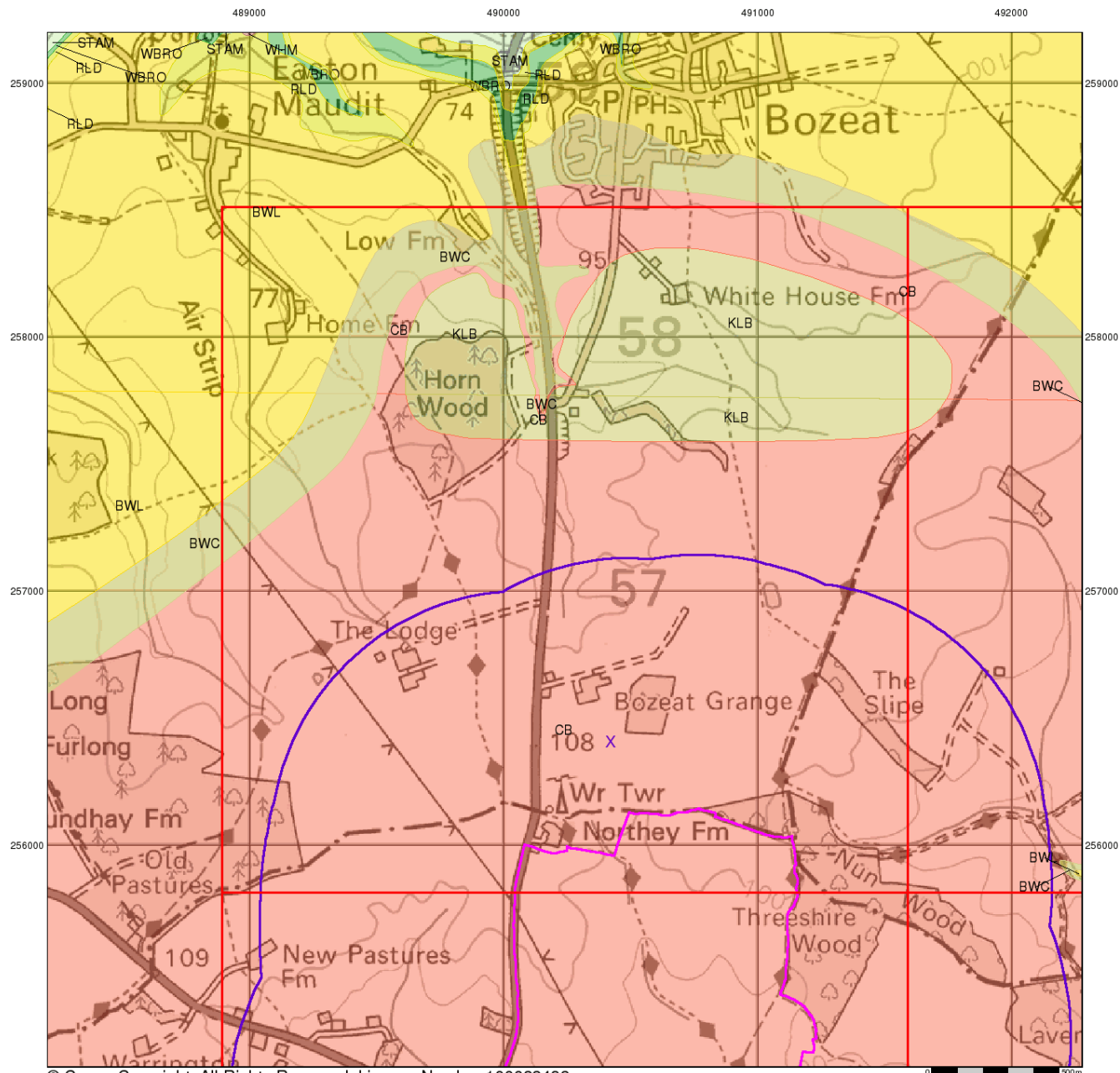
### Site Details:

Meikleland



Tel: 0844 844 9952  
 Fax: 0844 844 9951  
 Web: [Redacted]





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### Bedrock and Faults

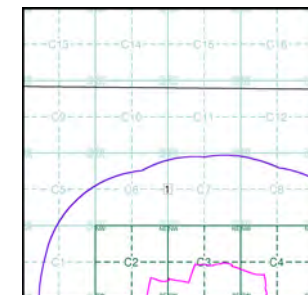
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults (e.g. normal, thrust), and thin beds mapped as lines (e.g. coal seam, gypsum bed). Some of these are linked to other particular 1:50,000 Geology datasets, for example, coal seams are part of the bedrock sequence, most faults and mineral veins primarily affect the bedrock but cut across the strata and post date its deposition.

### Bedrock and Faults Map - Slice C



### Order Details:

Order Number: 346936621\_1\_1  
 Customer Reference: DS78309  
 National Grid Reference: 490420, 256410  
 Slice: C  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

### Site Details:

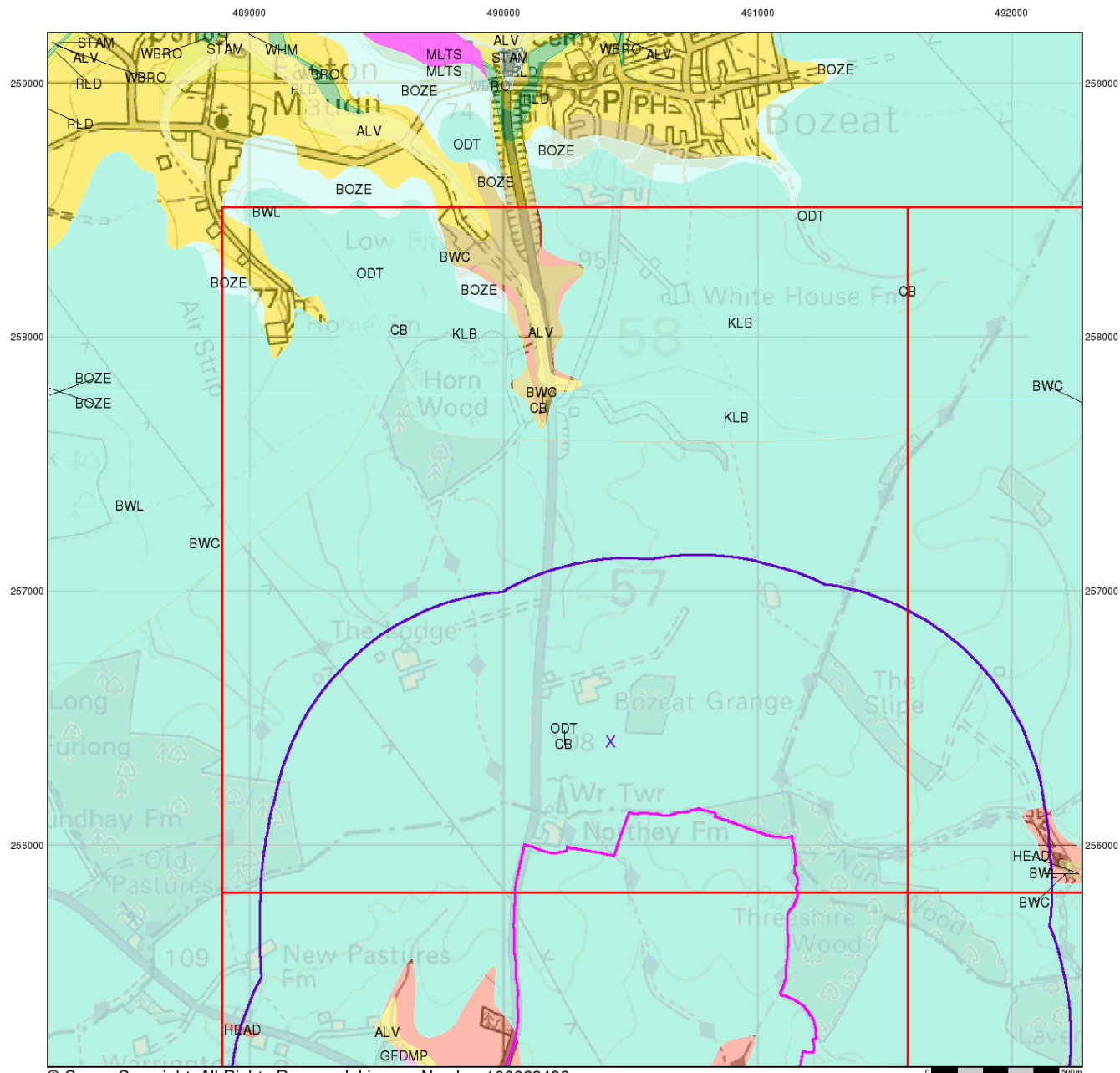
Meikleland



Tel: 0844 844 9952  
 Fax: 0844 844 9951  
 Web: [Redacted]

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### Combined Surface Geology

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

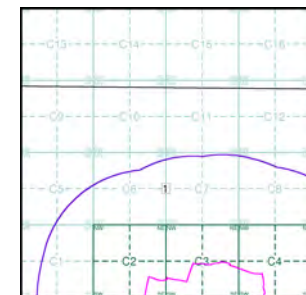
### Additional Information

More information on 1:50,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

### Contact

British Geological Survey  
Kingsley Dunham Centre  
Keyworth  
Nottingham  
NG12 5GG  
Telephone: 0115 936 3143  
Fax: 0115 936 3276  
email: enquiries@bgs.ac.uk  
website: www.bgs.ac.uk

### Combined Geology Map - Slice C



### Order Details:

Order Number: 346936621\_1\_1  
Customer Reference: DS78309  
National Grid Reference: 490420, 256410  
Slice: C  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

### Site Details:

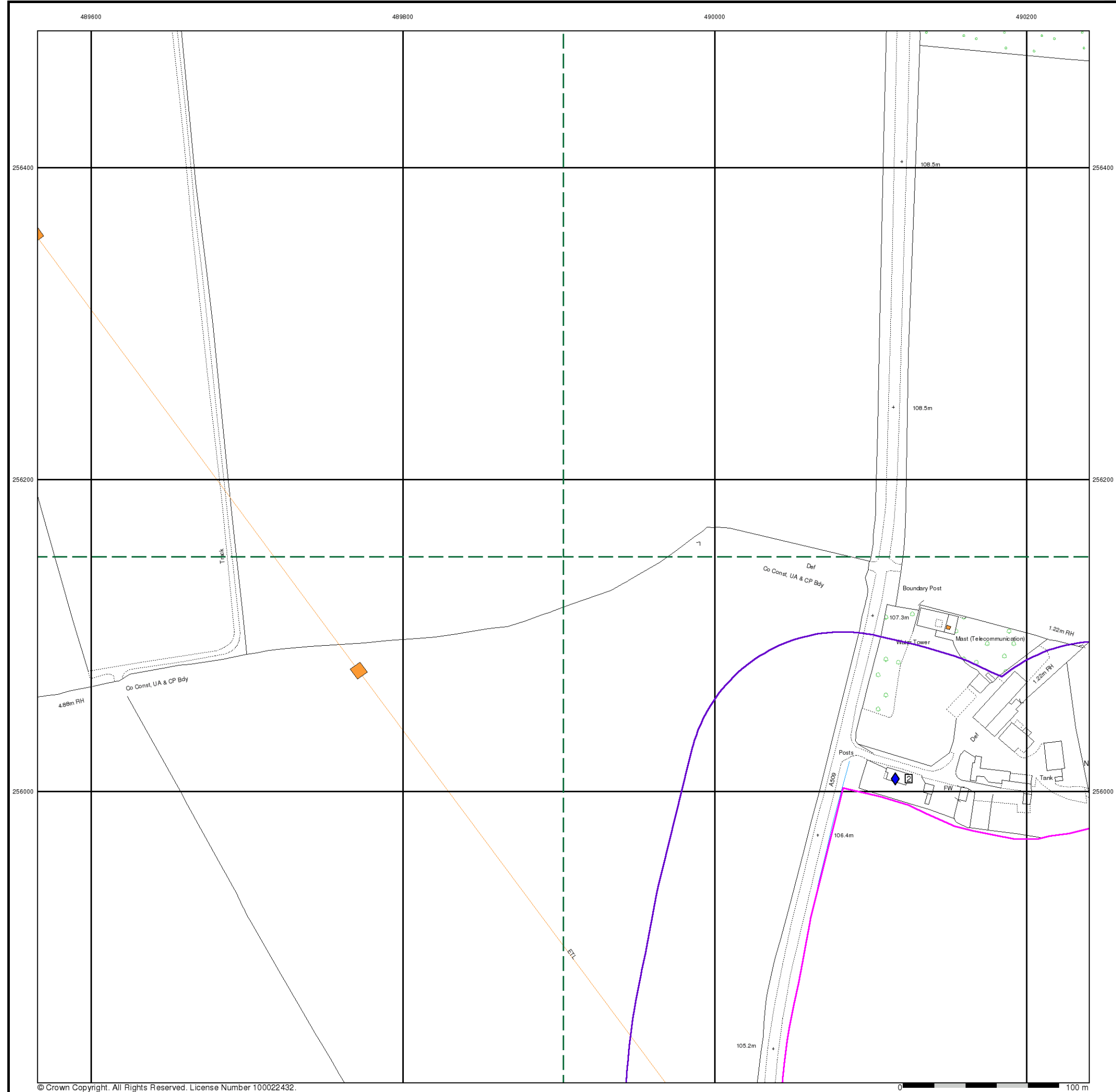
Meikleland



Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [Redacted]

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**General**

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID

**Agency and Hydrological**

- Several of Type at Location
- Pylon
- Overhead Transmission Line
- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

**Waste**

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

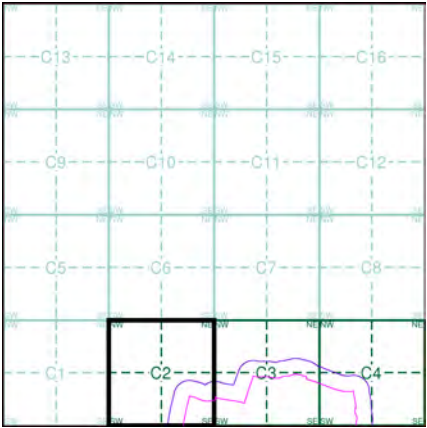
**Hazardous Substances**

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

**Geological**

- BGS Recorded Mineral Site

Site Sensitivity Map - Segment C2



**Order Details**

Order Number:	346936621_1_1
Customer Ref:	DS78309
National Grid Reference:	490420, 256410
Slice:	C
Site Area (Ha):	172.36
Plot Buffer (m):	100

**Site Details**

Meikleland

**Landmark**  
INFORMATION GROUP

Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [Redacted]



## General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID

## Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

## Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement
- BGS Recorded Mineral Site

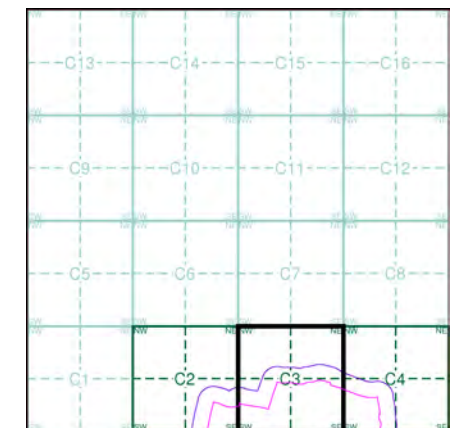
## Geological

- BGS Recorded Mineral Site

## Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

## Site Sensitivity Map - Segment C3

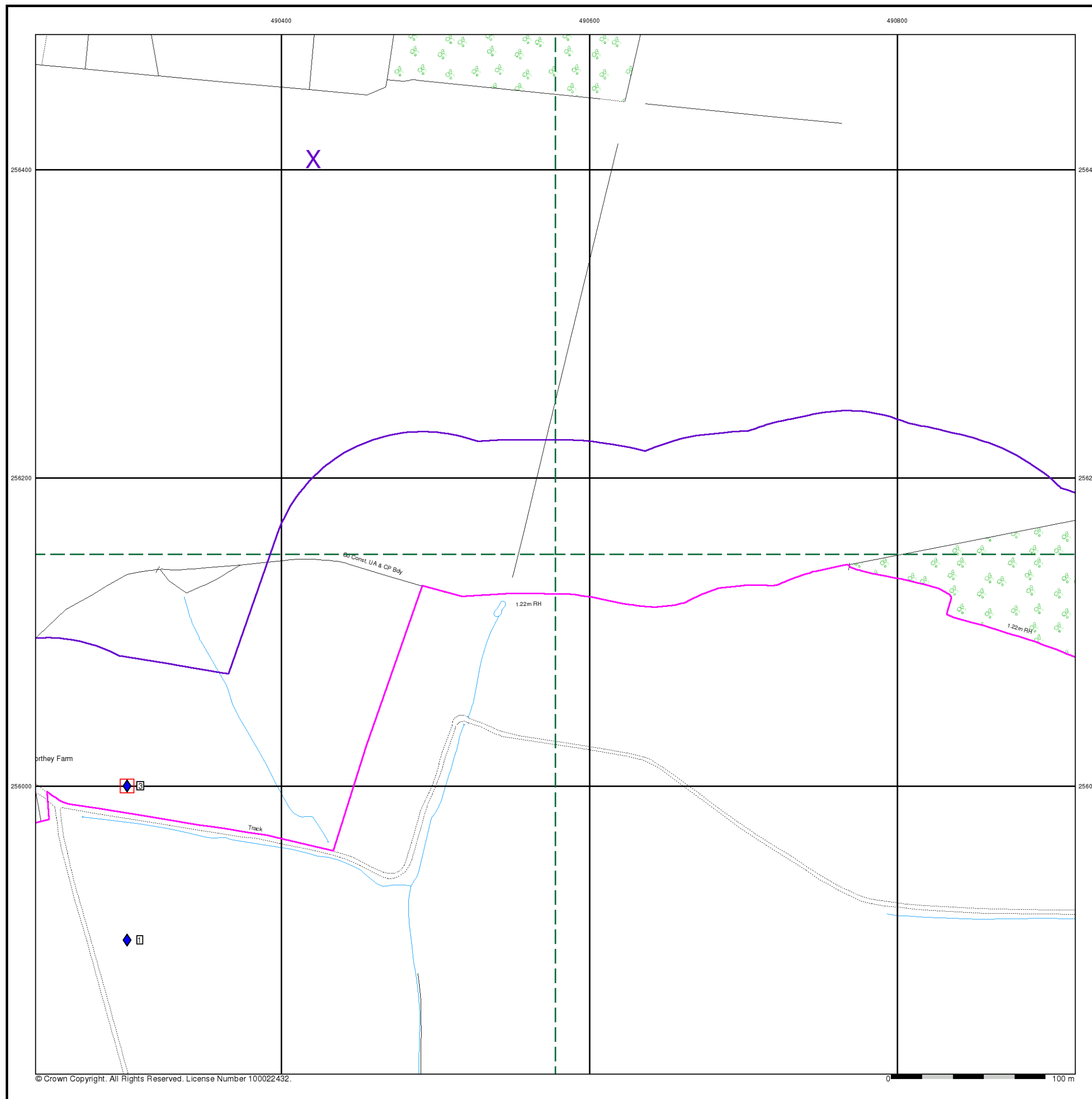


## Order Details

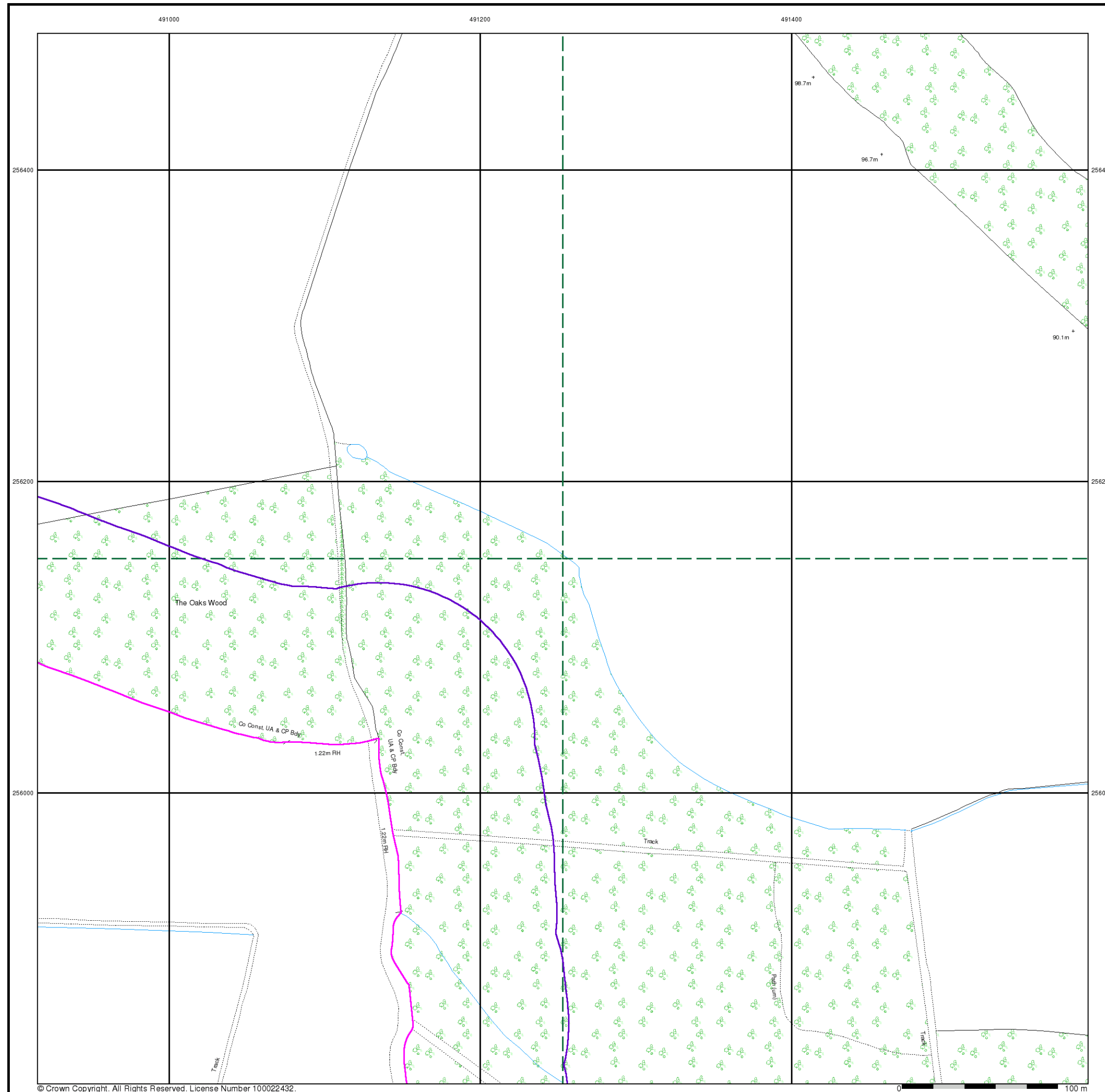
Order Number: 346936621\_1\_1  
 Customer Ref: DS78309  
 National Grid Reference: 490420, 256410  
 Slice: C  
 Site Area (Ha): 172.36  
 Plot Buffer (m): 100

## Site Details

Meikleland



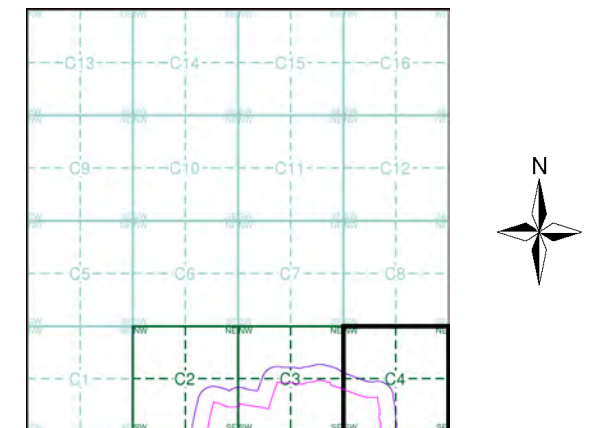




## General

- |                             |                                                              |  |                                                    |              |                                                        |  |        |
|-----------------------------|--------------------------------------------------------------|--|----------------------------------------------------|--------------|--------------------------------------------------------|--|--------|
|                             | Specified Site                                               |  | Specified Buffer(s)                                |              | Bearing Reference Point                                |  | Map ID |
|                             | Several of Type at Location                                  |  | Pylon                                              |              | Overhead Transmission Line                             |  |        |
| <b>Age and Hydrological</b> |                                                              |  |                                                    | <b>Waste</b> |                                                        |  |        |
|                             | Contaminated Land Register Entry or Notice (Location)        |  | BGS Recorded Landfill Site (Location)              |              | BGS Recorded Landfill Site                             |  |        |
|                             | Contaminated Land Register Entry or Notice (Location)        |  | EA Historic Landfill (Buffered Point)              |              | EA Historic Landfill (Polygon)                         |  |        |
|                             | Discharge Consent                                            |  | Integrated Pollution Control Registered Waste Site |              | Licensed Waste Management Facility (Landfill Boundary) |  |        |
|                             | Enforcement or Prohibition Notice                            |  | Licensed Waste Management Facility (Location)      |              | Local Authority Recorded Landfill Site (Location)      |  |        |
|                             | Integrated Pollution Control                                 |  | Local Authority Recorded Landfill Site             |              | Potentially Infilled Land (Non-water)                  |  |        |
|                             | Integrated Pollution Prevention Control                      |  | Potentially Infilled Land (Non-water)              |              | Potentially Infilled Land (Non-water)                  |  |        |
|                             | Local Authority Integrated Pollution Prevention and Control  |  | Potentially Infilled Land (Non-water)              |              | Potentially Infilled Land (Water)                      |  |        |
|                             | Local Authority Pollution Prevention and Control             |  | Potentially Infilled Land (Water)                  |              | Potentially Infilled Land (Water)                      |  |        |
|                             | Local Authority Pollution Prevention and Control Enforcement |  | Registered Landfill Site                           |              | Registered Landfill Site (Location)                    |  |        |
|                             | Pollution Incident to Controlled Waters                      |  | Registered Landfill Site (Point Buffered to 100m)  |              | Registered Landfill Site (Point Buffered to 250m)      |  |        |
|                             | Prosecution Relating to Authorised Processes                 |  | Registered Landfill Site (Point Buffered to 250m)  |              | Registered Waste Transfer Site (Location)              |  |        |
|                             | Prosecution Relating to Controlled Waters                    |  | Registered Waste Transfer Site                     |              | Registered Waste Treatment or Disposal Site (Location) |  |        |
|                             | Registered Radioactive Substance                             |  | Registered Waste Treatment or Disposal Site        |              |                                                        |  |        |
|                             | River Network or Water Feature                               |  |                                                    |              |                                                        |  |        |
|                             | River Quality Sampling Point                                 |  |                                                    |              |                                                        |  |        |
|                             | Substantiated Pollution Incident Register                    |  |                                                    |              |                                                        |  |        |
|                             | Water Abstraction                                            |  |                                                    |              |                                                        |  |        |
|                             | Water Industry Act Referral                                  |  |                                                    |              |                                                        |  |        |
| <b>Hazardous Substances</b> |                                                              |  |                                                    |              |                                                        |  |        |
|                             | COMAH Site                                                   |  | Explosive Site                                     |              |                                                        |  |        |
|                             | NIHHS Site                                                   |  |                                                    |              |                                                        |  |        |
|                             | Planning Hazardous Substance Consent                         |  |                                                    |              |                                                        |  |        |
|                             | Planning Hazardous Substance Enforcement                     |  |                                                    |              |                                                        |  |        |
| <b>Geological</b>           |                                                              |  |                                                    |              |                                                        |  |        |
|                             | BGS Recorded Mineral Site                                    |  |                                                    |              |                                                        |  |        |

## Site Sensitivity Map - Segment C4



## Order Details

Order Number: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 490420, 256410  
Slice: C  
Site Area (Ha): 172.36  
Plot Buffer (m): 100

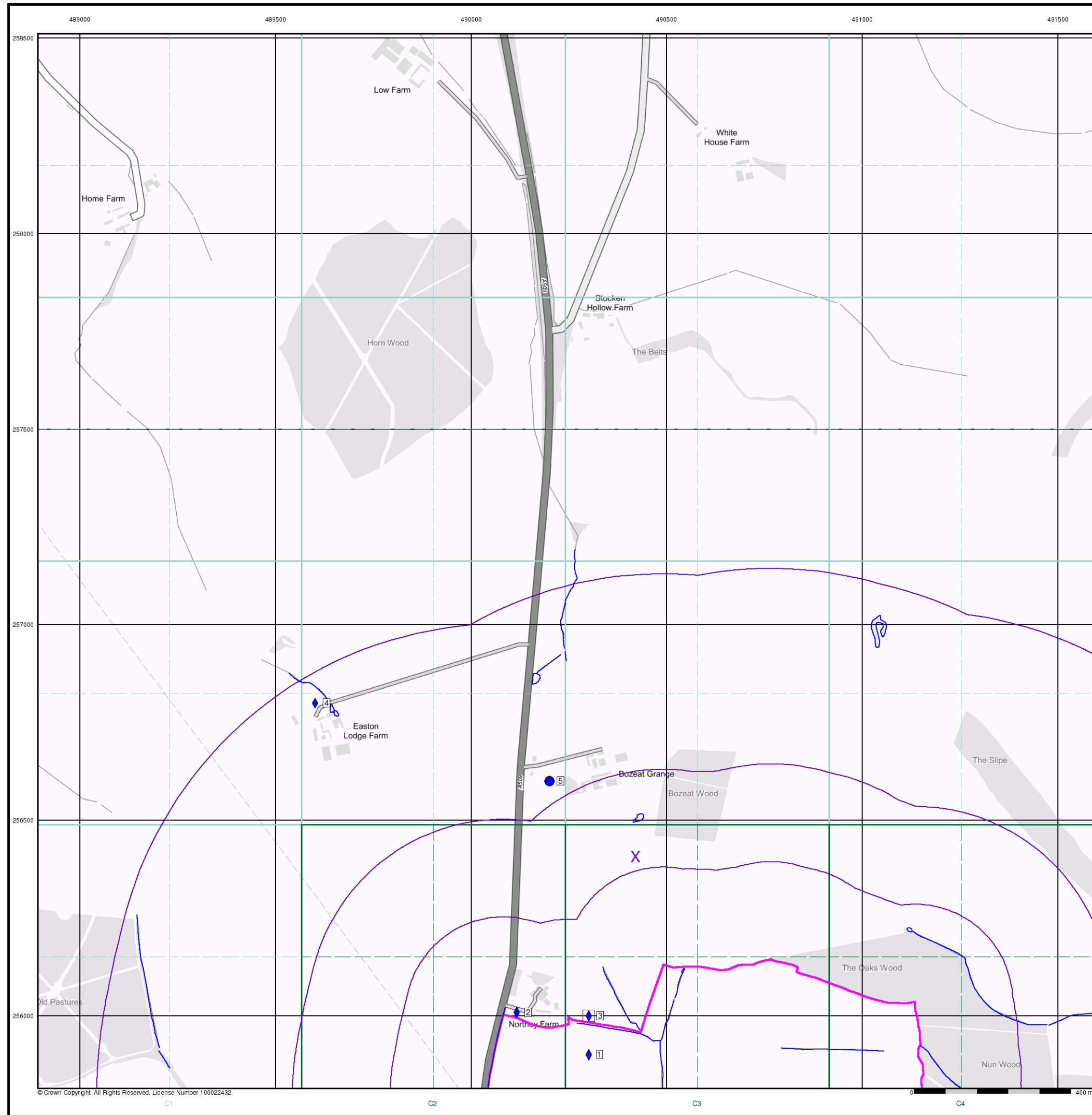
## Site Details

Meikleland

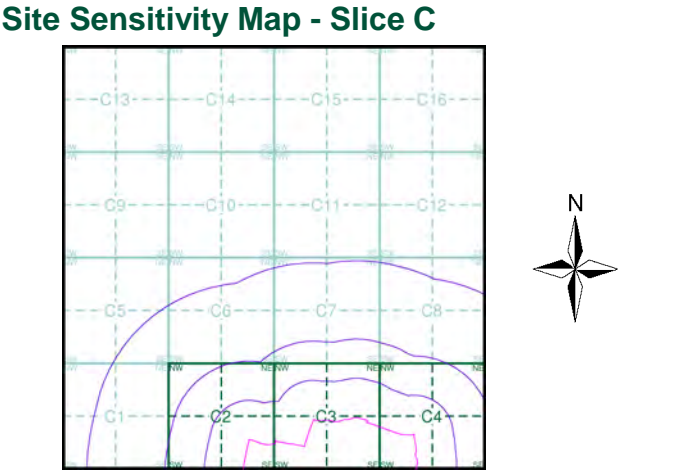
**Landmark**  
INFORMATION GROUP

Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [REDACTED]





- General**
- Specified Site
  - Specified Buffer(s)
  - Bearing Reference Point
  - Map ID
  - Several of Type at Location
- Agency and Hydrological**
- Contaminated Land Register Entry or Notice (Location)
  - Contaminated Land Register Entry or Notice
  - Discharge Consent
  - Enforcement or Prohibition Notice
  - Integrated Pollution Control
  - Integrated Pollution Prevention Control
  - Local Authority Integrated Pollution Prevention and Control
  - Local Authority Pollution Prevention and Control
  - Local Authority Pollution Prevention and Control Enforcement
  - Pollution Incident to Controlled Waters
  - Prosecution Relating to Authorised Processes
  - Prosecution Relating to Controlled Waters
  - Registered Radioactive Substance
  - River Network or Water Feature
  - River Quality Sampling Point
  - Substantiated Pollution Incident Register
  - Water Abstraction
  - Water Industry Act Referral
- Hazardous Substances**
- COMAH Site
  - Explosive Site
  - NIHHS Site
  - Planning Hazardous Substance Consent
  - Planning Hazardous Substance Enforcement
  - BGS Recorded Mineral Site
- Waste**
- BGS Recorded Landfill Site (Location)
  - BGS Recorded Landfill Site
  - EA Historic Landfill (Buffered Point)
  - EA Historic Landfill (Polygon)
  - Integrated Pollution Control Registered Waste Site
  - Licensed Waste Management Facility (Landfill Boundary)
  - Licensed Waste Management Facility (Location)
  - Local Authority Recorded Landfill Site (Location)
  - Local Authority Recorded Landfill Site
  - Potentially Infilled Land (Non-water)
  - Potentially Infilled Land (Non-water)
  - Potentially Infilled Land (Non-water)
  - Potentially Infilled Land (Water)
  - Potentially Infilled Land (Water)
  - Potentially Infilled Land (Water)
  - Registered Landfill Site (Location)
  - Registered Landfill Site (Point Buffered to 100m)
  - Registered Landfill Site (Point Buffered to 250m)
  - Registered Waste Transfer Site (Location)
  - Registered Waste Transfer Site
  - Registered Waste Treatment or Disposal Site (Location)
  - Registered Waste Treatment or Disposal Site



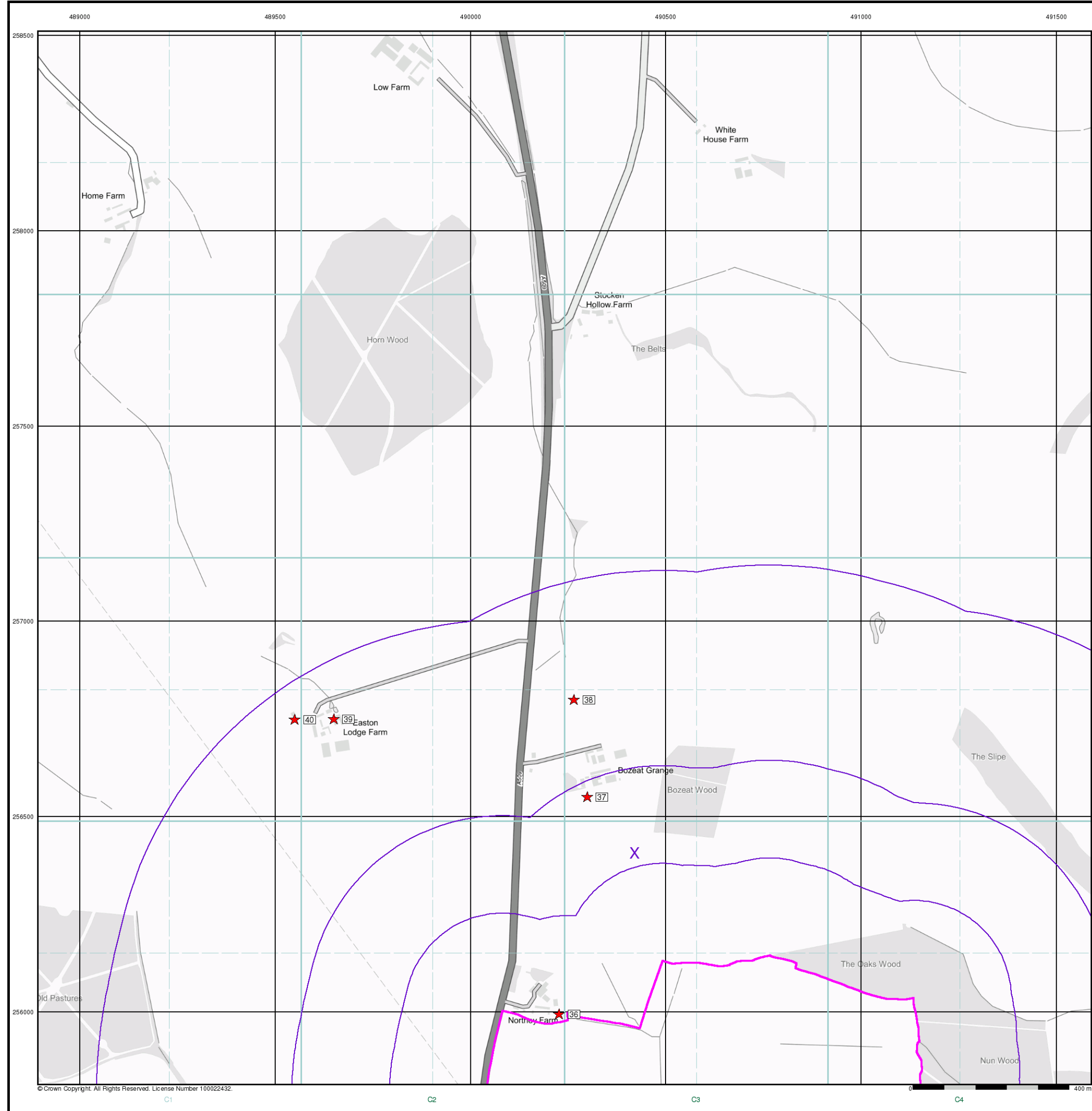
**Order Details**

Order Number: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 490420, 256410  
Slice: C  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

**Site Details**

Meikleland





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## Industrial Land Use Map

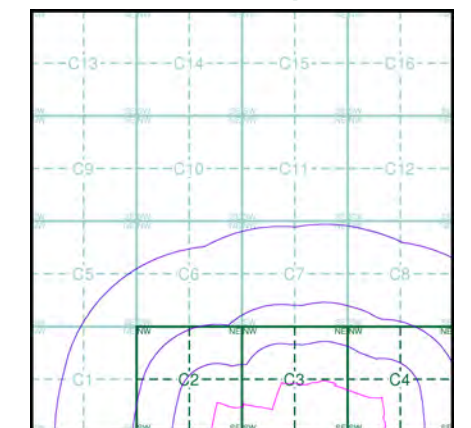
### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- Gas Pipeline
- Points of Interest - Commercial Services
- Points of Interest - Education and Health
- Points of Interest - Manufacturing and Production
- Points of Interest - Public Infrastructure
- Points of Interest - Recreational and Environmental
- Underground Electrical Cables

## Industrial Land Use Map - Slice C



### Order Details

Order Number: 346936621\_1\_1  
 Customer Ref: DS78309  
 National Grid Reference: 490420, 256410  
 Slice: C  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

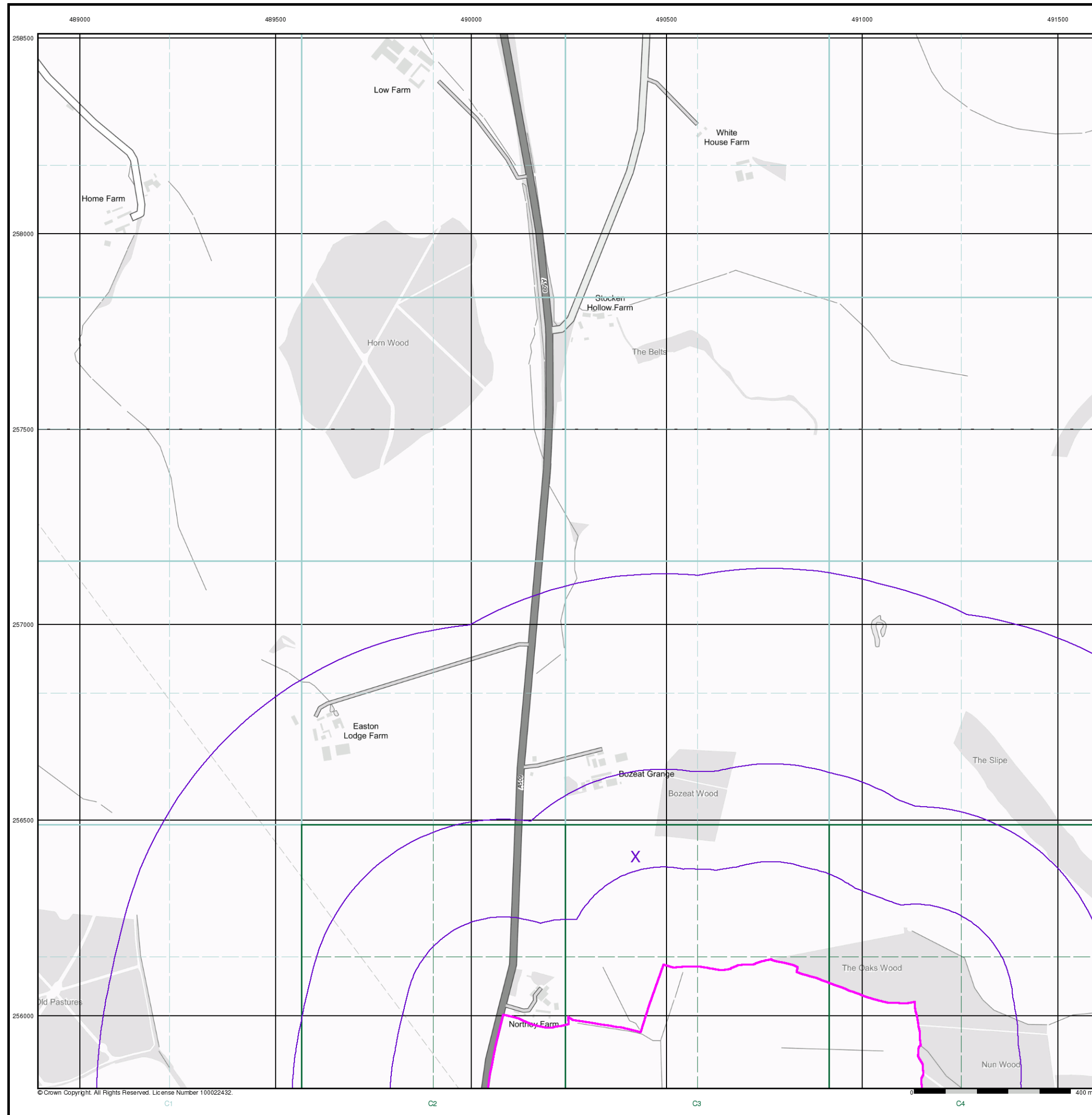
### Site Details

Meikleland



Tel: 0844 844 9952  
 Fax: 0844 844 9951  
 Web: [Redacted]





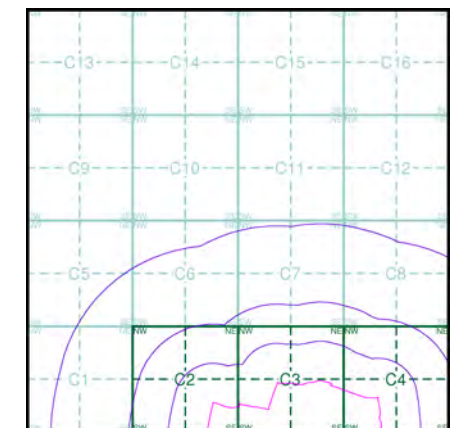
### General

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

### Agency and Hydrological (Flood)

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

### Flood Map - Slice C



### Order Details

Order Number: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 490420, 256410  
Slice: C  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

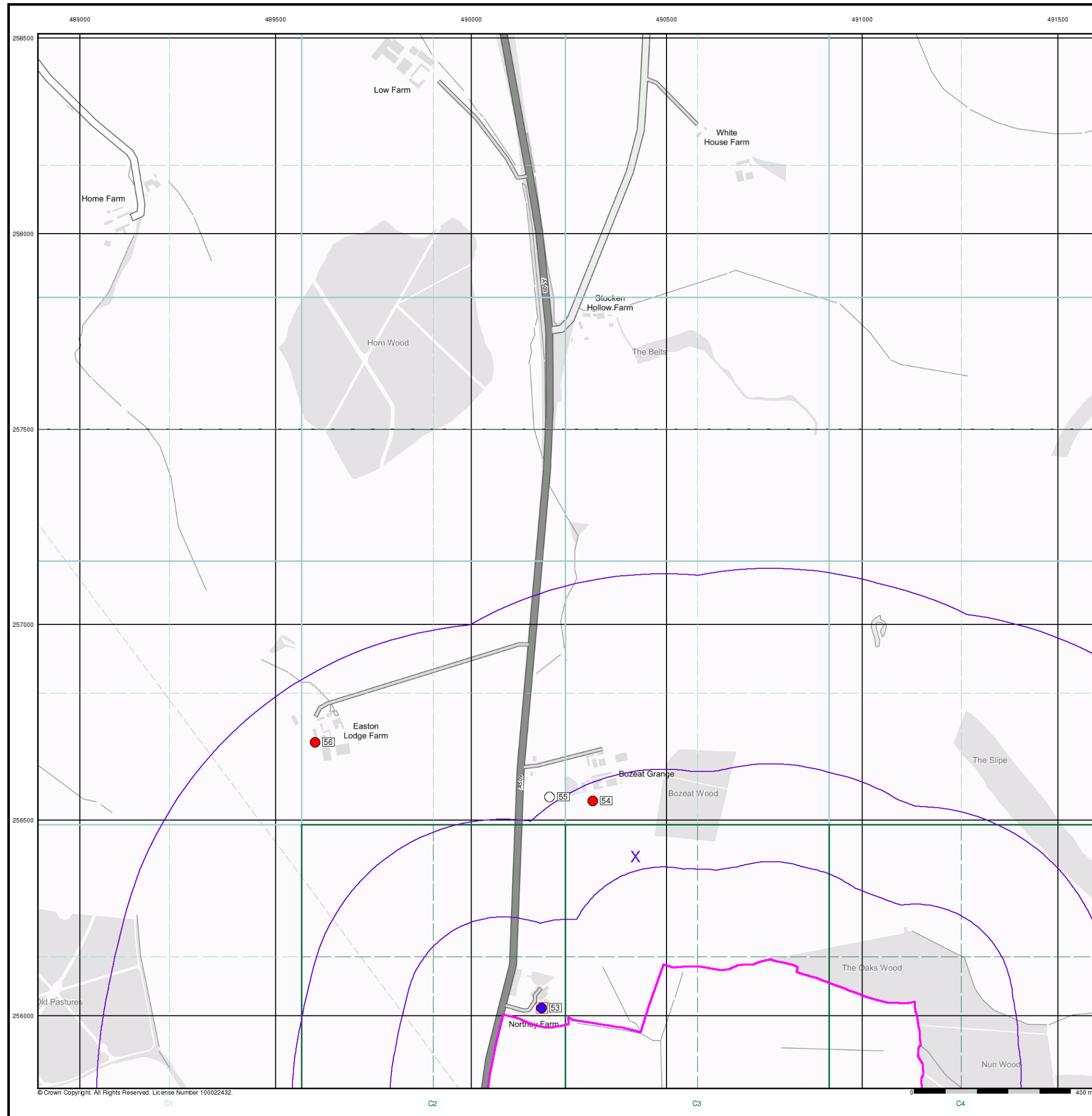
### Site Details

Meikleland



Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [Redacted]





### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

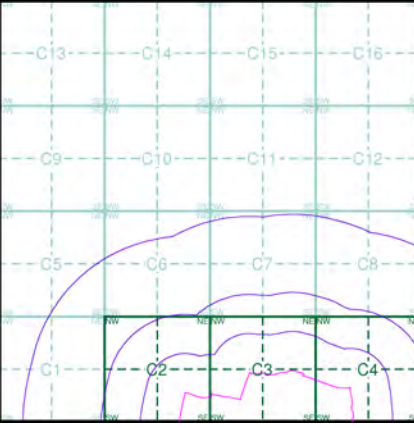
### Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of [REDACTED]

### Borehole Map - Slice C



### Order Details

Order Number: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 490420, 256410  
Slice: C  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

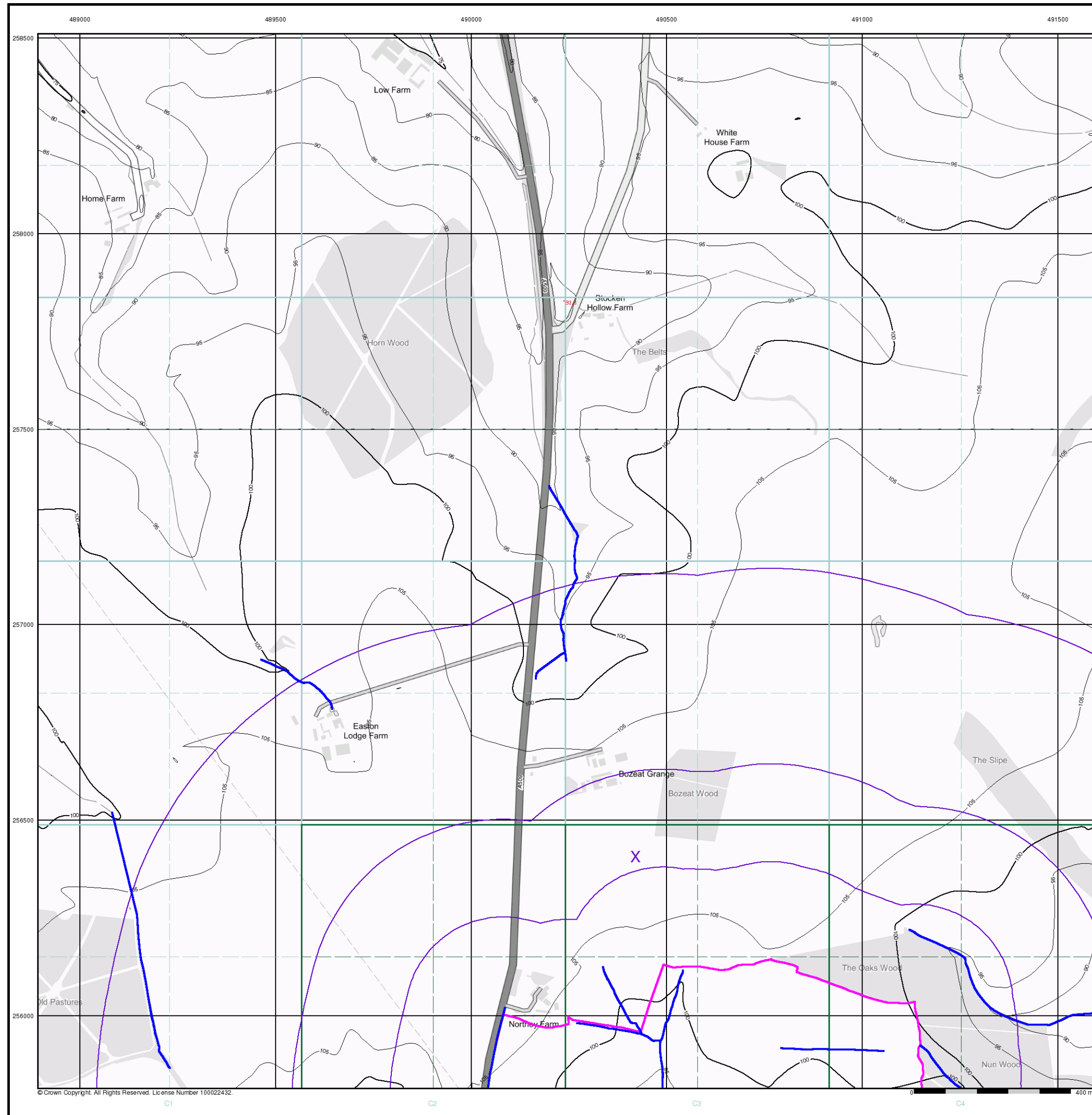
### Site Details

Meikleland



Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [REDACTED]





#### General

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

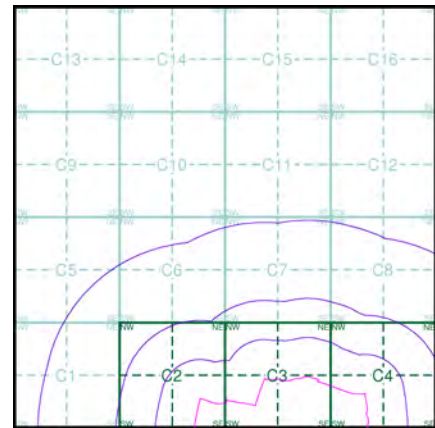
#### OS Water Network Data

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

#### Contours (height in meters)

- |                  |       |     |    |     |                 |
|------------------|-------|-----|----|-----|-----------------|
| Standard Contour | 105   | 100 | 95 | MLW | Mean Low Water  |
| Master Contour   | 105   | 100 | 95 | MHW | Mean High Water |
| Spot Height      | 167.3 |     |    |     |                 |

#### OS Water Network Map - Slice C



#### Order Details

Order Number: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 490420, 256410  
Slice: C  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

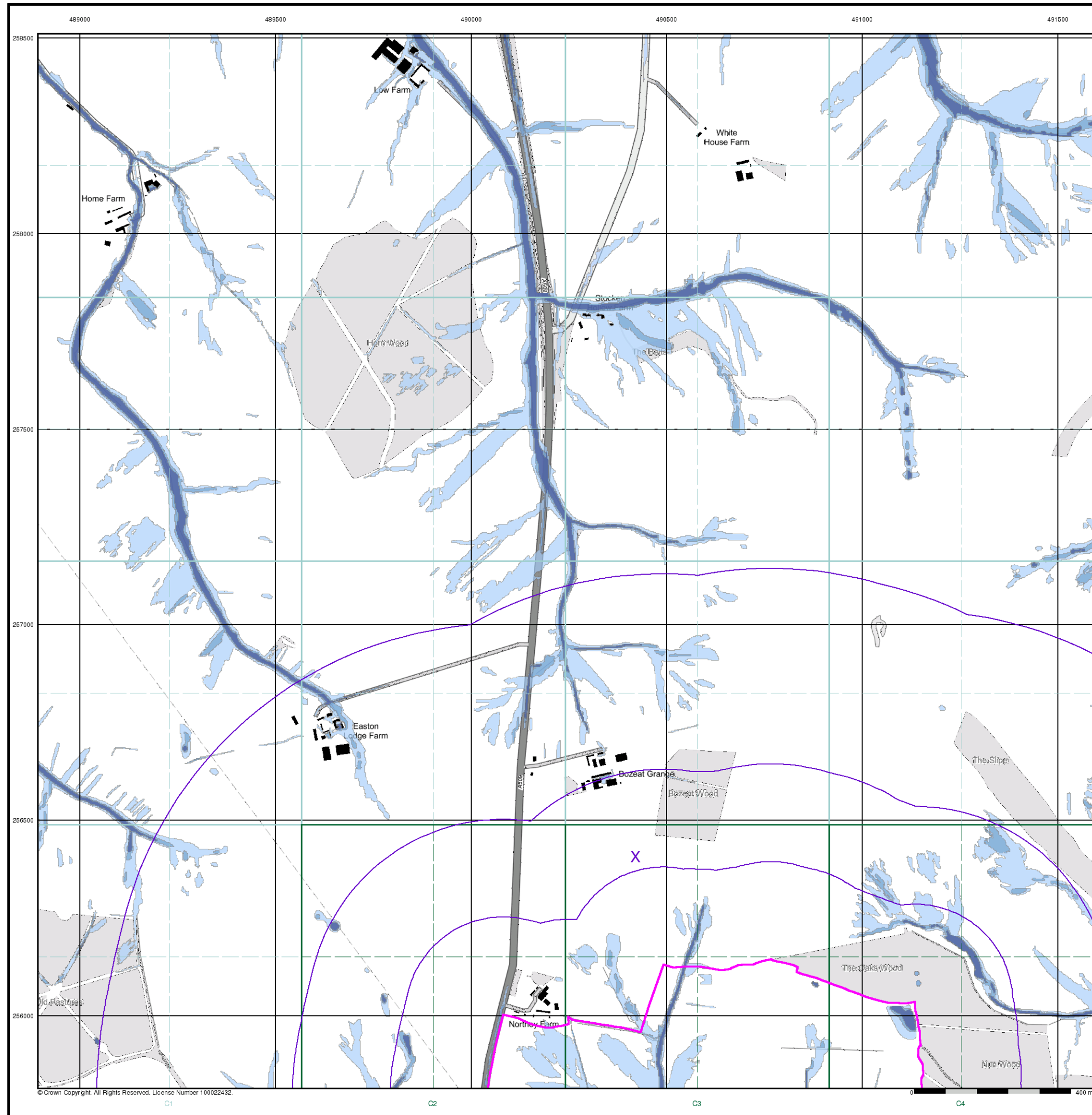
#### Site Details

Meikleland



Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [Redacted]





### General

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

### Risk of Flooding from Surface Water

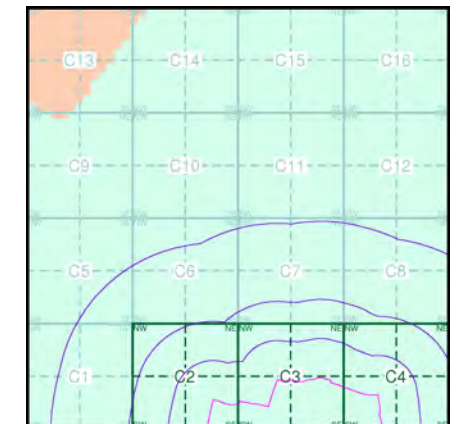
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

### Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

### EANRW Suitability Map - Slice C



### Order Details

Order Number: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 490420, 256410  
Slice: C  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

### Site Details

Meikleland



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Web: [Redacted]

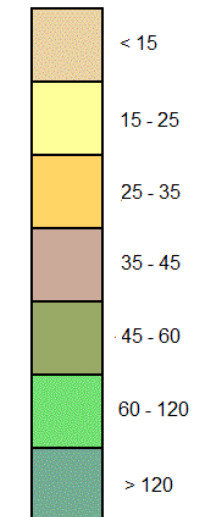


**General**

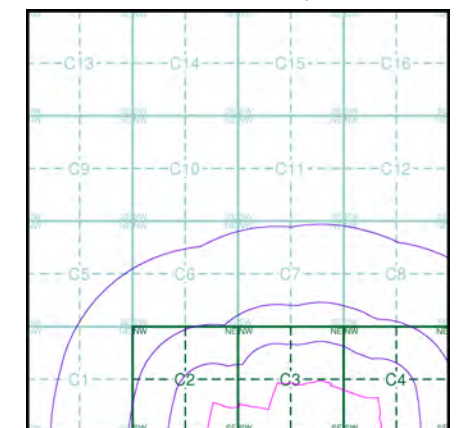
 Specified Site  Specified Buffer(s)  Bearing Reference Point

**Estimated Soil Chemistry Arsenic**

Arsenic Concentrations mg/kg



**Estimated Soil Chemistry Arsenic - Slice C**

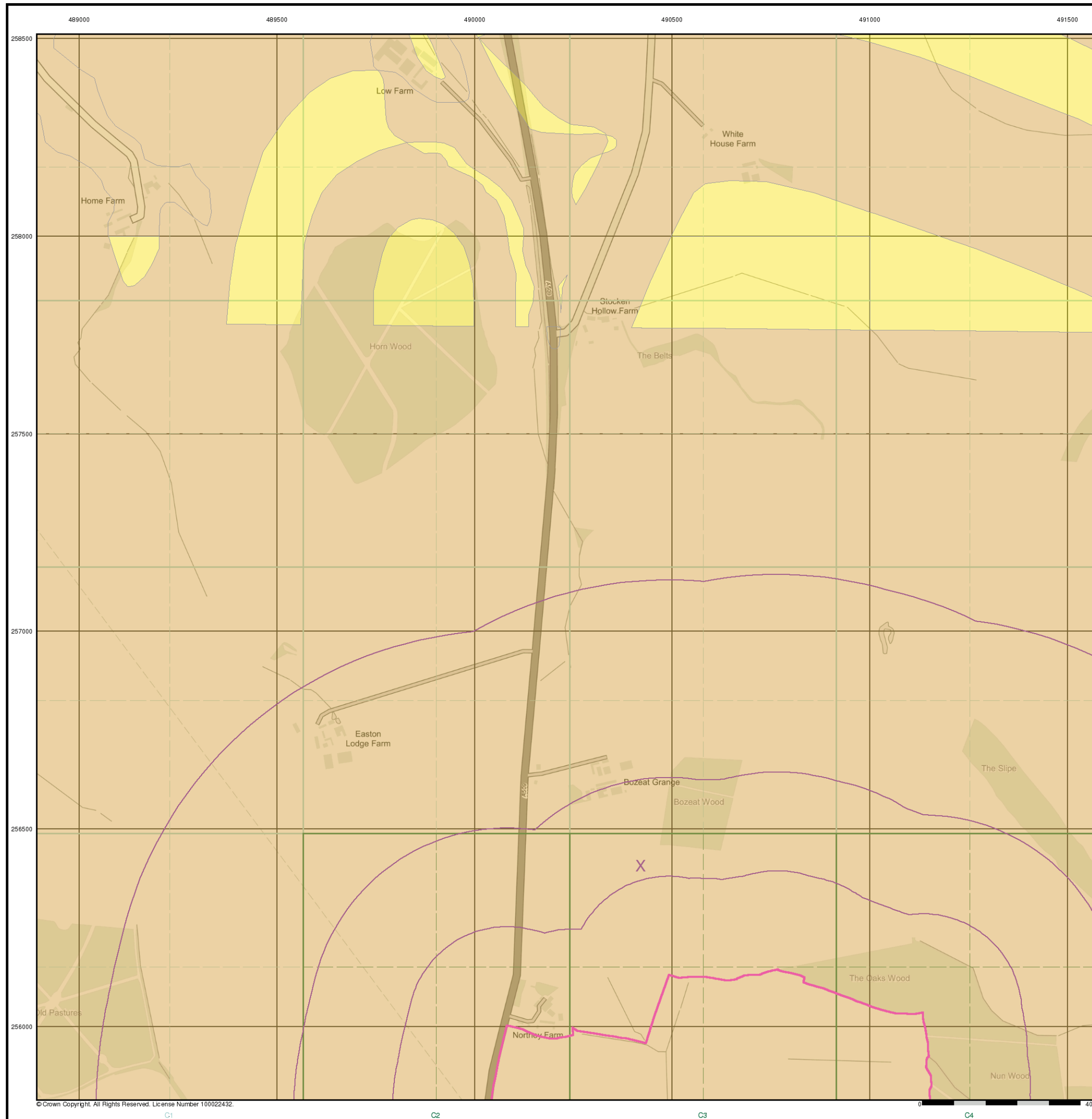


**Order Details**

Order Details: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 490420, 256410  
Slice: C  
Site Area (Ha): 172.36  
Search Buffer (m): 1000


**Site Details**

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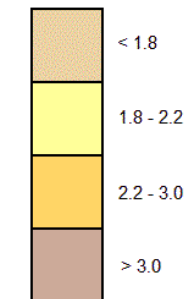


### General

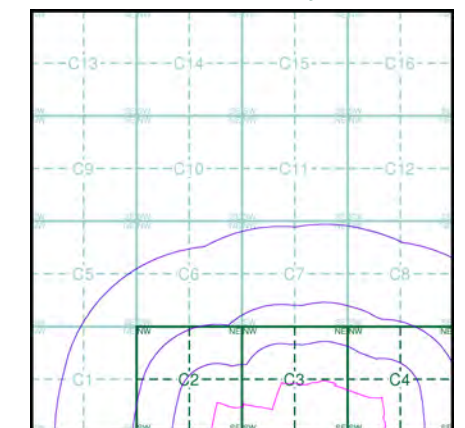
 Specified Site       Specified Buffer(s)       Bearing Reference Point

### Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg



### Estimated Soil Chemistry Cadmium - Slice C



### Order Details

Order Details: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 490420, 256410  
Slice: C  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

### Site Details

Meikleland

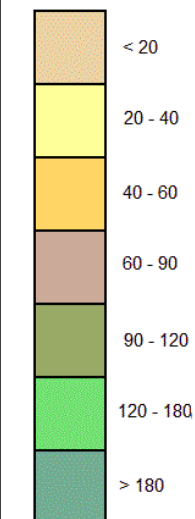


## General

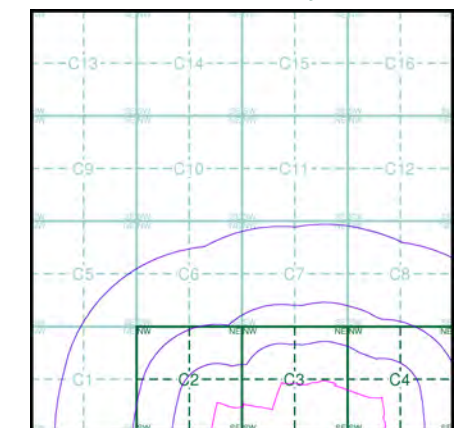
 Specified Site
  Specified Buffer(s)
  Bearing Reference Point

## Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg



## Estimated Soil Chemistry Chromium - Slice C

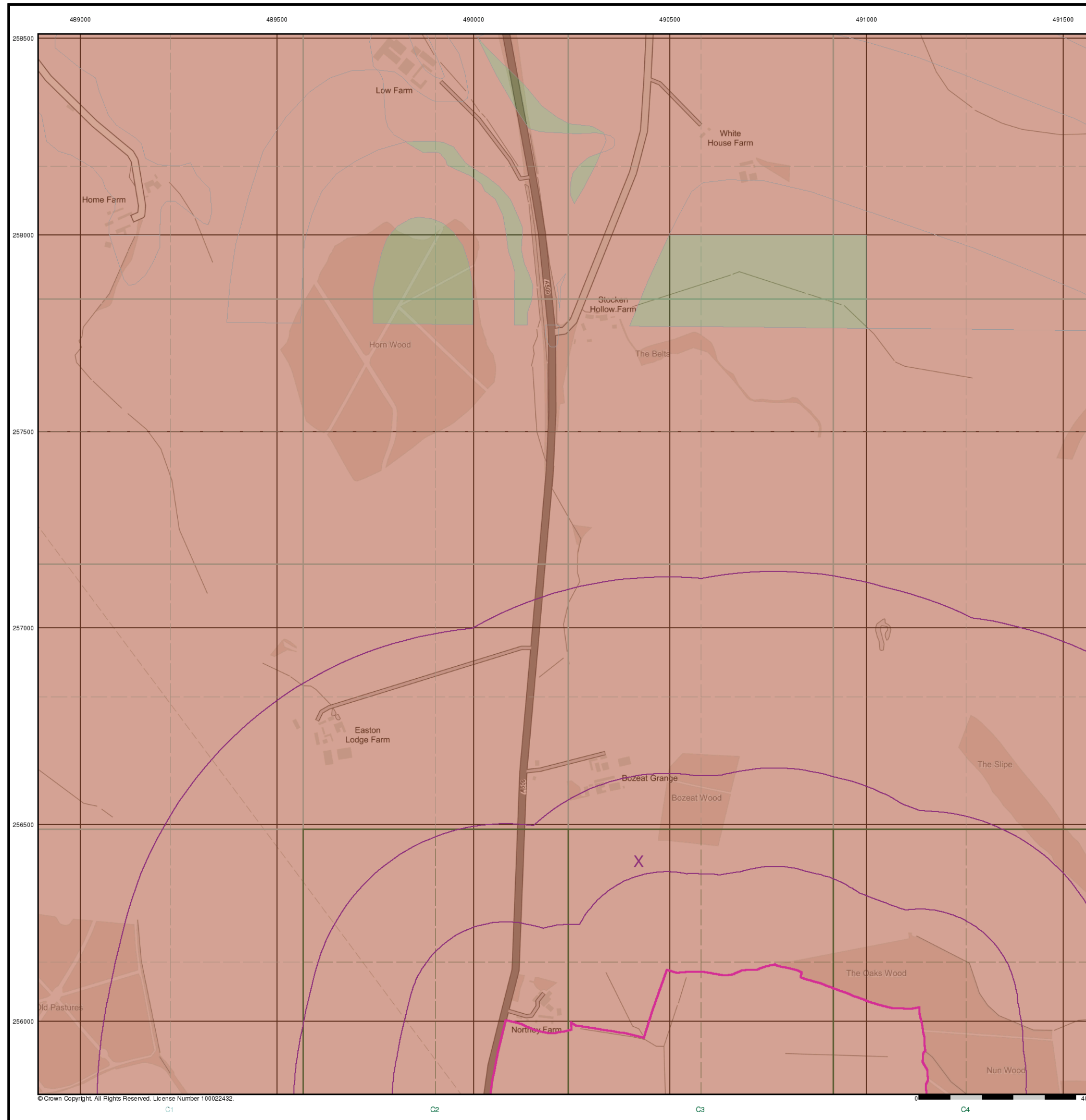


## Order Details

Order Details: 346936621\_1\_1  
 Customer Ref: DS78309  
 National Grid Reference: 490420, 256410  
 Slice: C  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000




## Site Details

Meikleland



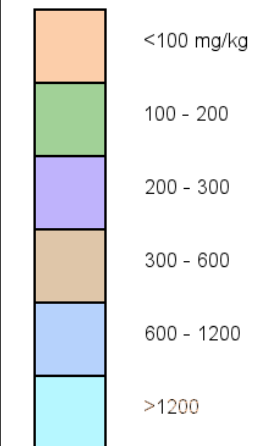


**General**

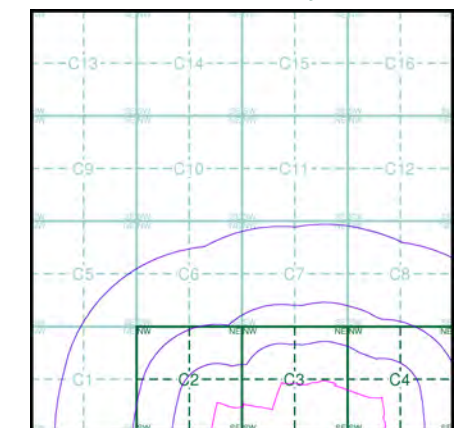
 Specified Site       Specified Buffer(s)       Bearing Reference Point

**Estimated Soil Chemistry Lead**

Lead Concentrations mg/kg



**Estimated Soil Chemistry Lead - Slice C**

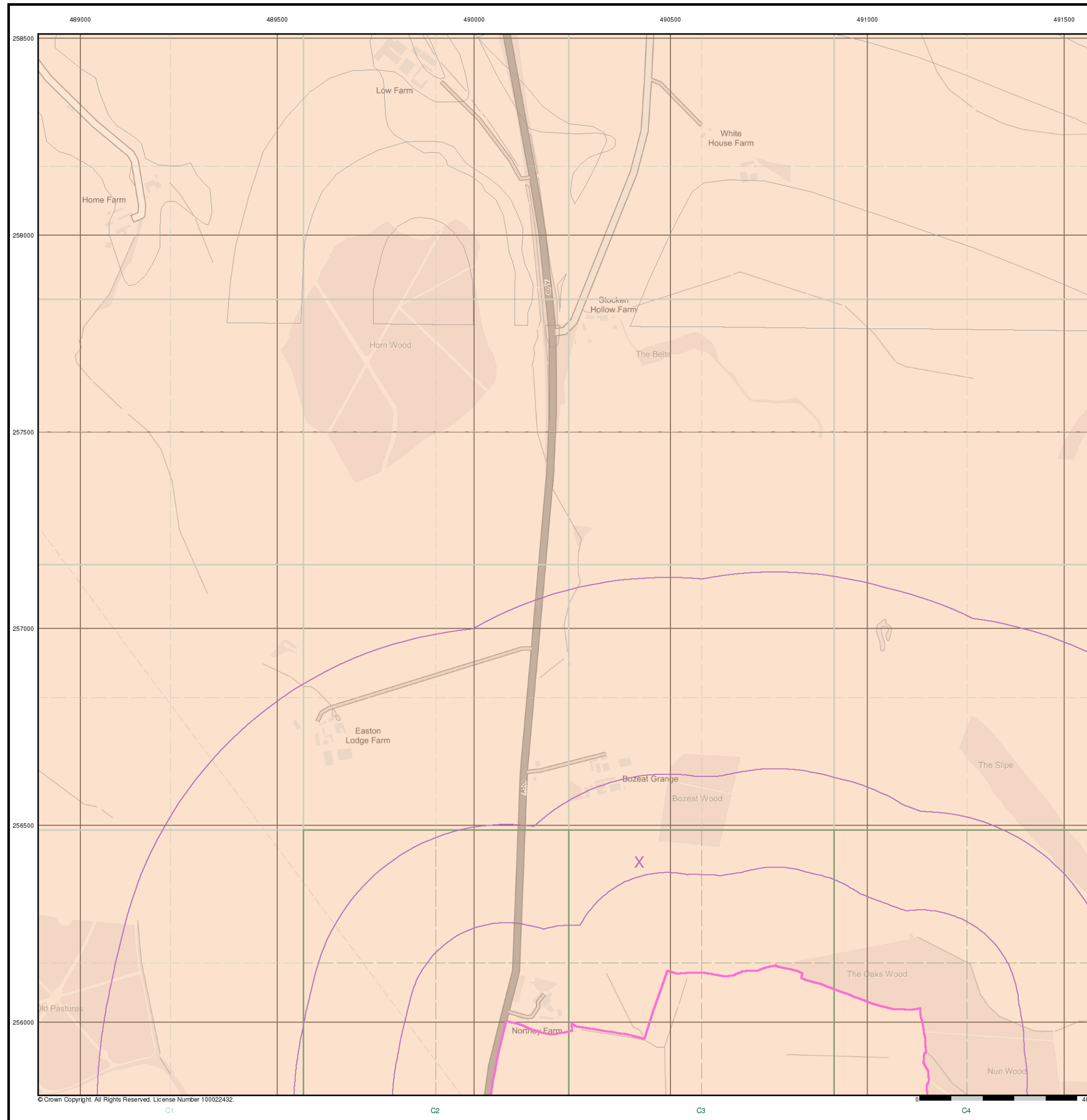


**Order Details**

Order Details: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 490420, 256410  
Slice: C  
Site Area (Ha): 172.36  
Search Buffer (m): 1000



**Site Details**

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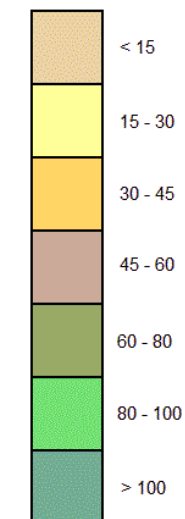


**General**

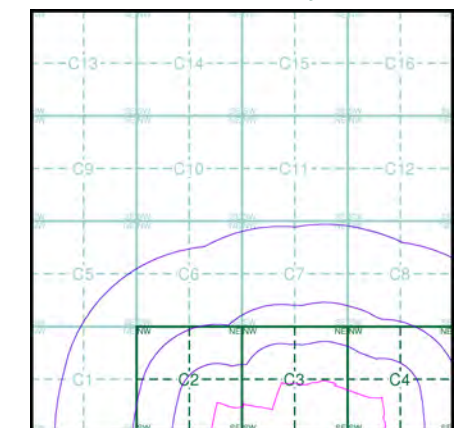
 Specified Site     Specified Buffer(s)     Bearing Reference Point

**Estimated Soil Chemistry Nickel**

Nickel Concentrations mg/kg



**Estimated Soil Chemistry Nickel - Slice C**

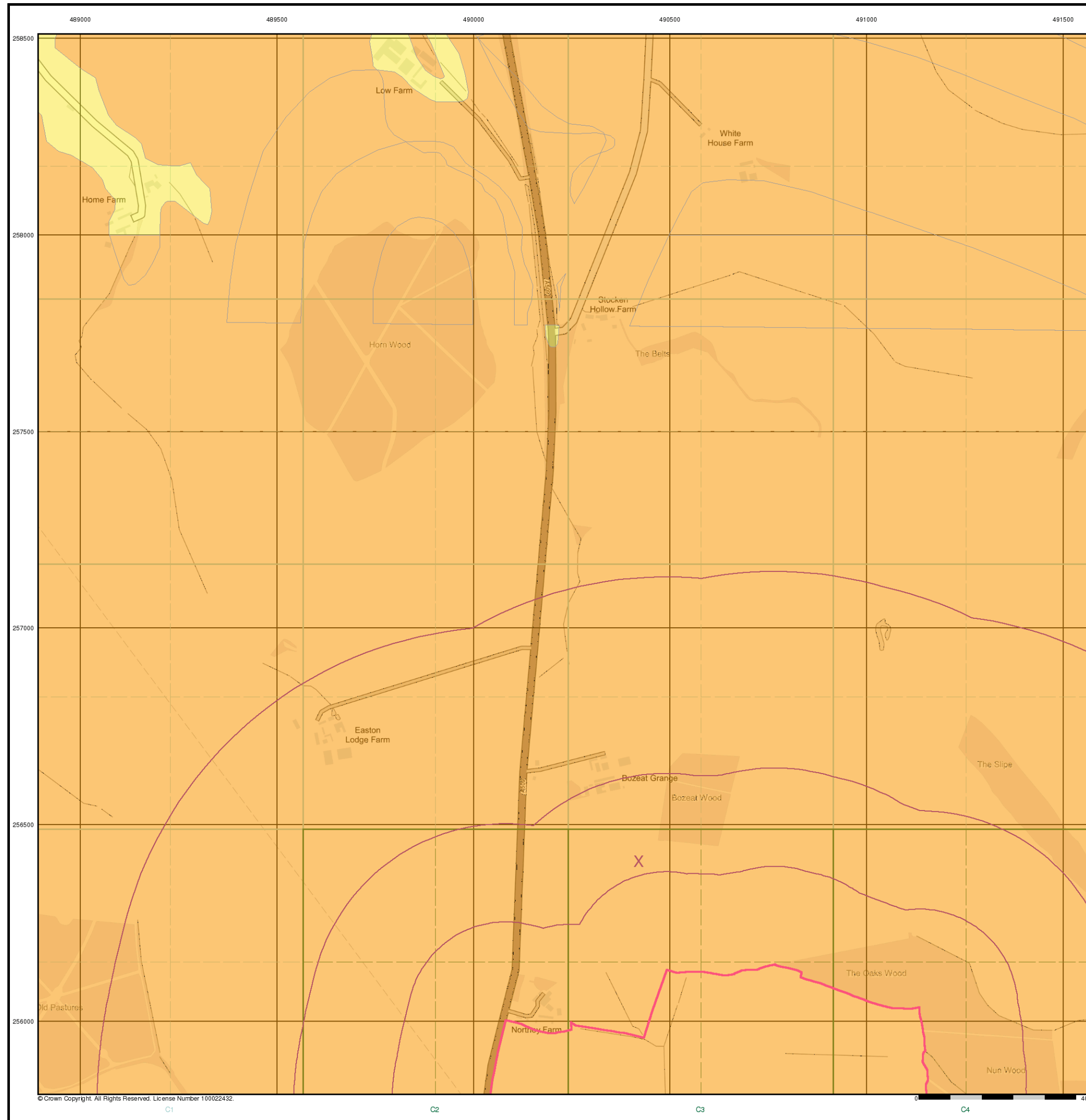


**Order Details**

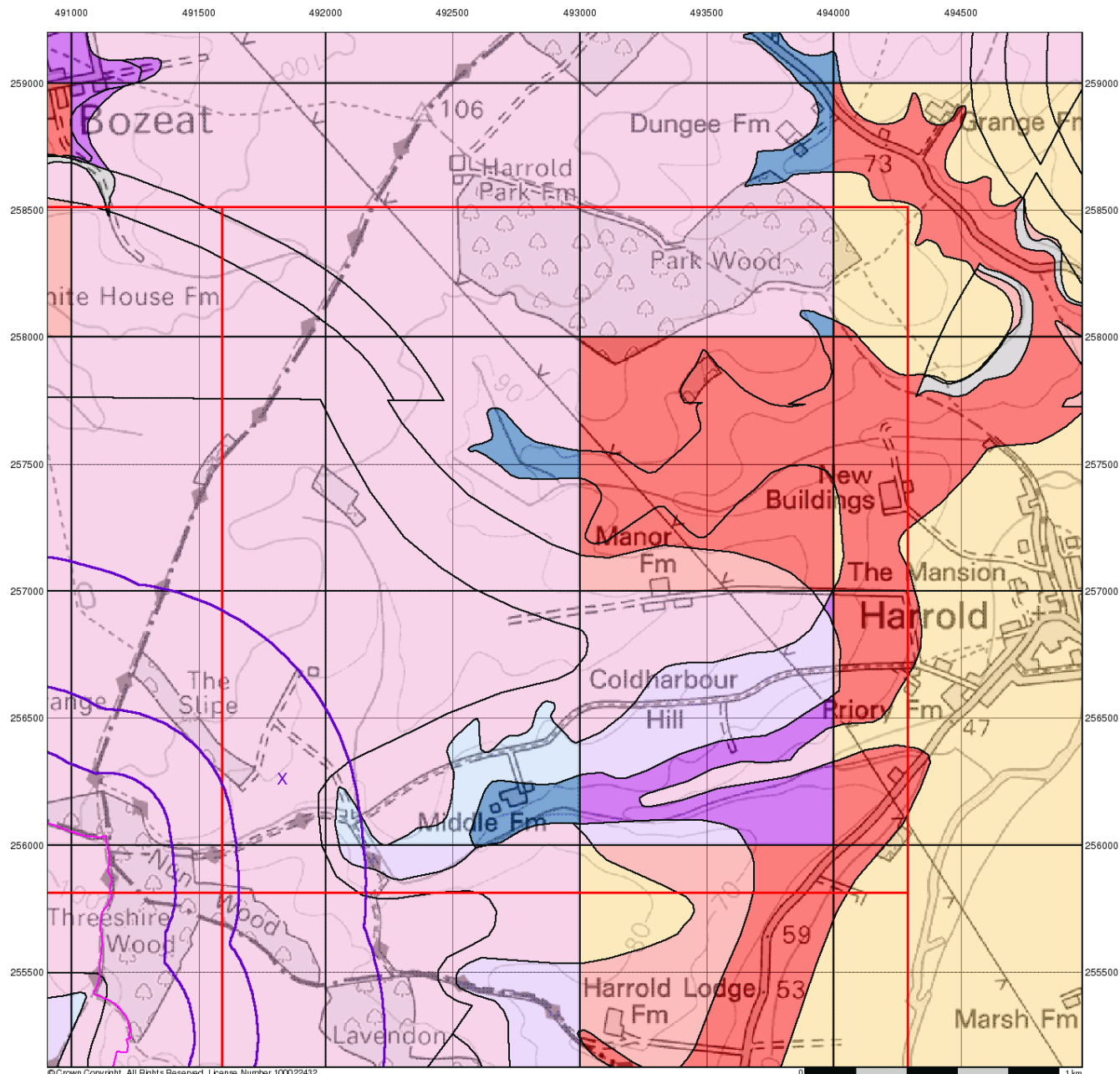
Order Details: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 490420, 256410  
Slice: C  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

**Site Details**

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0 1 km



## Groundwater Vulnerability

### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### Agency and Hydrological

#### Bedrock Aquifers

- High Vulnerability, Principal Aquifer
- High Vulnerability, Secondary Aquifer
- Medium Vulnerability, Principal Aquifer
- Medium Vulnerability, Secondary Aquifer
- Low Vulnerability, Principal Aquifer
- Low Vulnerability, Secondary Aquifer

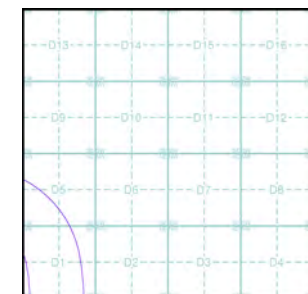
#### Superficial Aquifers

- High Vulnerability, Principal Aquifer
- High Vulnerability, Secondary Aquifer
- Medium Vulnerability, Principal Aquifer
- Medium Vulnerability, Secondary Aquifer
- Low Vulnerability, Principal Aquifer
- Low Vulnerability, Secondary Aquifer

Unproductive Aquifer

Soluble Rock

### Site Sensitivity Context Map - Slice D



### Order Details

Order Number: 346936621\_1\_1  
 Customer Ref: DS78309  
 National Grid Reference: 491830, 256260  
 Slice: D  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

### Site Details

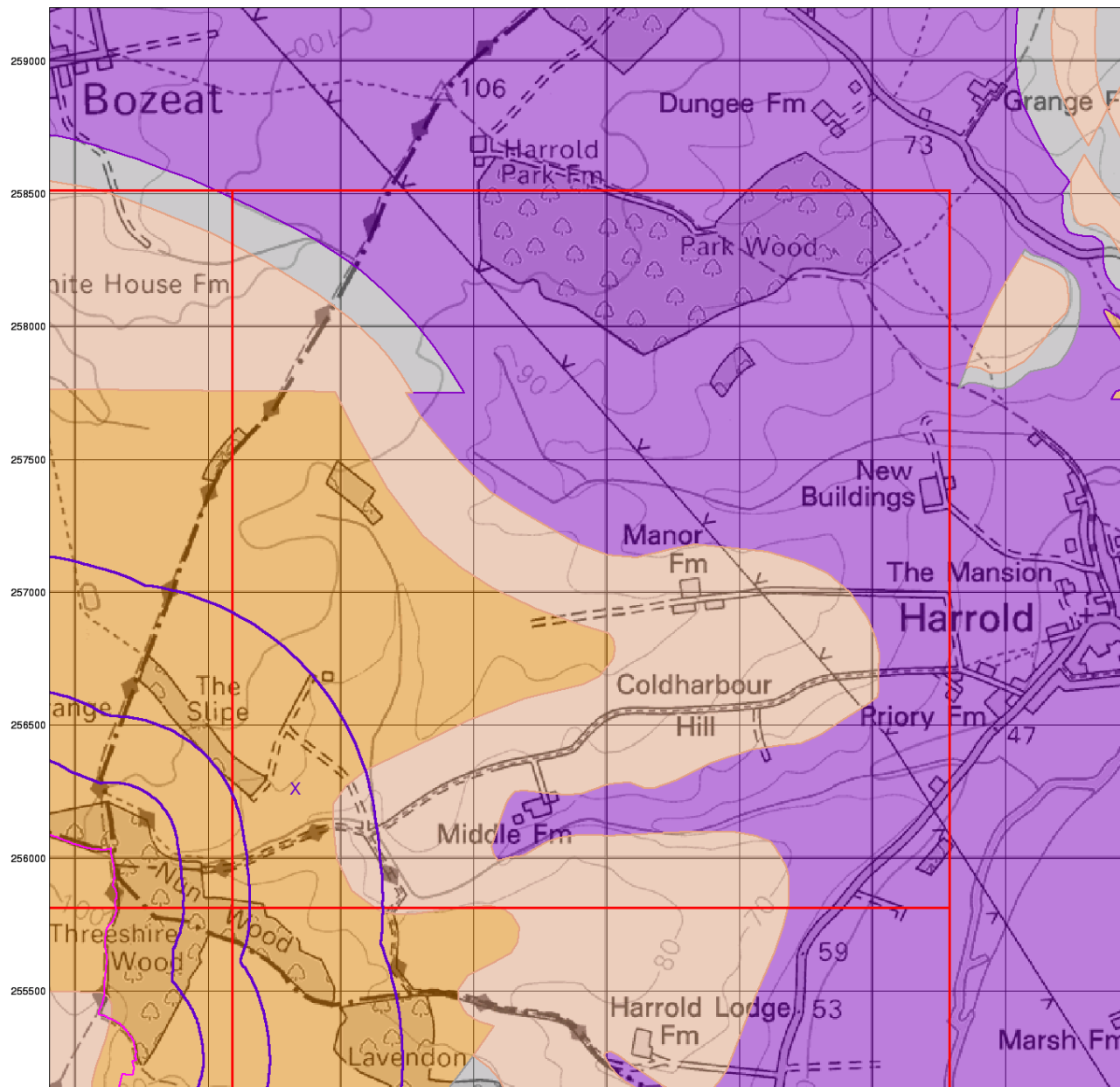
Meikleland



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491000 491500 492000 492500 493000 493500 494000 494500



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0 1 km



## Bedrock Aquifer Designation

### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### Agency and Hydrological

#### Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

### Site Sensitivity Context Map - Slice D



### Order Details

Order Number: 346936621\_1\_1  
 Customer Ref: DS78309  
 National Grid Reference: 491830, 256260  
 Slice: D  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

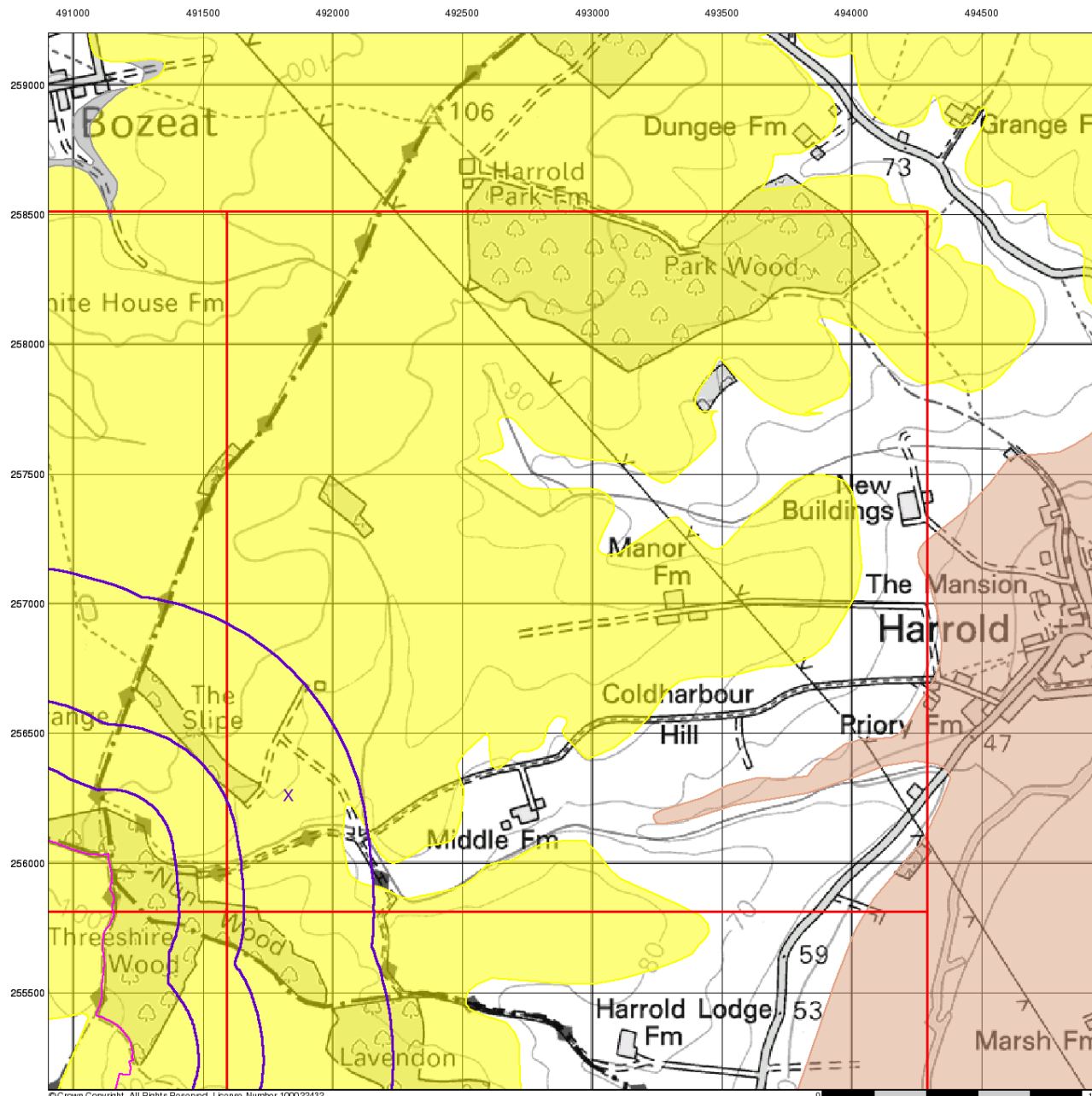
### Site Details

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 Web: [Redacted]





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## Superficial Aquifer Designation

### General

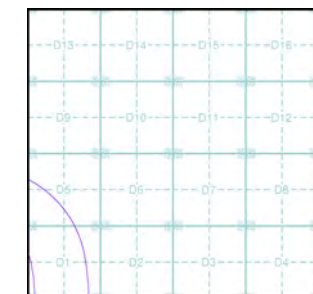
- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### Agency and Hydrological

#### Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

### Site Sensitivity Context Map - Slice D



### Order Details

Order Number: 346936621\_1\_1  
 Customer Ref: DS78309  
 National Grid Reference: 491830, 256260  
 Slice: D  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

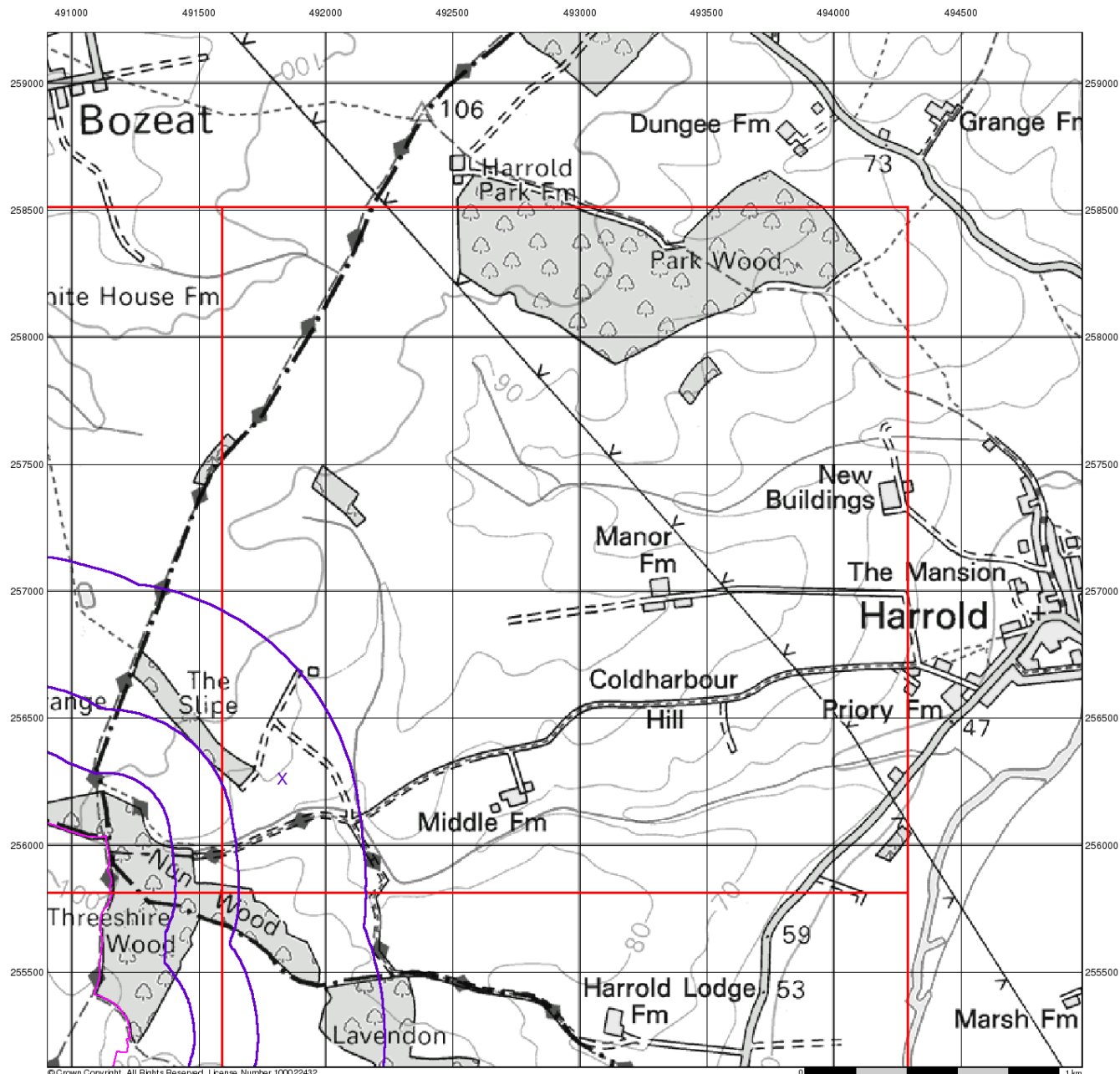
### Site Details

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## Source Protection Zones

### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### Agency and Hydrological

- Inner zone (Zone 1)
- Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- Total catchment - subsurface activity only (Zone 3c)
- Special interest (Zone 4)

### Site Sensitivity Context Map - Slice D



### Order Details

Order Number: 346936621\_1\_1  
 Customer Ref: DS78309  
 National Grid Reference: 491830, 256260  
 Slice: D  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

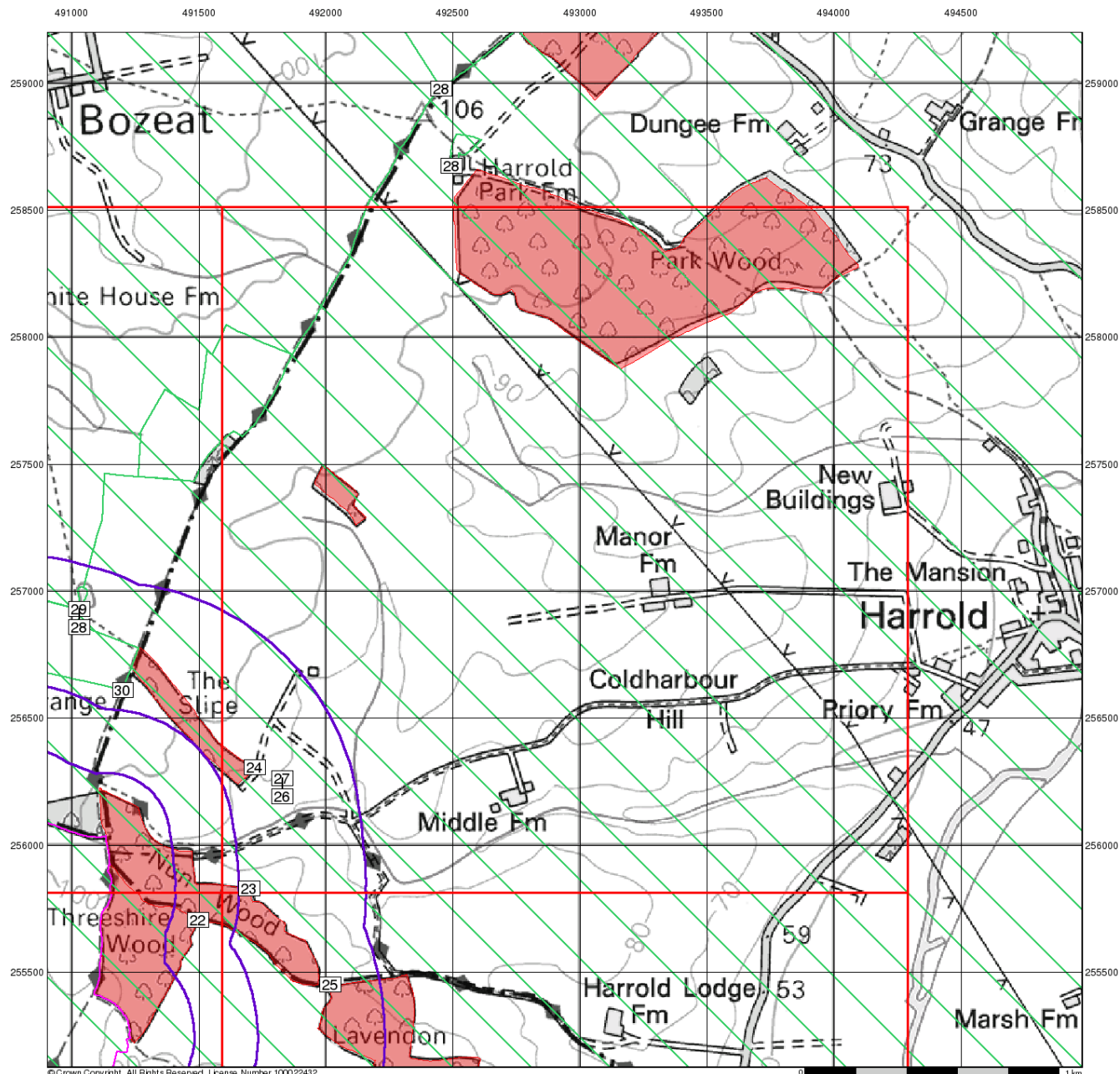
### Site Details

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Tel: 0844 844 9952  
 Fax: 0844 844 9951  
 Web: [Redacted]





## Sensitive Land Uses

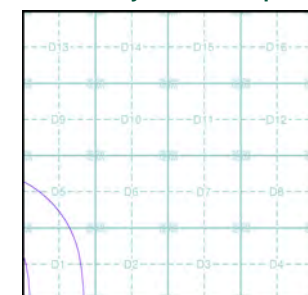
### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### Sensitive Land Uses

- Ancient Woodland
- Area of Adopted Green Belt
- Area of Unadopted Green Belt
- Area of Outstanding Natural Beauty
- Environmentally Sensitive Area
- Forest Park
- Local Nature Reserve
- Marine Nature Reserve
- National Nature Reserve
- National Park
- Nitrate Sensitive Area
- Nitrate Vulnerable Zone
- Ramsar Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area
- World Heritage Sites

### Site Sensitivity Context Map - Slice D



### Order Details

Order Number: 346936621\_1\_1  
 Customer Ref: DS78309  
 National Grid Reference: 491830, 256260  
 Slice: D  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

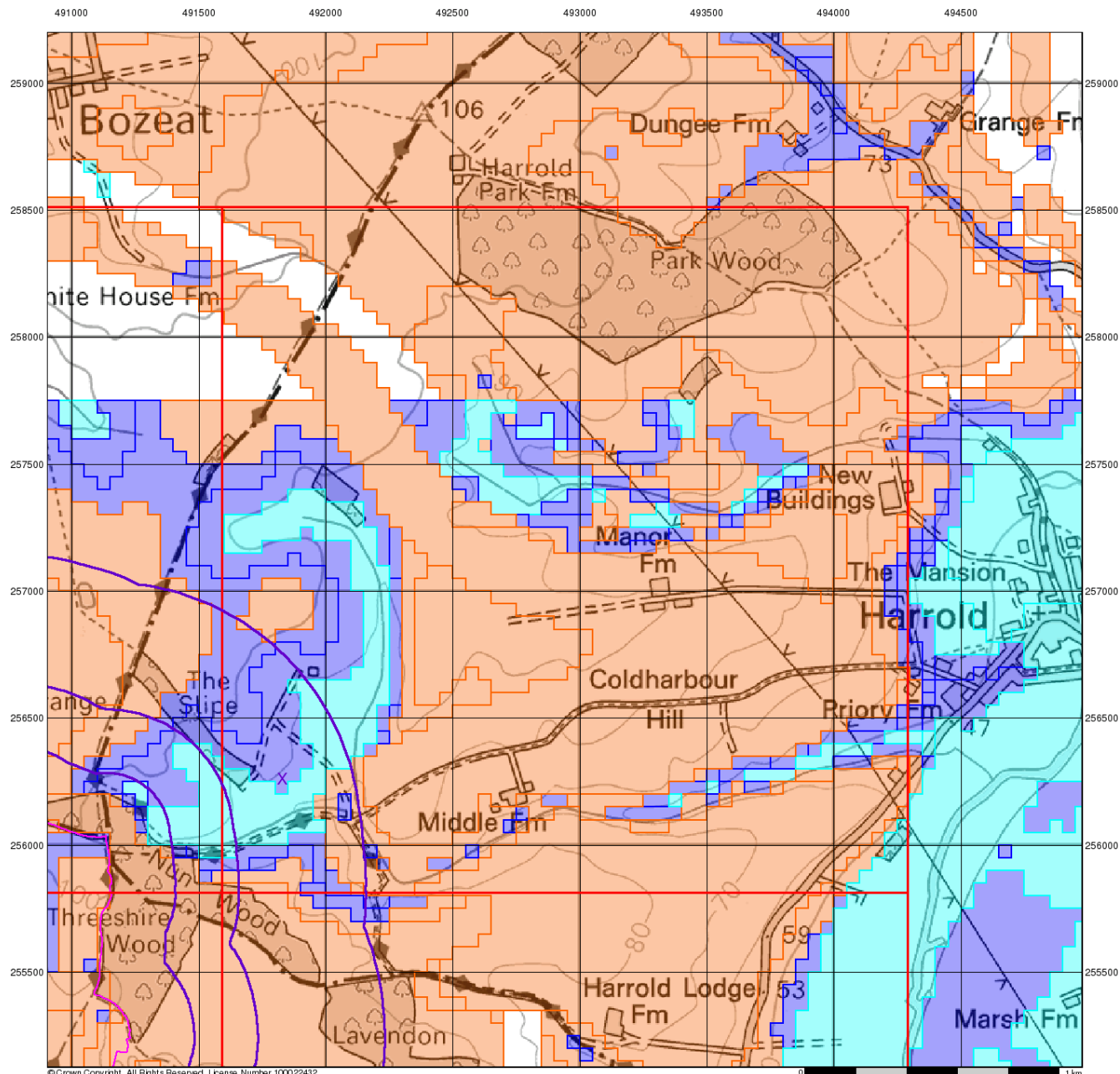
### Site Details

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## BGS Flood GFS Data

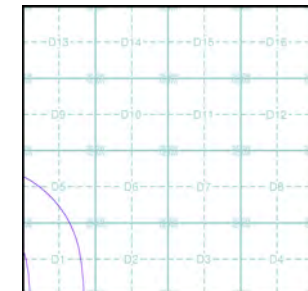
### General

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

### Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

### Site Sensitivity Context Map - Slice D



### Order Details

Order Number: 346936621\_1\_1  
 Customer Ref: DS78309  
 National Grid Reference: 491830, 256260  
 Slice: D  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

### Site Details

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 Fax: 0844 844 9951  
 Web: [www.landmarkinfo.co.uk](http://www.landmarkinfo.co.uk)



## Envirocheck<sup>®</sup> Report:

### Datasheet

#### Order Details:

**Order Number:**

346936621\_1\_1

**Customer Reference:**

DS78309

**National Grid Reference:**

491830, 256260

**Slice:**

D

**Site Area (Ha):**

172.36


**Search Buffer (m):**

1000

#### Site Details:

Meikleland

#### Client Details:

  
Delta Simons  
Suite 4A  
One Portland Street  
Manchester  
M1 3BE





Report Section	Page Number
Summary	-
Agency & Hydrological	1
Waste	8
Hazardous Substances	-
Geological	9
Industrial Land Use	-
Sensitive Land Use	10
Data Currency	11
Data Suppliers	17
Useful Contacts	18

#### Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination. For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client. In this datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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#### Report Version v53.0



Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
<b>Agency &amp; Hydrological</b>					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents					
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls					
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 2			Yes	
Pollution Incidents to Controlled Waters					
Prosecutions Relating to Authorised Processes					
Registered Radioactive Substances					
River Quality					
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points					
Substantiated Pollution Incident Register					
Water Abstractions					
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 2	Yes	n/a	n/a	n/a
Groundwater Vulnerability - Soluble Rock Risk	pg 4	4	n/a	n/a	n/a
Groundwater Vulnerability - Local Information			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 4	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 4	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences				n/a	n/a
Flooding from Rivers or Sea without Defences				n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 4			1	20



Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
<b>Waste</b>					
BGS Recorded Landfill Sites					
Historical Landfill Sites					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)					
Local Authority Landfill Coverage	pg 8	2	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)					
Potentially Infilled Land (Water)					
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
<b>Hazardous Substances</b>					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					



Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
<b>Geological</b>					
BGS 1:625,000 Solid Geology	pg 9	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 9	Yes			Yes
BGS Recorded Mineral Sites					
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 9	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards				n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 9	Yes		n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 9	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 9	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 9	Yes		n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
<b>Industrial Land Use</b>					
Contemporary Trade Directory Entries					
Fuel Station Entries					
Points of Interest - Commercial Services					
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production					
Points of Interest - Public Infrastructure					
Points of Interest - Recreational and Environmental					
Gas Pipelines					
Underground Electrical Cables					



Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
<b>Sensitive Land Use</b>					
Ancient Woodland	pg 10	2			2
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 10	2	3		
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW)	0	1	491150 255500
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SW)	0	1	491150 255350
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW)	0	1	491200 255350
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW)	0	1	491050 255350
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	0	1	491150 256050
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW)	0	1	491150 255950
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SW)	0	1	491100 255550
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	0	1	491450 256600
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	0	1	490950 256100
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	D1SW (S)	0	1	491830 255850
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW)	0	1	491150 255300
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	109	1	491300 256050
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(W)	116	1	491200 256200
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	117	1	491300 256100
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	133	1	491300 256150
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(W)	133	1	491250 256200
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	D1NW (NW)	139	1	491750 256400
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	D1NW (NW)	156	1	491830 256263
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding to Occur at Surface	D1NW (SE)	159	1	491850 256250
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding to Occur at Surface	(W)	163	1	491300 256250
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(SW)	203	1	491400 256000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	(NW)	207	1	491200 256550



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SW)	253	1	491450 256000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SW)	302	1	491500 256000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	(SW)	344	1	491550 255900
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	D1SW (S)	347	1	491830 256000
	<b>BGS Groundwater Flooding Susceptibility</b> Flooding Type: Limited Potential for Groundwater Flooding to Occur	D1SW (S)	394	1	491830 255950
	<b>Nearest Surface Water Feature</b>	D1SW (SW)	331	-	491659 256021
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Bedrock Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial Patchiness: <90% Superficial Thickness: 3-10m Superficial Recharge: Low	(SW)	0	2	491000 255413
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Bedrock Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	(SW)	0	2	491051 255418
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Low Bedrock Flow: Mixed Dilution: <300 mm/year Baseflow Index: 40-70% Superficial Patchiness: >90% Superficial Thickness: >10m Superficial Recharge: Low	(W)	0	2	491000 256263



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial: >90% Patchiness: >10m Thickness: Low Superficial Recharge:	D1NW (NW)	0	2	491830 256263
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial: <90% Patchiness: 3-10m Thickness: Low Superficial Recharge:	(SW)	0	2	491000 255496
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial: <90% Patchiness: 3-10m Thickness: Low Superficial Recharge:	(SW)	0	2	491000 255261
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial: <90% Patchiness: 3-10m Thickness: Low Superficial Recharge:	(W)	0	2	491000 256000



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial: >90% Patchiness: >10m Superficial Thickness: Low Superficial Recharge:	(SW)	0	2	491124 255478
	<b>Groundwater Vulnerability Map</b> Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: <300 mm/year Baseflow Index: <40% Superficial: >90% Patchiness: >10m Superficial Thickness: Low Superficial Recharge:	D1SW (S)	0	2	491830 256000
	<b>Groundwater Vulnerability - Soluble Rock Risk</b> Classification: Significant Risk - Low Possibility	D1NW (NW)	0	2	491830 256263
	<b>Groundwater Vulnerability - Soluble Rock Risk</b> Classification: Significant Risk - Problems Unlikely	(W)	0	2	491000 256263
	<b>Groundwater Vulnerability - Soluble Rock Risk</b> Classification: Significant Risk - Low Possibility	(W)	0	2	491000 256000
	<b>Groundwater Vulnerability - Soluble Rock Risk</b> Classification: Significant Risk - Low Possibility	D1SW (S)	0	2	491830 256000
	<b>Bedrock Aquifer Designations</b> Aquifer Designation: Secondary Aquifer - A	(SW)	0	2	491124 255478
	<b>Bedrock Aquifer Designations</b> Aquifer Designation: Secondary Aquifer - B	D1NW (NW)	0	2	491830 256263
	<b>Superficial Aquifer Designations</b> Aquifer Designation: Secondary Aquifer - Undifferentiated	D1NW (NW)	0	2	491830 256263
	<b>Extreme Flooding from Rivers or Sea without Defences</b> None				
	<b>Flooding from Rivers or Sea without Defences</b> None				
	<b>Areas Benefiting from Flood Defences</b> None				
	<b>Flood Water Storage Areas</b> None				
	<b>Flood Defences</b> None				
1	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 189.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	D1SW (SW)	331	3	491659 256021



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 125.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	D1SW (S)	516	3	491769 256078
3	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 11.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	D1NW (W)	557	3	491661 256232
4	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 4.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	D1NW (W)	562	3	491664 256229
5	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 11.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	D1NW (W)	564	3	491673 256221
6	<b>OS Water Network Lines</b> Watercourse Form: Lake Watercourse Length: 5.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	D1NW (W)	570	3	491676 256216
7	<b>OS Water Network Lines</b> Watercourse Form: Lake Watercourse Length: 5.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	D1NW (W)	571	3	491678 256212
8	<b>OS Water Network Lines</b> Watercourse Form: Lake Watercourse Length: 12.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	D1NW (W)	571	3	491689 256216
9	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 46.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	D1NW (W)	572	3	491678 256212
10	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 115.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	D1NW (SW)	573	3	491704 256152



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
11	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 2.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	D1SW (S)	633	3	491768 256080
12	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 72.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	D1SW (S)	634	3	491837 256104
13	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 3.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	D1SW (S)	705	3	491840 256106
14	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 244.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	D1SW (S)	709	3	491856 256113
15	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 14.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	D1SE (SE)	927	3	492061 256114
16	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 21.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	D1SE (SE)	941	3	492074 256119
17	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 17.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	D1SE (SE)	958	3	492093 256109
18	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 8.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	D1SE (SE)	968	3	492105 256097
19	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 2.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	D1SE (SE)	968	3	492105 256099





Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
20	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 600.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	D1NE (E)	969	3	492120 256225
21	<b>OS Water Network Lines</b> Watercourse Form: Inland river Watercourse Length: 950.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Cam Ely Ouse and South Level Primacy: 1	D1SE (SE)	971	3	492110 256090





Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>Local Authority Landfill Coverage</b> Name: Bedford Borough Council - Has supplied landfill data		0	4	491830 256263
	<b>Local Authority Landfill Coverage</b> Name: Bedfordshire County Council - Has no landfill data to supply		0	5	491830 256263



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	<b>BGS 1:625,000 Solid Geology</b> Description: Kellaways Formation And Oxford Clay Formation (Undifferentiated)	D1NW (NW)	0	1	491830 256263
	<b>BGS 1:625,000 Solid Geology</b> Description: Great Oolite Group	D1NW (E)	0	1	491905 256239
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	D1NW (NW)	0	1	491830 256263
	<b>BGS Estimated Soil Chemistry</b> Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	D1NE (E)	898	1	492048 256223
	<b>BGS Measured Urban Soil Chemistry</b> No data available				
	<b>BGS Urban Soil Chemistry Averages</b> No data available				
	<b>Coal Mining Affected Areas</b> In an area that might not be affected by coal mining				
	<b>Non Coal Mining Areas of Great Britain</b> No Hazard				
	<b>Potential for Collapsible Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	D1NW (NW)	0	1	491830 256263
	<b>Potential for Compressible Ground Stability Hazards</b> Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	D1NW (NW)	0	1	491830 256263
	<b>Potential for Ground Dissolution Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	D1NW (NW)	0	1	491830 256263
	<b>Potential for Landslide Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	D1NW (NW)	0	1	491830 256263
	<b>Potential for Running Sand Ground Stability Hazards</b> Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	D1NW (NW)	0	1	491830 256263
	<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	D1NW (NW)	0	1	491830 256263
	<b>Radon Potential - Radon Affected Areas</b> Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	D1NW (NW)	0	1	491830 256263
	<b>Radon Potential - Radon Protection Measures</b> Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	D1NW (NW)	0	1	491830 256263



Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
22	<b>Ancient Woodland</b> Name: Three Shire Wood Reference: 1501796 Area(m <sup>2</sup> ): 146931.81 Type: Ancient and Semi-Natural Woodland	(SW)	0	7	491498 255705
23	<b>Ancient Woodland</b> Name: Nun Wood Reference: 1475867 Area(m <sup>2</sup> ): 178825.06 Type: Ancient and Semi-Natural Woodland	D1SW (S)	0	7	491701 255828
24	<b>Ancient Woodland</b> Name: Not Supplied Reference: 1418468 Area(m <sup>2</sup> ): 53849.6 Type: Ancient and Semi-Natural Woodland	D1NW (W)	503	7	491720 256306
25	<b>Ancient Woodland</b> Name: Lavendon Wood Reference: 1503173 Area(m <sup>2</sup> ): 205906.44 Type: Ancient and Semi-Natural Woodland	(S)	737	7	492019 255449
26	<b>Nitrate Vulnerable Zones</b> Name: Great Ouse Nvz Description: Surface Water Source: Environment Agency, Head Office	D1NW (NW)	0	2	491830 256263
27	<b>Nitrate Vulnerable Zones</b> Name: Bedford Great Oolite Description: Groundwater Source: Environment Agency, Head Office	D1NW (NW)	0	2	491830 256263
28	<b>Nitrate Vulnerable Zones</b> Name: Thrapstone Lake Eutrophic Lake Nvz Description: Eutrophic Water Source: Environment Agency, Head Office	(NW)	147	2	491031 256928
29	<b>Nitrate Vulnerable Zones</b> Name: Northampton Sands Description: Groundwater Source: Environment Agency, Head Office	(NW)	147	2	491031 256928
30	<b>Nitrate Vulnerable Zones</b> Name: River Nene Nvz Description: Surface Water Source: Environment Agency, Head Office	(NW)	147	2	491199 256610



Agency & Hydrological	Version	Update Cycle
<b>Contaminated Land Register Entries and Notices</b> Wellingborough Borough Council (now part of North Northamptonshire Council) - Environmental Health Department Bedford Borough Council - Environmental Health Department North Northamptonshire Council Environment Agency - Head Office	August 2013  December 2014 December 2019 November 2023	Annual Rolling Update  Annual Rolling Update Annual Rolling Update Annually
<b>Discharge Consents</b> Environment Agency - Anglian Region	April 2024	Quarterly
<b>Enforcement and Prohibition Notices</b> Environment Agency - Anglian Region	March 2013	
<b>Integrated Pollution Controls</b> Environment Agency - Anglian Region	January 2009	
<b>Integrated Pollution Prevention And Control</b> Environment Agency - Anglian Region	October 2023	Quarterly
<b>Local Authority Integrated Pollution Prevention And Control</b> Wellingborough Borough Council (now part of North Northamptonshire Council) - Environmental Health Department North Northamptonshire Council Bedford Borough Council - Environmental Health Department	December 2020  February 2015 March 2015	Variable  Variable Variable
<b>Local Authority Pollution Prevention and Controls</b> Bedford Borough Council - Environmental Health Department Wellingborough Borough Council (now part of North Northamptonshire Council) - Environmental Health Department North Northamptonshire Council	December 2020 December 2020  February 2015	Annual Rolling Update Annual Rolling Update  Annual Rolling Update
<b>Local Authority Pollution Prevention and Control Enforcements</b> Wellingborough Borough Council (now part of North Northamptonshire Council) - Environmental Health Department North Northamptonshire Council Bedford Borough Council - Environmental Health Department	December 2014  February 2015 March 2015	Variable  Variable Variable
<b>Nearest Surface Water Feature</b> Ordnance Survey	March 2024	
<b>Pollution Incidents to Controlled Waters</b> Environment Agency - Anglian Region	September 1999	
<b>Prosecutions Relating to Authorised Processes</b> Environment Agency - Anglian Region	July 2015	
<b>Prosecutions Relating to Controlled Waters</b> Environment Agency - Anglian Region	March 2013	
<b>Registered Radioactive Substances</b> Environment Agency - Anglian Region Environment Agency - Head Office	June 2016 May 2023	As notified Quarterly
<b>River Quality</b> Environment Agency - Head Office	November 2001	Not Applicable
<b>River Quality Biology Sampling Points</b> Environment Agency - Head Office	April 2012	
<b>River Quality Chemistry Sampling Points</b> Environment Agency - Head Office	April 2012	
<b>Substantiated Pollution Incident Register</b> Environment Agency - Anglian Region - Central Area Environment Agency - Anglian Region - Northern Area	April 2024 April 2024	Quarterly Quarterly
<b>Water Abstractions</b> Environment Agency - Anglian Region	April 2024	Quarterly
<b>Water Industry Act Referrals</b> Environment Agency - Anglian Region	October 2017	



Agency & Hydrological	Version	Update Cycle
<b>Groundwater Vulnerability Map</b> Environment Agency - Head Office	June 2018	As notified
<b>Groundwater Vulnerability - Soluble Rock Risk</b> Environment Agency - Head Office	June 2018	As notified
<b>Bedrock Aquifer Designations</b> Environment Agency - Head Office	January 2018	As notified
<b>Superficial Aquifer Designations</b> Environment Agency - Head Office	January 2018	As notified
<b>Source Protection Zones</b> Environment Agency - Head Office	September 2022	Bi-Annually
<b>Extreme Flooding from Rivers or Sea without Defences</b> Environment Agency - Head Office	December 2023	Quarterly
<b>Flooding from Rivers or Sea without Defences</b> Environment Agency - Head Office	December 2023	Quarterly
<b>Areas Benefiting from Flood Defences</b> Environment Agency - Head Office	February 2023	Quarterly
<b>Flood Water Storage Areas</b> Environment Agency - Head Office	January 2024	Quarterly
<b>Flood Defences</b> Environment Agency - Head Office	August 2022	Quarterly
<b>OS Water Network Lines</b> Ordnance Survey	April 2024	Quarterly
<b>Surface Water 1 in 30 year Flood Extent</b> Environment Agency - Head Office	May 2018	Annually
<b>Surface Water 1 in 100 year Flood Extent</b> Environment Agency - Head Office	May 2018	Annually
<b>Surface Water 1 in 1000 year Flood Extent</b> Environment Agency - Head Office	May 2018	Annually
<b>Surface Water Suitability</b> Environment Agency - Head Office	February 2016	Annually
<b>BGS Groundwater Flooding Susceptibility</b> British Geological Survey - National Geoscience Information Service	May 2013	As notified



Waste	Version	Update Cycle
<b>BGS Recorded Landfill Sites</b> British Geological Survey - National Geoscience Information Service	November 2002	As notified
<b>Historical Landfill Sites</b> Environment Agency - Head Office	May 2024	Quarterly
<b>Integrated Pollution Control Registered Waste Sites</b> Environment Agency - Anglian Region	January 2009	Not Applicable
<b>Licensed Waste Management Facilities (Landfill Boundaries)</b> Environment Agency - Anglian Region - Central Area Environment Agency - Anglian Region - Northern Area	May 2024 May 2024	Quarterly Quarterly
<b>Licensed Waste Management Facilities (Locations)</b> Environment Agency - Anglian Region - Central Area Environment Agency - Anglian Region - Northern Area	January 2023 January 2023	Quarterly Quarterly
<b>Local Authority Landfill Coverage</b> Bedford Borough Council - Environmental Health Department Bedfordshire County Council (now part of Central Bedfordshire Council) Northamptonshire County Council Wellingborough Borough Council (now part of North Northamptonshire Council) North Northamptonshire Council	February 2003 February 2003 February 2003 February 2003 May 2000	Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable
<b>Local Authority Recorded Landfill Sites</b> North Northamptonshire Council Bedford Borough Council - Environmental Health Department Bedfordshire County Council (now part of Central Bedfordshire Council) Northamptonshire County Council Wellingborough Borough Council (now part of North Northamptonshire Council)	August 2006 October 2018 October 2018 October 2018 October 2018	
<b>Potentially Infilled Land (Non-Water)</b> Landmark Information Group Limited	December 1999	
<b>Potentially Infilled Land (Water)</b> Landmark Information Group Limited	December 1999	
<b>Registered Landfill Sites</b> Environment Agency - Anglian Region - Central Area Environment Agency - Anglian Region - Northern Area	March 2006 March 2006	Not Applicable Not Applicable
<b>Registered Waste Transfer Sites</b> Environment Agency - Anglian Region - Central Area Environment Agency - Anglian Region - Northern Area	April 2018 April 2018	
<b>Registered Waste Treatment or Disposal Sites</b> Environment Agency - Anglian Region - Central Area Environment Agency - Anglian Region - Northern Area	June 2015 June 2015	



<b>Hazardous Substances</b>	<b>Version</b>	<b>Update Cycle</b>
<b>Control of Major Accident Hazards Sites (COMAH)</b> Health and Safety Executive	January 2024	Bi-Annually
<b>Explosive Sites</b> Health and Safety Executive	March 2017	
<b>Notification of Installations Handling Hazardous Substances (NIHHS)</b> Health and Safety Executive	August 2001	
<b>Planning Hazardous Substance Enforcements</b> North Northamptonshire Council Wellingborough Borough Council (now part of North Northamptonshire Council) Bedfordshire County Council (now part of Central Bedfordshire Council) Bedford Borough Council Northamptonshire County Council	February 2016 February 2016 July 2008 March 2023 May 2013	Variable Variable Annual Rolling Update Variable Annual Rolling Update
<b>Planning Hazardous Substance Consents</b> Northamptonshire County Council Bedford Borough Council North Northamptonshire Council Wellingborough Borough Council (now part of North Northamptonshire Council) Bedfordshire County Council (now part of Central Bedfordshire Council)	December 2014 February 2016 February 2016 February 2016 July 2008	Annual Rolling Update Variable Variable Variable Annual Rolling Update
<b>Geological</b>	<b>Version</b>	<b>Update Cycle</b>
<b>BGS 1:625,000 Solid Geology</b> British Geological Survey - National Geoscience Information Service	January 2009	As notified
<b>BGS Estimated Soil Chemistry</b> British Geological Survey - National Geoscience Information Service	December 2015	As notified
<b>BGS Recorded Mineral Sites</b> British Geological Survey - National Geoscience Information Service	January 2024	Bi-Annually
<b>CBSCB Compensation District</b> Cheshire Brine Subsidence Compensation Board (CBSCB) Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011 November 2020	As notified
<b>Coal Mining Affected Areas</b> The Coal Authority - Property Searches	February 2023	Annual Rolling Update
<b>Mining Instability</b> Ove Arup & Partners	June 1998	Not Applicable
<b>Non Coal Mining Areas of Great Britain</b> British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
<b>Potential for Collapsible Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	April 2020	As notified
<b>Potential for Compressible Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	As notified
<b>Potential for Ground Dissolution Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	As notified
<b>Potential for Landslide Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	As notified
<b>Potential for Running Sand Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	As notified
<b>Potential for Shrinking or Swelling Clay Ground Stability Hazards</b> British Geological Survey - National Geoscience Information Service	January 2019	As notified
<b>Radon Potential - Radon Affected Areas</b> British Geological Survey - National Geoscience Information Service	October 2023	Annually
<b>Radon Potential - Radon Protection Measures</b> British Geological Survey - National Geoscience Information Service	October 2023	Annually



Industrial Land Use	Version	Update Cycle
<b>Contemporary Trade Directory Entries</b> Thomson Directories	April 2024	Quarterly
<b>Fuel Station Entries</b> Catalist Ltd - Experian	February 2024	Quarterly
<b>Gas Pipelines</b> National Grid	October 2021	Bi-Annually
<b>Points of Interest - Commercial Services</b> PointX	March 2024	Quarterly
<b>Points of Interest - Education and Health</b> PointX	March 2024	Quarterly
<b>Points of Interest - Manufacturing and Production</b> PointX	March 2024	Quarterly
<b>Points of Interest - Public Infrastructure</b> PointX	March 2024	Quarterly
<b>Points of Interest - Recreational and Environmental</b> PointX	March 2024	Quarterly
<b>Underground Electrical Cables</b> National Grid	January 2024	Bi-Annually



<b>Sensitive Land Use</b>	<b>Version</b>	<b>Update Cycle</b>
<b>Ancient Woodland</b> Natural England	April 2024	Bi-Annually
<b>Areas of Adopted Green Belt</b> Bedford Borough Council North Northamptonshire Council Wellingborough Borough Council (now part of North Northamptonshire Council)	February 2024 February 2024 February 2024	Quarterly Quarterly Quarterly
<b>Areas of Unadopted Green Belt</b> Bedford Borough Council North Northamptonshire Council Wellingborough Borough Council (now part of North Northamptonshire Council)	February 2024 February 2024 February 2024	Quarterly Quarterly Quarterly
<b>Areas of Outstanding Natural Beauty</b> Natural England	May 2024	Bi-Annually
<b>Environmentally Sensitive Areas</b> Natural England	August 2023	
<b>Forest Parks</b> Forestry Commission	May 2023	Not Applicable
<b>Local Nature Reserves</b> Natural England	February 2024	Bi-Annually
<b>Marine Nature Reserves</b> Natural England	February 2024	Bi-Annually
<b>National Nature Reserves</b> Natural England	February 2024	Bi-Annually
<b>National Parks</b> Natural England	February 2018	Bi-Annually
<b>Nitrate Sensitive Areas</b> Natural England	April 2023	Not Applicable
<b>Nitrate Vulnerable Zones</b> Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA) Environment Agency - Head Office	April 2016 April 2024	Bi-Annually
<b>Ramsar Sites</b> Natural England	February 2024	Bi-Annually
<b>Sites of Special Scientific Interest</b> Natural England	April 2024	Bi-Annually
<b>Special Areas of Conservation</b> Natural England	April 2024	Bi-Annually
<b>Special Protection Areas</b> Natural England	April 2024	Bi-Annually



A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	 <b>British Geological Survey</b> NATURAL ENVIRONMENT RESEARCH COUNCIL
Centre for Ecology and Hydrology	 <b>Centre for Ecology &amp; Hydrology</b> NATURAL ENVIRONMENT RESEARCH COUNCIL
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Stantec UK Ltd	








Contact	Name and Address	Contact Details
1	<b>British Geological Survey - Enquiry Service</b> British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 [REDACTED]
2	<b>Environment Agency - Head Office</b> Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409
3	<b>Ordnance Survey</b> Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
4	<b>Bedford Borough Council - Environmental Health Department</b> Town Hall, St Pauls Street, Bedford, Bedfordshire, MK40 1SJ	Telephone: 01234 267422 Fax: 01234 325671 Email: enquiries@bedford.gov.uk Website: www.bedford.gov.uk
5	<b>Bedfordshire County Council (now part of Central Bedfordshire Council)</b> Priory House, Monks Walk, Chicksands, Shefford, Bedfordshire, SG17 5TQ	Telephone: 0300 300 8301 Email: www.centralbedfordshire.gov.uk Website: www.centralbedfordshire.gov.uk
6	<b>PointX</b> 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	[REDACTED]
7	<b>Natural England</b> County Hall, Spetchley Road, Worcester, WR5 2NP	Telephone: 0300 060 3900 Email: enquiries@naturalengland.org.uk Website: www.naturalengland.org.uk
-	<b>Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards</b> Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 [REDACTED]
-	<b>Landmark Information Group Limited</b> Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 [REDACTED] info.co.uk

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.











## Geology 1:50,000 Maps Legends

### Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay and Silt	Not Supplied - Holocene
	ODT	Oadby Member	Diamicton	Not Supplied - Anglian
	FELM	Felmersham Member	Sand and Gravel	Not Supplied - Pleistocene
	HEAD	Head	Clay, Silt, Sand and Gravel	Not Supplied - Quaternary
	BOZE	Bozeat Till	Diamicton	Not Supplied - Quaternary

### Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	KLB	Kellaways Formation	Sandstone, Siltstone and Mudstone	Not Supplied - Callovian
	KLC	Kellaways Clay Member	Mudstone	Not Supplied - Callovian
	KLS	Kellaways Sand Member	Sandstone and Siltstone, Interbedded	Not Supplied - Callovian
	CB	Combrash Formation	Limestone	Not Supplied - Bathonian
	BWC	Blisworth Clay Formation	Mudstone	Not Supplied - Bathonian
	BWL	Blisworth Limestone Formation	Limestone	Not Supplied - Bathonian
	RLD	Rutland Formation	Mudstone	Not Supplied - Bajocian
		Faults		



### Geology 1:50,000 Maps

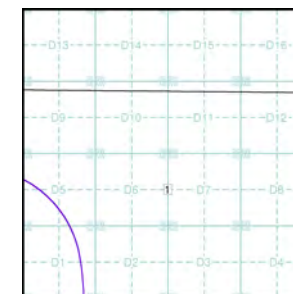
This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published paper maps.

The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page. Not all layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

### Geology 1:50,000 Maps Coverage

Map ID:	1
Map Sheet No:	203
Map Name:	Bedford
Map Date:	2010
Bedrock Geology:	Available
Superficial Geology:	Available
Artificial Geology:	Available
Faults:	Not Supplied
Landslip:	Available
Rock Segments:	Not Supplied

### Geology 1:50,000 Maps - Slice D



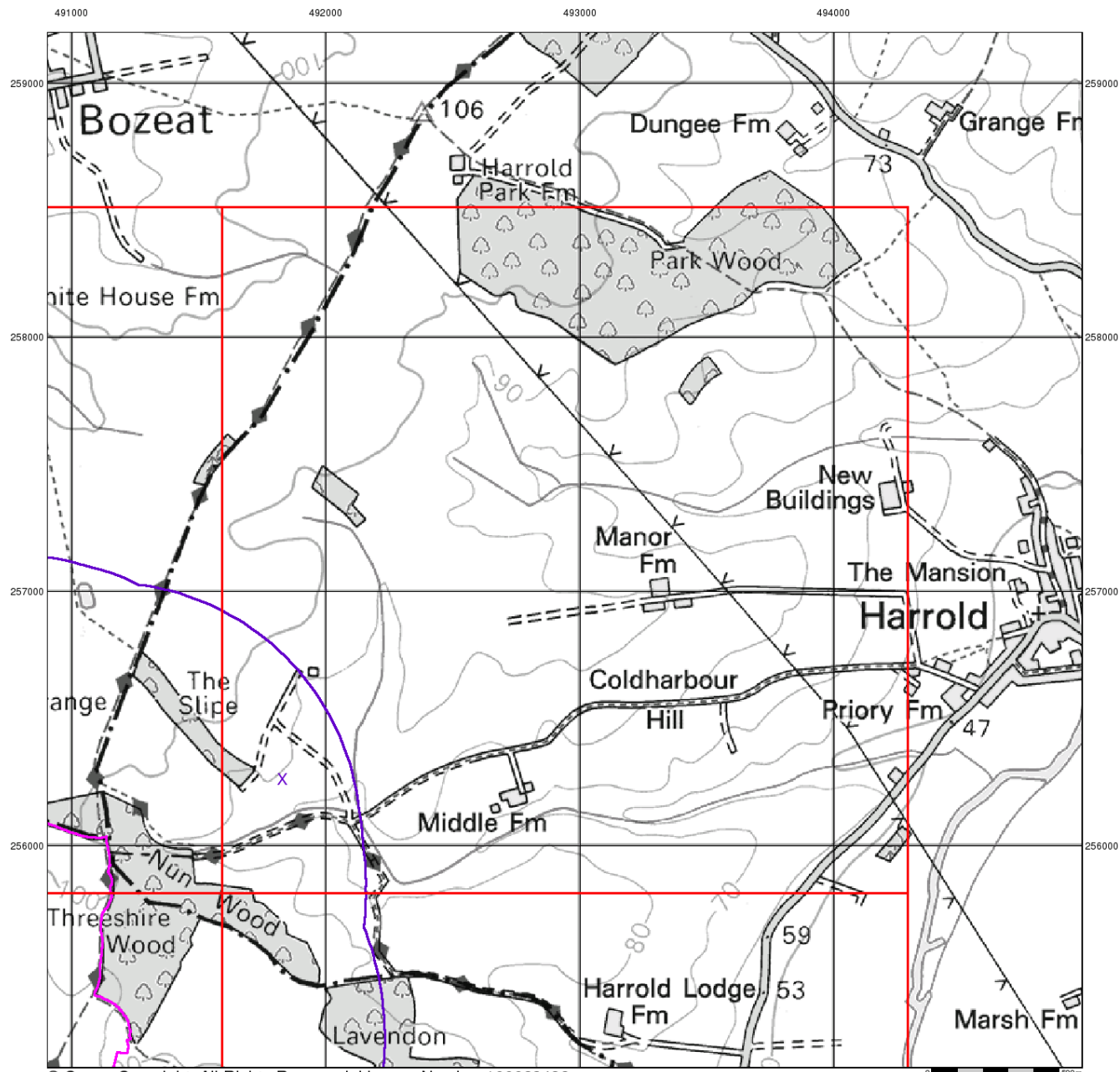
### Order Details:

Order Number:	346936621_1_1
Customer Reference:	DS78309
National Grid Reference:	491830, 256260
Slice:	D
Site Area (Ha):	172.36
Search Buffer (m):	1000

### Site Details:

Meikleland





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### Artificial Ground and Landslip

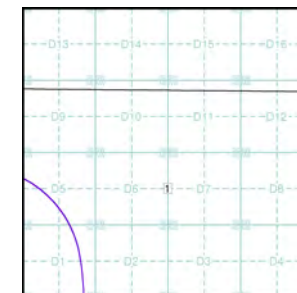
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions and unstable ground.

Artificial ground includes:

- Made ground - man-made deposits such as embankments and spoil heaps on the natural ground surface.
- Worked ground - areas where the ground has been cut away such as quarries and road cuttings.
- Infilled ground - areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground - areas where the surface has been reshaped.
- Disturbed ground - areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes foundered strata, where the ground has collapsed due to subsidence.

### Artificial Ground and Landslip Map - Slice D



### Order Details:

Order Number: 346936621\_1\_1  
 Customer Reference: DS78309  
 National Grid Reference: 491830, 256260  
 Slice: D  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

### Site Details:

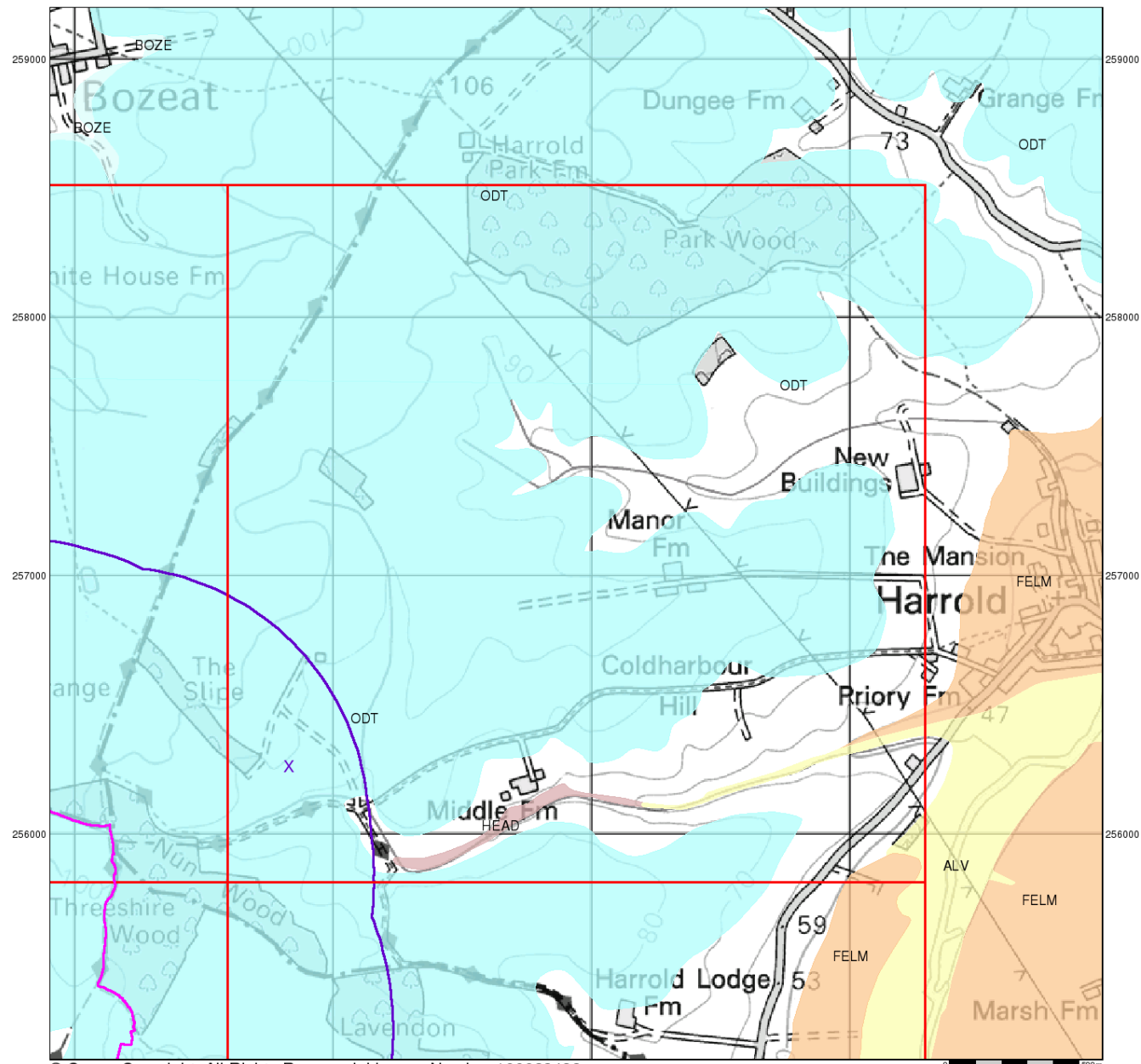
Meikleland

**Landmark**  
 INFORMATION GROUP

Tel: 0844 844 9952  
 Fax: 0844 844 9951  
 Web: [Redacted]



491000 492000 493000 494000



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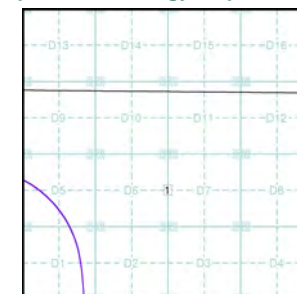
### Superficial Geology

Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, the Quaternary, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

### Superficial Geology Map - Slice D



### Order Details:

Order Number: 346936621\_1\_1  
Customer Reference: DS78309  
National Grid Reference: 491830, 256260  
Slice: D  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

### Site Details:

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**Landmark**  
INFORMATION GROUP

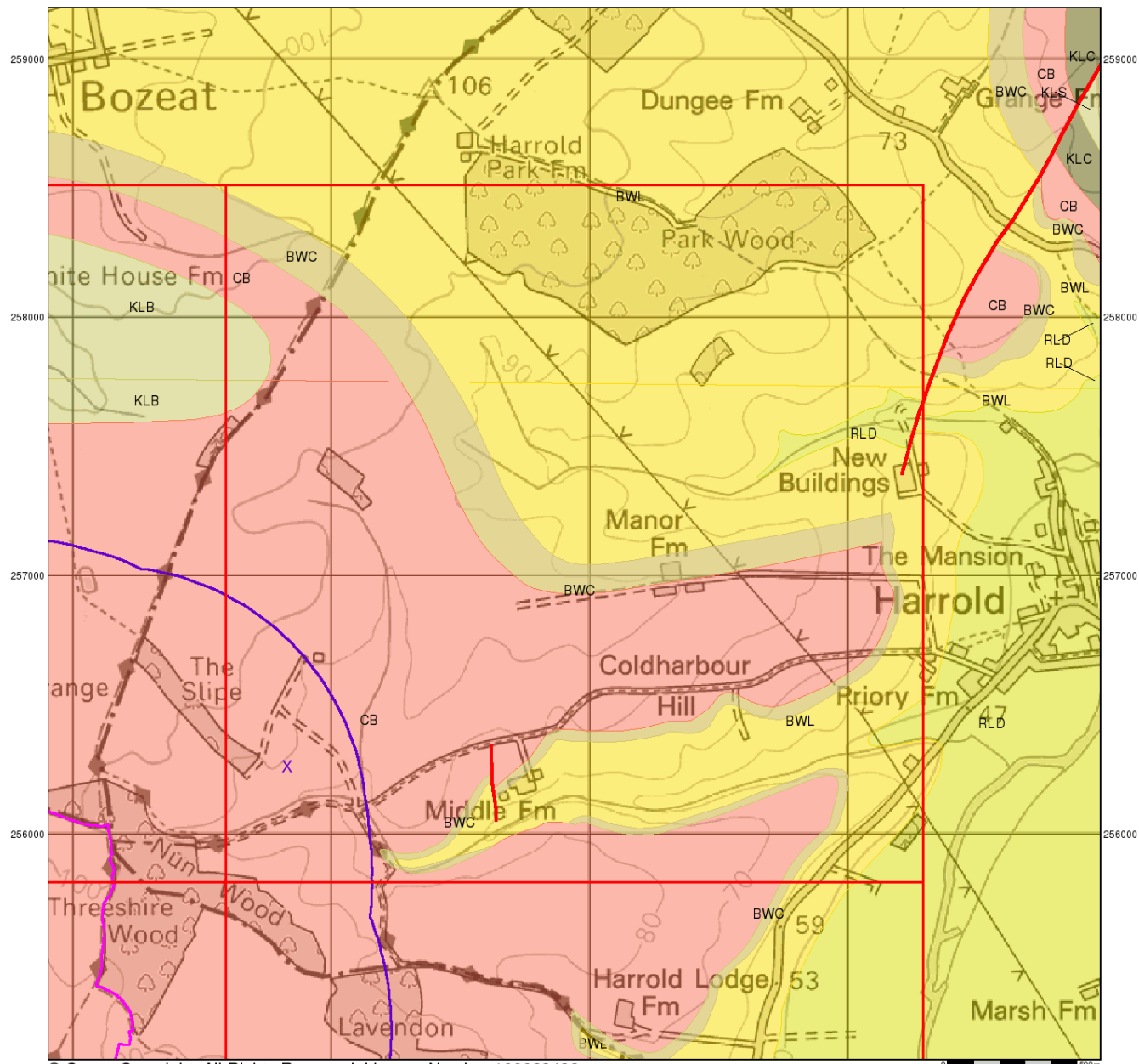
Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [Redacted]

v15.0 16-May-2024

Page 3 of 5



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## Bedrock and Faults

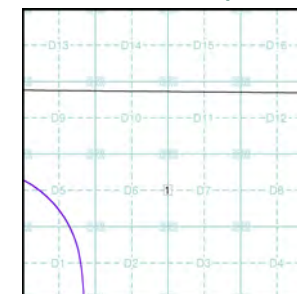
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults (e.g. normal, thrust), and thin beds mapped as lines (e.g. coal seam, gypsum bed). Some of these are linked to other particular 1:50,000 Geology datasets, for example, coal seams are part of the bedrock sequence, most faults and mineral veins primarily affect the bedrock but cut across the strata and post date its deposition.

## Bedrock and Faults Map - Slice D



## Order Details:

Order Number: 346936621\_1\_1  
Customer Reference: DS78309  
National Grid Reference: 491830, 256260  
Slice: D  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

## Site Details:

Meikleland

**Landmark**  
INFORMATION GROUP

Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [Redacted]

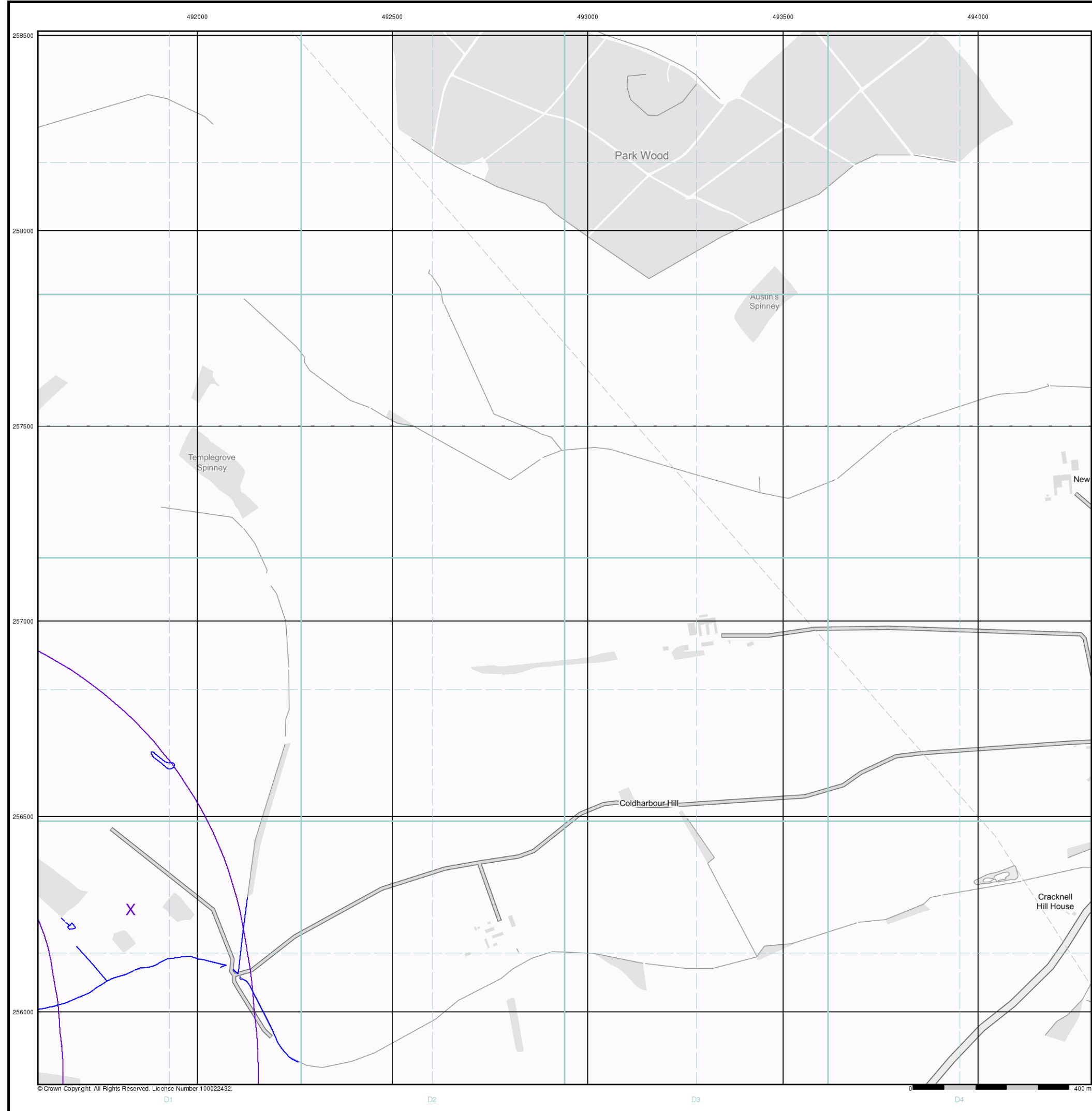
v15.0 16-May-2024

Page 4 of 5



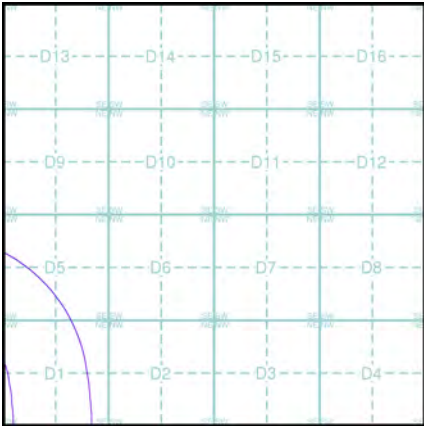






- General**
  - Specified Site
  - Specified Buffer(s)
  - Bearing Reference Point
  - Map ID
  - Several of Type at Location
- Agency and Hydrological**
  - Contaminated Land Register Entry or Notice (Location)
  - Contaminated Land Register Entry or Notice
  - Discharge Consent
  - Enforcement or Prohibition Notice
  - Integrated Pollution Control
  - Integrated Pollution Prevention Control
  - Local Authority Integrated Pollution Prevention and Control
  - Local Authority Pollution Prevention and Control
  - Local Authority Pollution Prevention and Control Enforcement
  - Pollution Incident to Controlled Waters
  - Prosecution Relating to Authorised Processes
  - Prosecution Relating to Controlled Waters
  - Registered Radioactive Substance
  - River Network or Water Feature
  - River Quality Sampling Point
  - Substantiated Pollution Incident Register
  - Water Abstraction
  - Water Industry Act Referral
- Hazardous Substances**
  - COMAH Site
  - Explosive Site
  - NIHHS Site
  - Planning Hazardous Substance Consent
  - Planning Hazardous Substance Enforcement
  - BGS Recorded Mineral Site
- Waste**
  - BGS Recorded Landfill Site (Location)
  - BGS Recorded Landfill Site
  - EA Historic Landfill (Buffered Point)
  - EA Historic Landfill (Polygon)
  - Integrated Pollution Control Registered Waste Site
  - Licensed Waste Management Facility (Landfill Boundary)
  - Licensed Waste Management Facility (Location)
  - Local Authority Recorded Landfill Site (Location)
  - Local Authority Recorded Landfill Site
  - Potentially Infilled Land (Non-water)
  - Potentially Infilled Land (Non-water)
  - Potentially Infilled Land (Non-water)
  - Potentially Infilled Land (Water)
  - Potentially Infilled Land (Water)
  - Potentially Infilled Land (Water)
  - Registered Landfill Site (Location)
  - Registered Landfill Site (Point Buffered to 100m)
  - Registered Landfill Site (Point Buffered to 250m)
  - Registered Waste Transfer Site (Location)
  - Registered Waste Transfer Site
  - Registered Waste Treatment or Disposal Site (Location)
  - Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Slice D



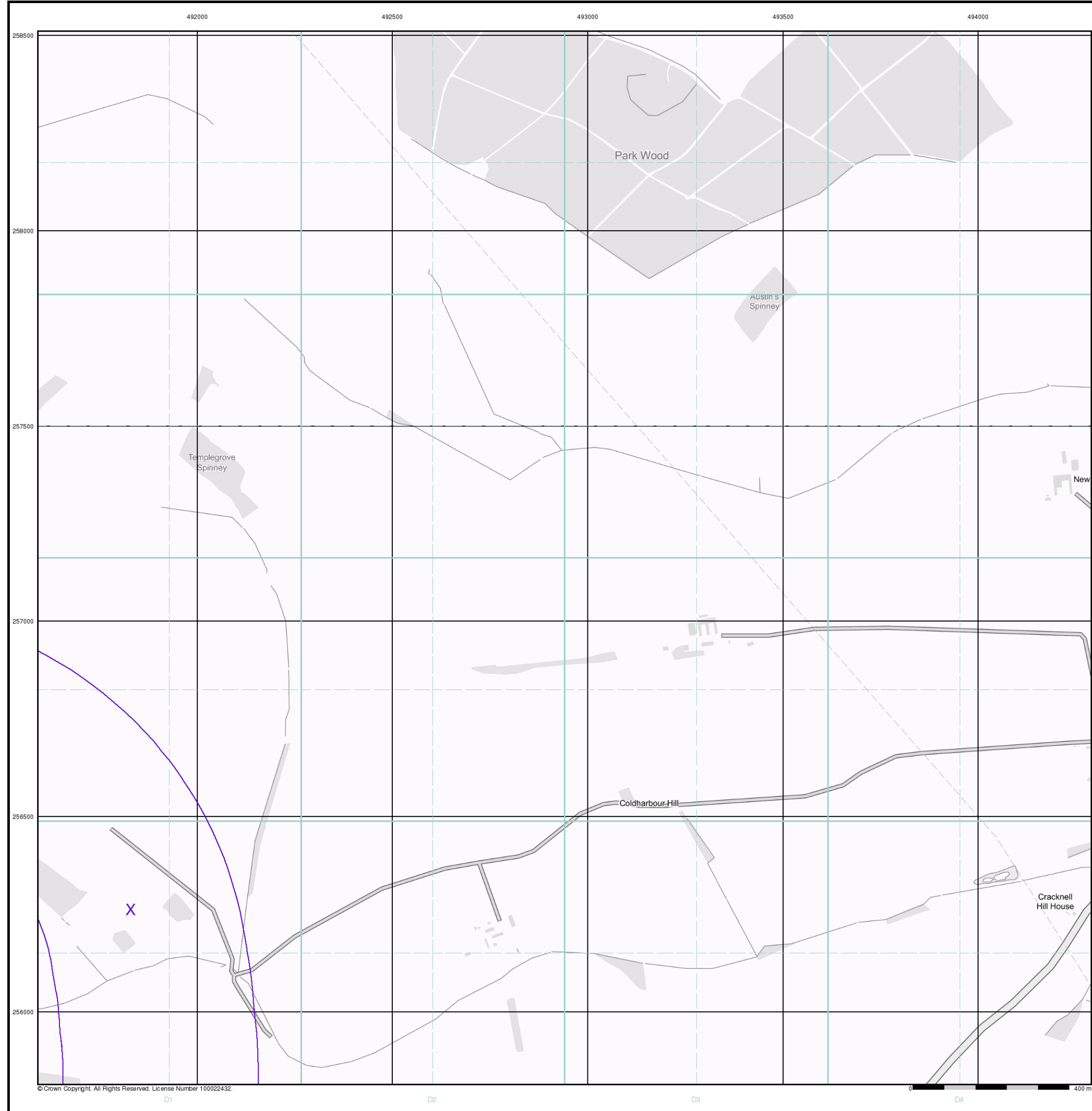
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Order Number: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 491830, 256260  
Slice: D  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

**Site Details**  
Meikleland



Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [Redacted]





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## Industrial Land Use Map

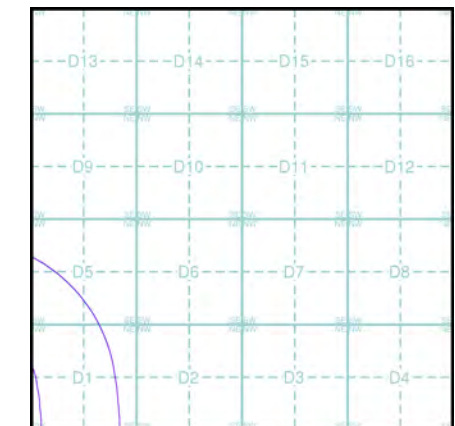
### General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

### Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- Gas Pipeline
- Points of Interest - Commercial Services
- Points of Interest - Education and Health
- Points of Interest - Manufacturing and Production
- Points of Interest - Public Infrastructure
- Points of Interest - Recreational and Environmental
- Underground Electrical Cables

## Industrial Land Use Map - Slice D



### Order Details

Order Number: 346936621\_1\_1  
 Customer Ref: DS78309  
 National Grid Reference: 491830, 256260  
 Slice: D  
 Site Area (Ha): 172.36  
 Search Buffer (m): 1000

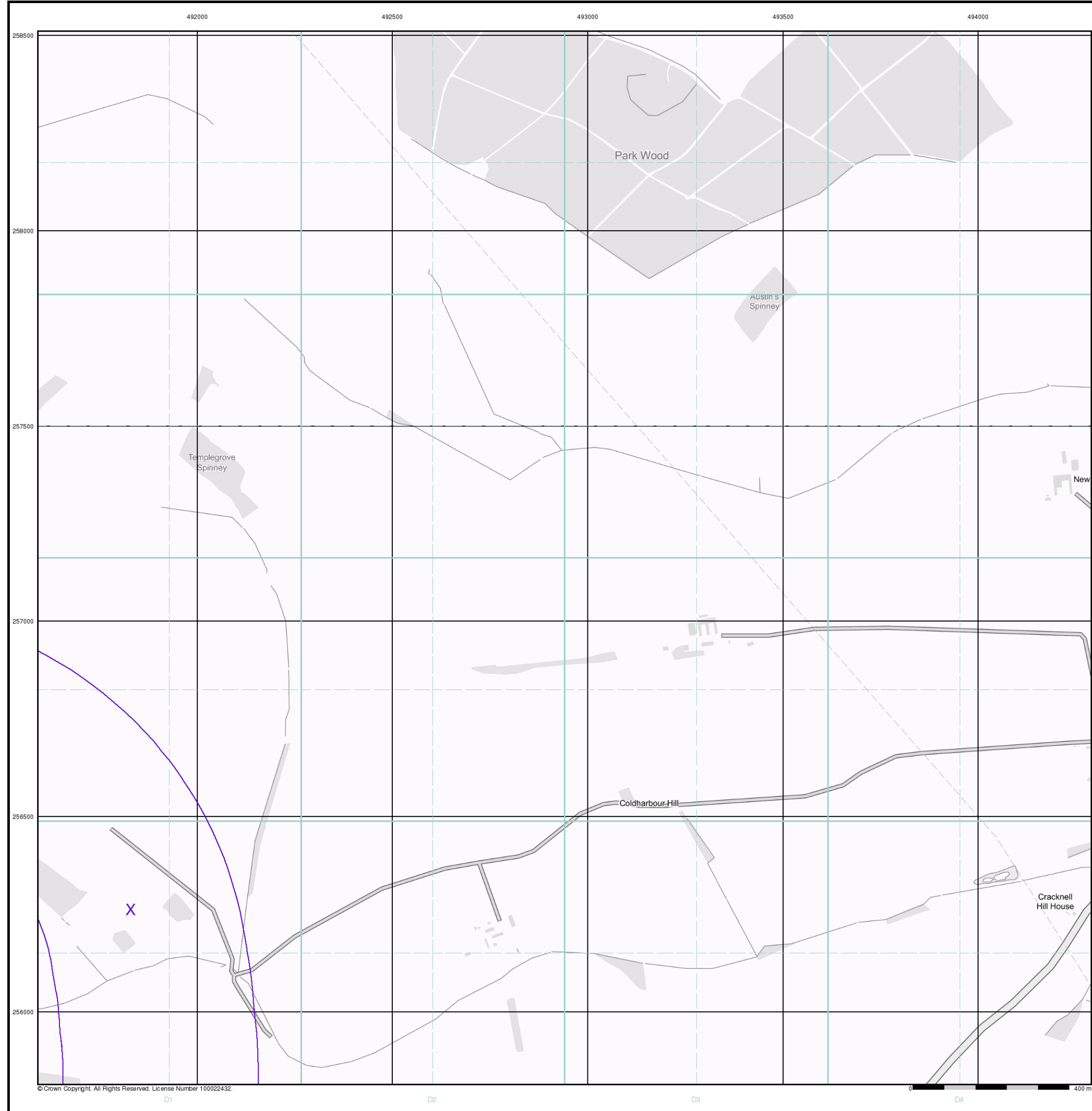
### Site Details

Meikleland



Tel: 0844 844 9952  
 Fax: 0844 844 9951  
 Web: [Redacted]





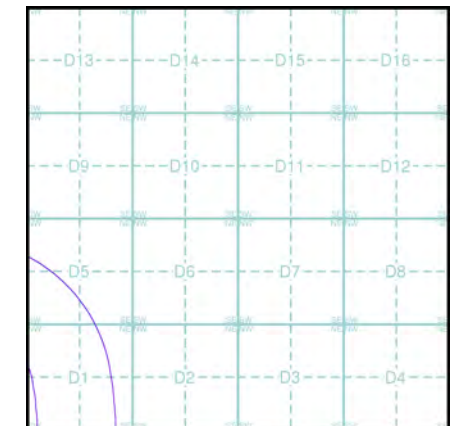
**General**

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

**Agency and Hydrological (Flood)**

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

**Flood Map - Slice D**



**Order Details**

Order Number: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 491830, 256260  
Slice: D  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

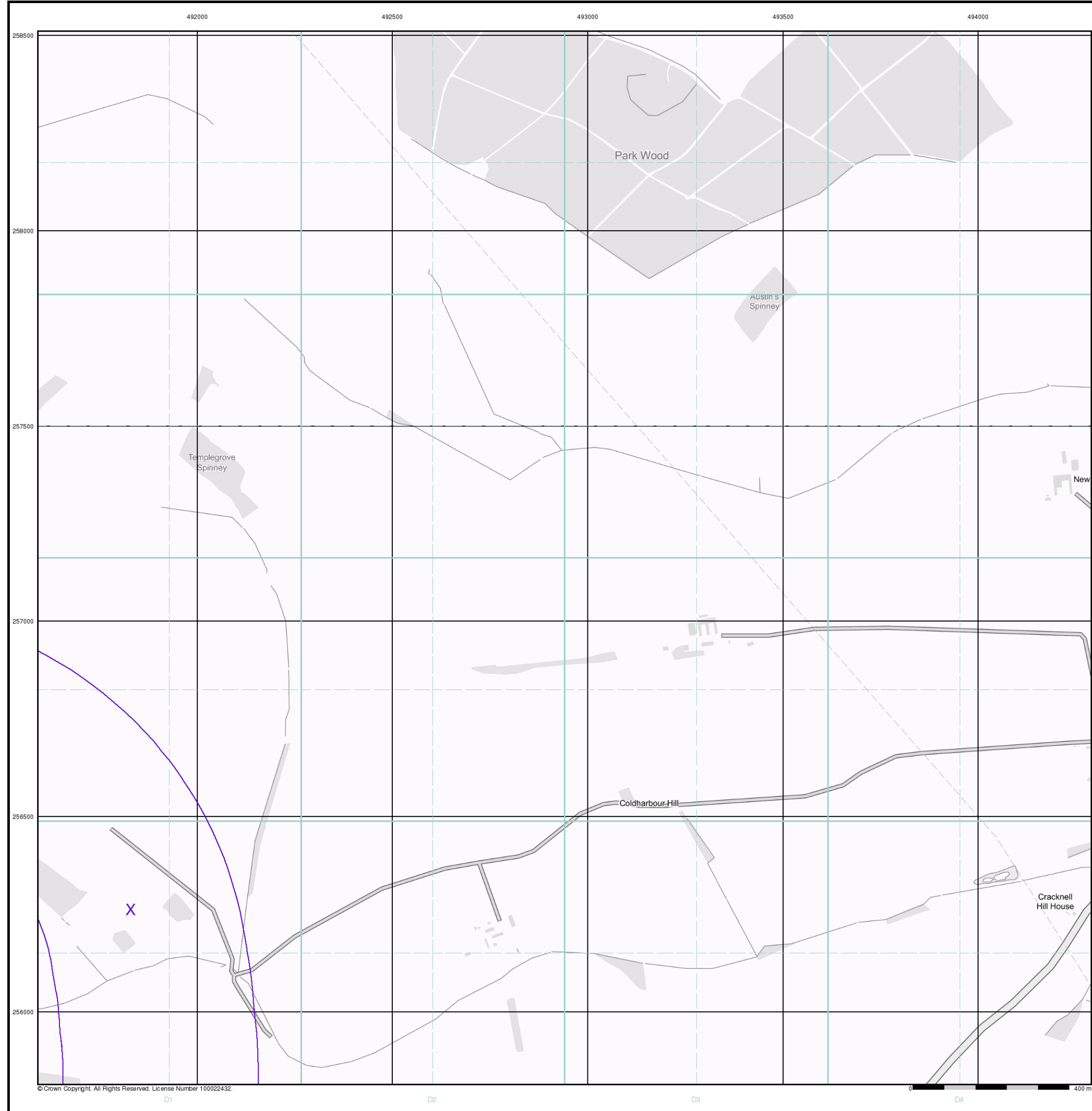
**Site Details**

Meikleland



Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [Redacted]





**General**

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

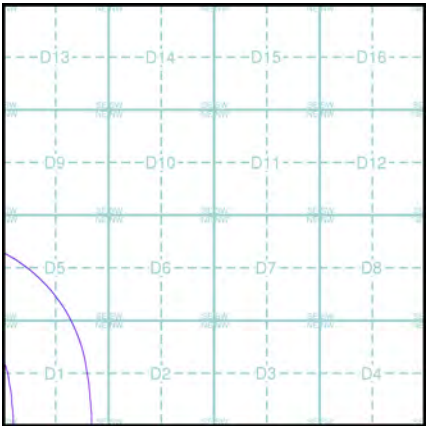
**Agency and Hydrological (Boreholes)**

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of [REDACTED]

**Borehole Map - Slice D**



**Order Details**

Order Number: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 491830, 256260  
Slice: D  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

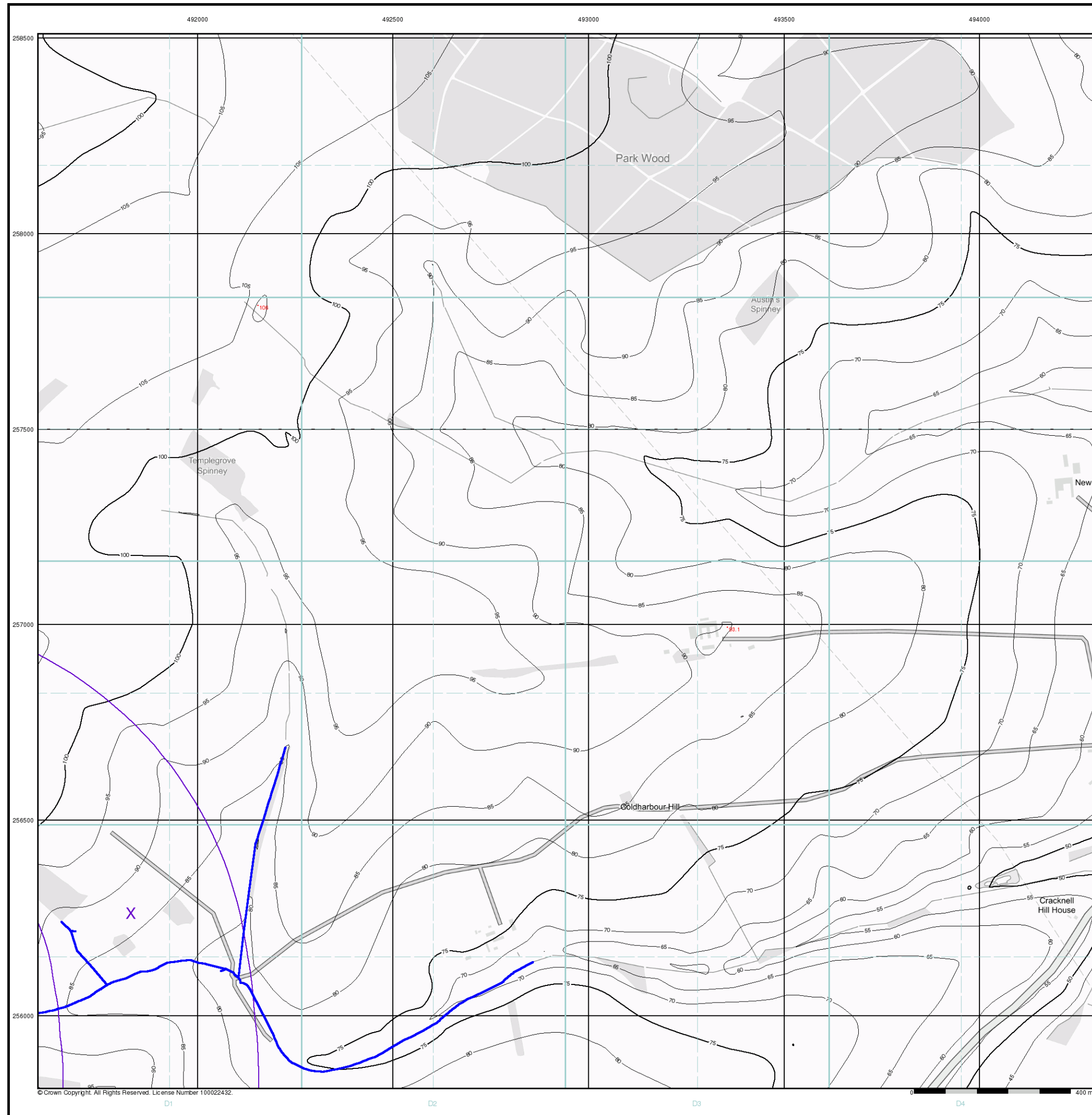
**Site Details**

Meikleland



Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [REDACTED]





General

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

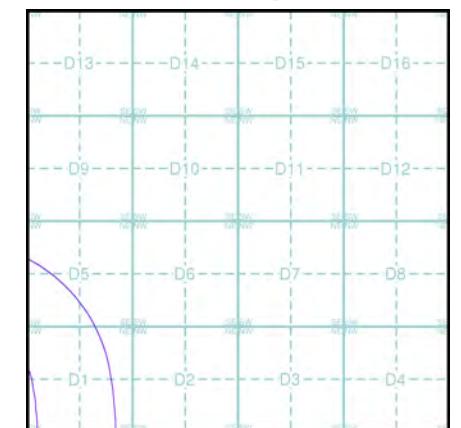
OS Water Network Data

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

Contours (height in meters)

- Standard Contour 105 100 95
- Master Contour
- Spot Height 167.3
- MLW Mean Low Water
- MHW Mean High Water

OS Water Network Map - Slice D



Order Details

Order Number: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 491830, 256260  
Slice: D  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

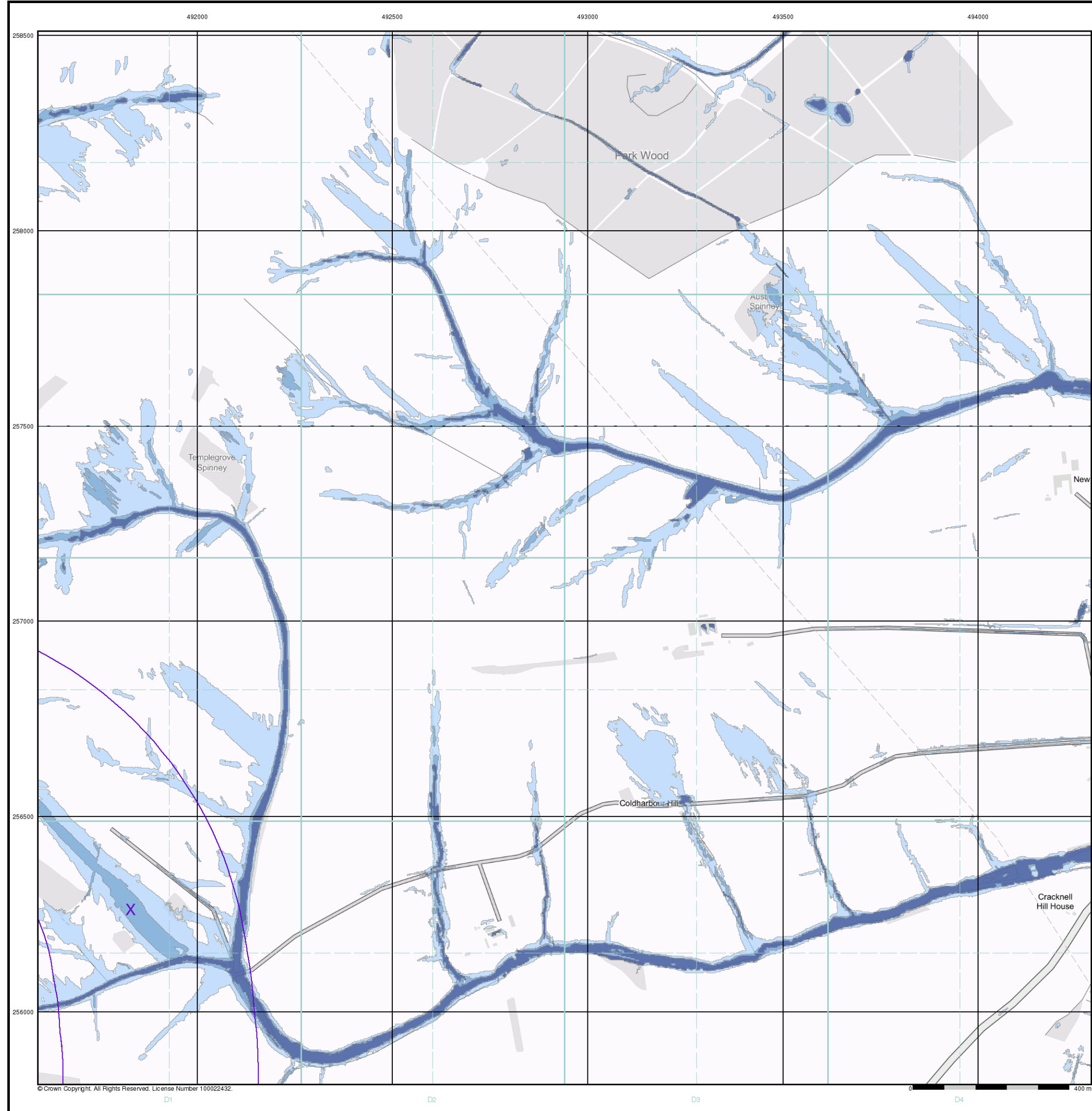
Site Details

Meikleland



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Fax: 0844 844 9951  
Web: [Redacted]





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### General

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

### Risk of Flooding from Surface Water

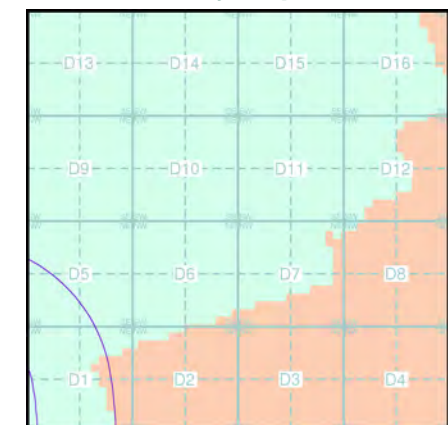
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

### Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

### EANRW Suitability Map - Slice D



### Order Details

Order Number: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 491830, 256260  
Slice: D  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

### Site Details


Meikleland



Tel: 0844 844 9952  
Fax: 0844 844 9951  
Web: [Redacted]

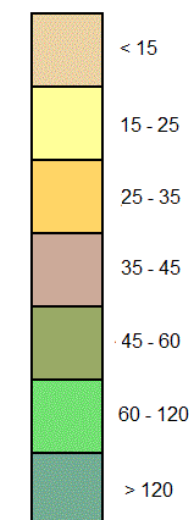


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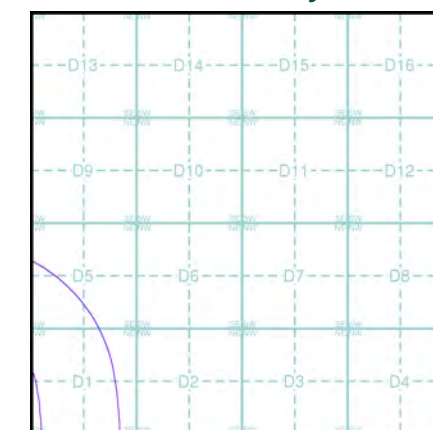
 Specified Site     Specified Buffer(s)     Bearing Reference Point

### Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg



### Estimated Soil Chemistry Arsenic - Slice D



### Order Details




Order Details: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 491830, 256260  
Slice: D  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

### Site Details

Meikleland

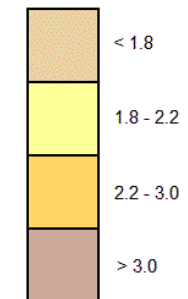


General

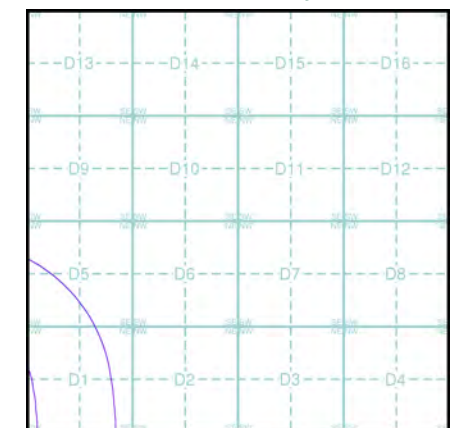
 Specified Site       Specified Buffer(s)       Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg



Estimated Soil Chemistry Cadmium - Slice D



Order Details

Order Details: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 491830, 256260  
Slice: D  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

Site Details

Meikleland

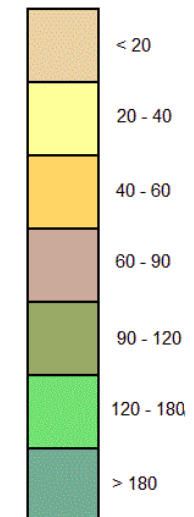


General

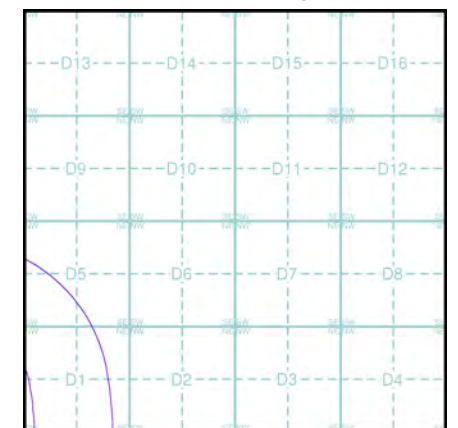
 Specified Site       Specified Buffer(s)       Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg



Estimated Soil Chemistry Chromium - Slice D



Order Details

Order Details: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 491830, 256260  
Slice: D  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

Site Details

Meikleland



### General

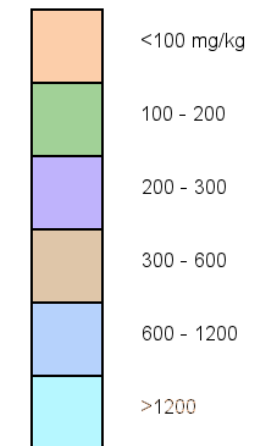
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 Specified Buffer(s)

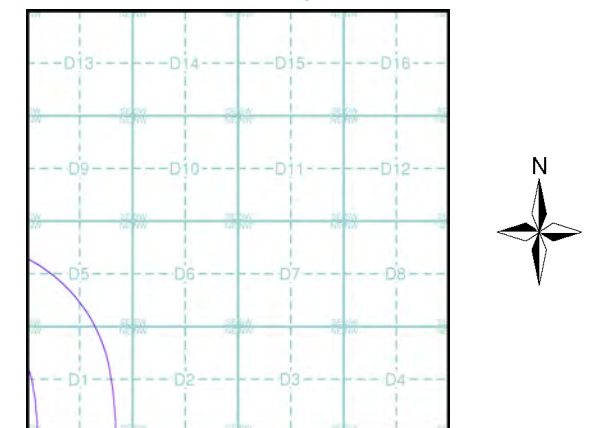
 Bearing Reference Point

### Estimated Soil Chemistry Lead

Lead Concentrations mg/kg



### Estimated Soil Chemistry Lead - Slice D



### Order Details




Order Details:	346936621_1_1
Customer Ref:	DS78309
National Grid Reference:	491830, 256260
Slice:	D
Site Area (Ha):	172.36
Search Buffer (m):	1000

### Site Details

Meikleland

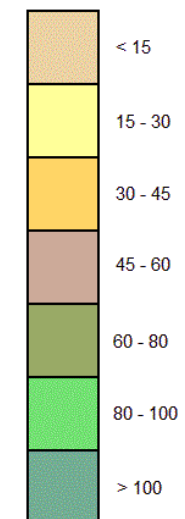


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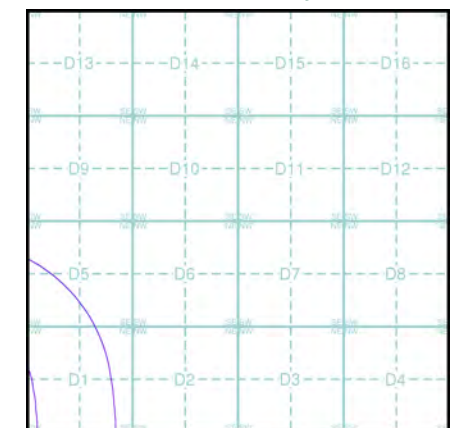
 Specified Site       Specified Buffer(s)       Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg



Estimated Soil Chemistry Nickel - Slice D



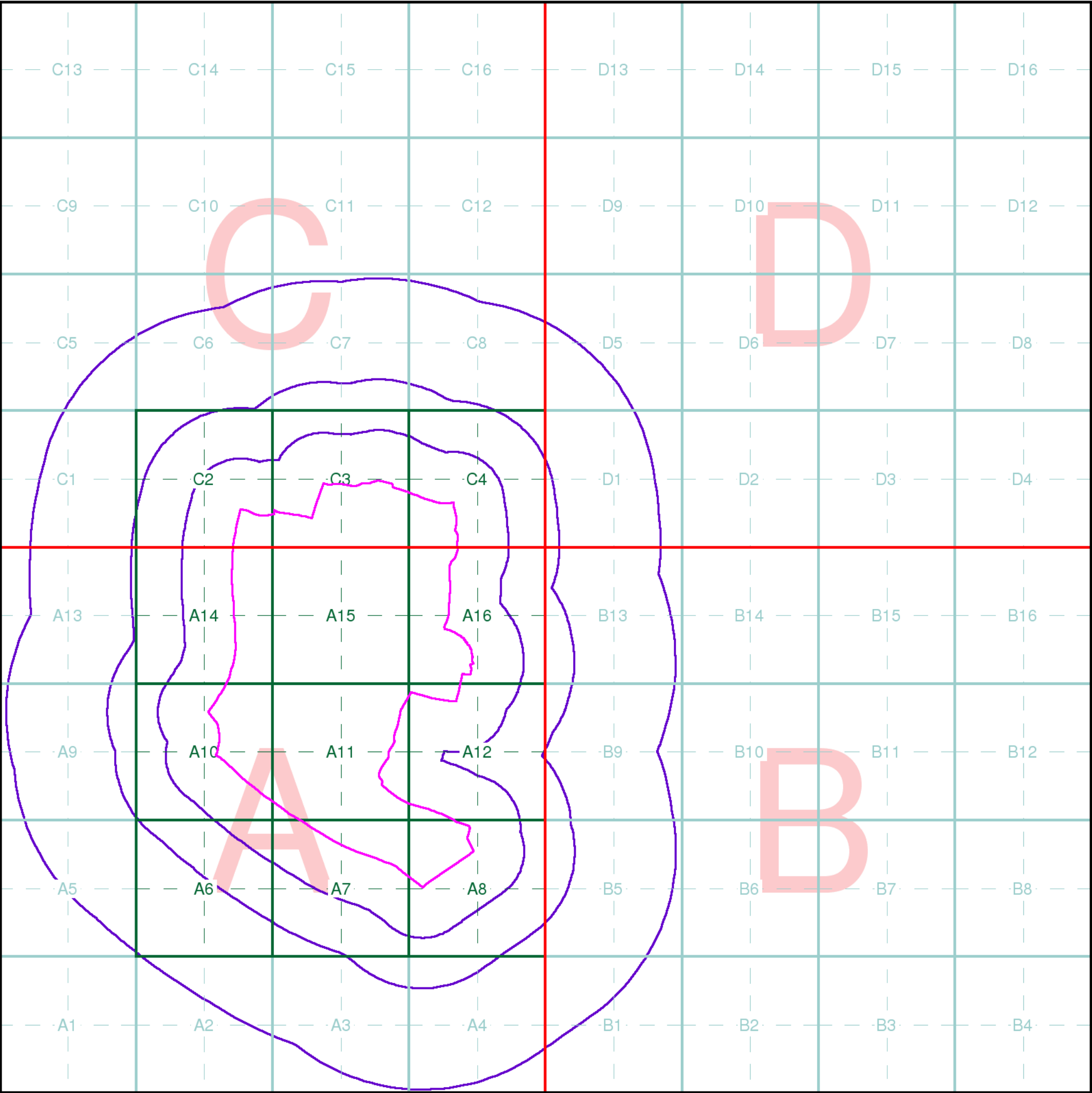
Order Details

Order Details: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 491830, 256260  
Slice: D  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

Site Details

Meikleland





### 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.

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Manchester, M1 3BE

### Order Details

Order Number: 346936621\_1\_1  
Customer Ref: DS78309  
National Grid Reference: 490590, 255230  
Site Area (Ha): 172.36  
Search Buffer (m): 1000

### Site Details

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## Appendix F - Detailed UXO Risk Assessment Green Hill G



## Stage 2 Detailed Explosive Ordnance Risk Assessment

**Project:** Green Hill Solar Project - Site G, Buckinghamshire | **Client:** Lucion Delta-Simons





## The Client

Lucion Delta-Simons Limited

## Project

Green Hill Solar Project - Site G, Buckinghamshire

## Report Reference Number

DRA.10219.25

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V2	Revision 1	-

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As detailed a search for pertinent information as possible within the stated timeframe and budget has been conducted. Although unlikely, additional significant information (e.g. local anecdotal accounts) may exist, however future emergence of such evidence would not constitute a failure of this risk assessment.

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## EXECUTIVE SUMMARY

Conclusion	Explosive ordnance (EO) poses a varying risk. Three risk zones have been identified.		
	Low Risk	Low-to-Moderate Risk	High Risk
Recommendation(s)	<ul style="list-style-type: none"><li>▶ <b>EO Safety &amp; Awareness Briefing</b> to all Site personnel prior to breaking ground anywhere on Site.</li><li>▶ <b>EO Safety Instructions / Emergency Response Plan</b> to be held on Site for the duration of the ground works within the Low Risk and Low-to-Moderate Risk zones.</li><li>▶ <b>EOD Engineer Supervision:</b> 'Watching brief' in support of any mechanical excavations within the High Risk Zone only.</li><li>▶ <b>Intrusive Magnetometer Survey</b> of all / any pile positions within the High Risk Zone only.</li></ul> <p>Note, if subsequent phases of archaeological excavations are required, the above recommendations are appropriate for any such ground works.</p>		
The Site	<p>Site address: London Road, Warrington, Milton Keynes Borough, Buckinghamshire, MK46 4JQ. The Site is centred on the approximate National Grid Ref: SP 90569 55329.</p> <p>The Site comprises several agricultural fields crossed by a footpath.</p>		
Proposed works	<p>A solar farm is planned for the Site. The solar arrays will be supported on either shallow pile foundations (to 1.5m - 2.0m bgl) or concrete pads placed on the surface or buried (very shallow mechanical excavations). Cable trenches will be excavated to depths of 0.6m - 1.0m bgl.</p>		
Risk Assessment - Key Findings			
Historic Site occupancy	<p>During WW1 and WW2, the Site was entirely occupied farmland. Although the central east section was temporarily requisitioned for military use (see below).</p>		
Likelihood of EO contamination:	<p><b>British EO:</b></p> <ul style="list-style-type: none"><li>▶ In 1944, the Air Ministry requisitioned a few fields in the east of the Site and established a practice bombing range for exclusive use with the United States Army Air Force (USAAF). Only practice bombs (low hazard EO variant) were authorised for use at RAF Lavendon range, partly due to its close proximity to a village. Although official RAF records report occasions when inexperienced USAAF aircrew (newly arrived in England) accidentally released live HE bombs over the wrong bombing range, no evidence of such an incident at Lavendon was found, and as Lavendon was a practice range exclusively used by USAAF squadrons, such an incident is considered highly unlikely.</li><li>▶ Official RAF records relating to another WW2 practice bombing range (similar to RAF Lavendon) confirm 16No. incidents of wayward practice bombs falling in and around a village up to ~1.37km east of the range target marker. This highlights the inaccuracies of WW2-era bomb aiming in Britain during training sorties. It suggests that practice bombs could conceivably have landed anywhere on Site, well beyond the perimeter of the 600-yard radius danger area. Indeed, wayward practice bomb strikes were recorded in Lavendon village during WW2. Although it can be assumed that the likelihood of such EO contamination decreases as the distance from the bombing target marker increases.</li></ul>		





- ▶ Immediately after WW2, the bombing range was largely derequisitioned however the government retained one field on Site as an explosives demolition ground. For approximately two years, various types of ammunition / munitions were disposed of here, via burning or controlled explosions. However recent experience (EO finds) at similar sites in the UK confirms that some military personnel cut corners by simply burying EO (unauthorised disposal), presumably to speed up the processing of huge quantities ammunition.
- ▶ Controlled explosions will have deposited large quantities of inert 'EO scrap' metal (much of which would have been tiny fragments) over the demolition ground and adjacent fields. However, the possibility that some EO was only partially destroyed (still potentially hazardous) or was simply buried on land neighbouring (just outside the official demolition ground area) cannot be discounted.
- ▶ The types of all EO disposed of on Site are not known. As a War Office site, one might assume that it was all of British Army origin. However, as numerous USAAF fuzes (from live bombs) have been found in this area as well as components of RAF incendiary bomb (IBs), it is likely that a wide variety of EO (British and American) was processed at this explosives demolition ground.
- ▶ Although two heavy anti-aircraft (HAA) gun batteries were located within firing range of the Site during WW2, the likelihood that any unexploded AA shells fired from these batteries fell within the Site boundary, is very low.

#### **German Unexploded Bombs (UXBs):**

- ▶ The Site experienced a low bombing density during WW2, with research identifying a single aircraft sortie incident (one or more 1kg / 2kg IB clusters) in the wider study area (500m radius from the Site boundary). However, the records do not contain the level of detail required to deduce whether this aircraft flew over the Site. Although unlikely, it is conceivable that this aircraft released a high explosive (HE) bomb over the Site which struck the ground as a UXB.
- ▶ Had a German HE UXB been released over the Site, it could have occurred unwitnessed and the entry hole could have gone undetected. Note, the Site was isolated, infrequently accessed farmland potentially occupied by tall / dense crop growth which could obscure a UXB entry hole from view. However, the likelihood of a HE UXB strike to the Site in the first instance is low.
- ▶ If the reported 1kg / 2kg IBs fell in the south of the Site, any UXBs are unlikely to have passed unnoticed. As these bombs were dropped in clusters, those IBs that functioned as designed would have created clear evidence of this type of bombing incident (burnt vegetation / scared ground), with a subsequent investigation / search by air raid precautions (ARP) wardens and farm workers almost certainly recovering all unexploded examples. That said, if dropped from a significant height, these lightweight UXBs were able to fully penetrate soft soil, leaving only a very small (easily obscured) entry hole.
- ▶ It is of course conceivable that a second German aircraft flew over the local area and released a single bomb that struck the Site unwitnessed and failed to detonate, thereby leaving no recordable evidence of the air raid. However, the probability of such a scenario occurring is extremely remote.





## Likelihood of EO remaining

- ▶ MoD responses to FOI requests confirm that they will not search for or release to the public any historic records of British Army or RAF EO clearance tasks relating to RAF Lavendon. However, as this was a practice bombing range (assumed to pose a low EO hazard), it is quite possible that no such range-wide EO surveying / clearance tasks were ever carried out post-WW2. And as the explosives demolition ground was a location where EO was disposed of, it will have been assumed that no EO contamination could have persisted after disposal activities ceased in 1947, and therefore a subsequent survey of the site by EOD engineers would have been unnecessary.
- ▶ Recent aerial photographs confirm evidence of arable farming activity within the field containing the explosives disposal ground and bombing range target marker and neighboring fields. However, numerous EO-related items remain on the surface here and magnetometer surveying confirms very high density buried contamination as well. Assuming this land has been ploughing multiple times, this soil disturbance has had no risk mitigating effect.
- ▶ Even if bombing range personnel did search parts of the Site for 'dud' practice bombs, the soft ground conditions may have seen such UXO fully penetrate the soil, making recovery more difficult. Any such bombs may have been simply abandoned. Note, no empirical data on the penetration depths of USAAF practice bombs is available. However, as RAF practice bombs (weighing considerably less) are known to have penetrated topsoil / surficial geology to 1.3m bgl, it can be assumed that a USAAF practice bomb could be encountered intact at greater depths on Site.

## Likelihood of EO encounter and initiation

- ▶ The likelihood of encountering hazardous EO (undamaged, live devices) is probably limited to the former explosives disposal ground field and its environs - the primary area of potential concern. USAAF practice bombs could be (and have been) encountered in fields beyond this area. This secondary area of potential concern cannot be easily demarcated as it relates to wayward bomb drops by trainee air crew. It is conceivable that USAAF practice bombs could be encountered anywhere on Site.
- ▶ As numerous USAAF practice bombs have been encountered within archaeological trenches on Site, it can be assumed that all future intrusive works (even those disturbing very shallow depth soil only) would be exposed to encountering this type of EO. If a cache of complete EO devices (buried not destroyed) exists within the primary area of potential concern it would also likely be encountered at shallow depth.
- ▶ If a German aircraft flying at average or higher altitude released even the smallest / lightest German HE UXB over the Site, it would almost certainly have penetrated the soil and geology on Site to depths beyond the reach of the planned mechanical excavations. Note, most of the Site area was underlain by topsoil and a layer of superficial Diamicton geology (almost certainly soft / unconsolidated at this shallow depth).
- ▶ If piled foundations are utilised, the likelihood of forcefully encountering / striking EO is greater due to the 'blind' nature of such intrusive methodologies. Note, during 'open' mechanical excavations an item of EO could be partially unearthed without the excavator bucket striking it. At which point, work could be halted if the suspicious object were to be spotted.





- ▶ There is no reason to believe that the Site-specific hazard items are more sensitive to an initiation when compared to similar EO contamination elsewhere in the UK.
- ▶ It has been demonstrated that the USAAF practice bomb contamination on Site does not pose a significant hazard. Furthermore, this type of device did not contain a significant quantity of HE or any other very hazardous substance. Striking the corroded remnants of these practice bombs during ground works will not cause an initiation / detonation event of any consequence.
- ▶ However, if during piling works or mechanical excavations, a cache of live, undamaged EO were to be encountered within the primary area of concern, the likelihood of an EO initiation would be significantly elevated. Note, some types of WW2-era British land service ammunition (LSA) were part constructed of glass and therefore especially sensitive. Such a scenario would also raise the possibility of additional sympathetic explosions - a chain reaction of initiations due to multiple / numerous devices in close proximity.

The executive summary covers the key points only. The main body of this report contains the majority of the Site-specific detail and the limitations of the assessment. Should the proposed works be significantly modified or additional works be considered, IAL should be contacted as a reassessment of EO risk may be required.

## Risk Map





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## Glossary

AA	Anti-Aircraft	MU	Maintenance Unit
AAA	Anti-Aircraft Artillery	NEQ	Net Explosive Quantity
ALARP	As Low As Reasonably Practicable	NFF	National Filling Factory
AP	Anti-Personnel	NGR	National Grid Reference
ARP	Air Raid Precautions	OB	Oil Bomb
AT	Anti-Tank	OS	Ordnance Survey
AXO	Abandoned Explosive Ordnance	PAC	Pilotless Aircraft (V1 missile)
BD	Bomb Disposal	PB	Phosphorus Bomb
bgl	below ground level	PM	Parachute Mine (bomb type)
BGS	British Geological Survey	POW	Prisoner of War
BPD	Bomb Penetration Depth	RADAR	Radio Detection And Ranging
CIRIA	Construction Industry Research & Information Association	RAF	Royal Air Force
DA	Delayed Action (bomb type)	RDX	Research Department Explosive
EO	Explosive Ordnance (UXO and AXO)	REF	Royal Explosive Factory
EOC	Explosive Ordnance Clearance	RFC	Royal Flying Corps (1912-1918)
EOD	Explosive Ordnance Disposal	RN	Royal Navy
FAA	Fleet Air Arm (Royal Navy)	RNAD	Royal Naval Armaments Depot
FP	Fire Pot (WW2 German bomb)	RNAS	Royal Naval Air Station
GP	General Purpose (bomb type)	ROF	Royal Ordnance Factory
ha	hectare(s)	SAA	Small Arms Ammunition
HAA	Heavy Anti-Aircraft (gun)	SI	Site Investigation
HC	High Capacity (bomb type)	SIP	Self-Igniting Phosphorus (grenade type)
HE	High Explosive	TA	Territorial Army
HMNB	Her/His Majesty's Naval Base	TNT	Trinitrotoluene (explosive)
HMS	Her/His Majesty's Service (shore establishment)	UK	United Kingdom
HO	Home Office	UN	United Nations
HQ	Headquarters	UP	Unrotating Projectile (AA rocket)
HSE	Health & Safety Executive	USAAF	United States Army Air Force (1941-1947)
IB	Incendiary Bomb	USAF	United States Air Force (since 1947)
kg	kilogram(s)	UX	Unexploded
km	kilometre(s)	UX AA	Unexploded Anti-Aircraft (projectile)
LAA	Light Anti-Aircraft (gun)	UXB	Unexploded Bomb
LM	Land Mine	UXO	Unexploded Ordnance
LRRB	Long Range Rocket Bomb (V2 rocket)	V1	Vergeltungswaffe 1 (German cruise missile)
LSA	Land Service Ammunition	V2	Vergeltungswaffe 2 (German ballistic missile)
m	metre(s)	WAAF	Women's Auxiliary Air Force (1939-1949)
MC	Medium Capacity (bomb type)	WO	War Office (1857-1964)
mm	millimetre(s)	WW1	World War One (1914-1918)
MOD	Ministry of Defence	WW2	World War Two (1939-1945)





# 1 Introduction

## 1.1 Instruction

Lucion Delta-Simons (referred to hereon in as the Client) has commissioned Impartial Assessments Limited (referred to hereon in as IAL) to carry out a Stage 2 Detailed EO Risk Assessment of the proposed works at the Green Hill Solar Project - Site G, Buckinghamshire site (referred to hereon in as the Site).

## 1.2 Objective

The objective of this report is to assess the likelihood of encountering buried explosive ordnance (EO) during intrusive ground works and to assess the consequences of any such encounter. If an intolerable risk level is identified, risk mitigation measures will be recommended.

## 1.3 Using This Report

In the UK, EO risk is not always considered or fully understood and is often misunderstood. This report aims to provide a comprehensive and coherent account, including introductory text and details on location-specific types of EO. We believe it is important to provide sufficient information to allow the layman to form a good understanding of the potential EO risks.

However, we also appreciate that some readers will not require the full contextual information and therefore the report is structured with this in mind. From **Chapters 3 to 13**, all Site-specific text that affects the outcome of this risk assessment can be found under the highlighted [Site-Specific](#) subheadings.

## 1.4 Explosive Ordnance Risk in the UK

The term EO describes both unexploded ordnance (UXO) and abandoned explosive ordnance (AXO). The former describes devices and projectiles that have been armed (and in some cases fired, dropped, placed, etc) yet failed to function. The latter describes devices and projectiles that have simply been abandoned (discarded or buried).

Fortunately, inadvertent EO initiations (detonations) in the UK are very rare, however, buried EO can cause significant delays to construction projects with associated increases in costs. The origin of UK EO can be broadly categorised as such:

- ▶ **Enemy Action (UXO):** the German air force bombed targets throughout the UK during WW1 and WW2. The German Navy bombarded coastal targets in eastern England during WW1 and German long-range artillery bombarded Kent during WW2.
- ▶ **Allied Military Activity (UXO and AXO):** several Allied nations used the UK as a staging area for military action in the European theatre of conflict (most notably the US and Canada) during WW1 and WW2.
- ▶ **UK Military Activity (UXO and AXO):** domestic British Army, Royal Air Force (RAF) and Royal Navy (RN) training activities as well as anti-aircraft (AA) weapons used during WW1 and WW2.

## 1.5 Guidelines for Risk Assessment

### 1.5.1 CIRIA

This assessment has been designed and written in accordance with the relevant Construction Industry Research and Information Association (CIRIA) guidelines: **C681** 'Unexploded Ordnance - A Guide for the Construction Industry' (published 2009) and **C785** 'Unexploded Ordnance Risk Management Guide for Land-Based Projects' (published 2019). C681 and C785 were written (with the support of the UK Health and Safety Executive) to provide the construction industry with accurate and authoritative information regarding matters of onshore EO risk in the UK.





### 1.5.2 Legislation

There is no specific UK legislation covering the assessment and management of EO risk. However, there is legislation that more broadly covers the consideration of EO hazards:

- ▶ Health & Safety at Work Act (1974) and Management of Health & Safety at Work Regulations 1999
- ▶ Construction (Design & Management) Regulations (CDM) 2015
- ▶ Corporate Manslaughter and Corporate Homicide Act 2007

### 1.5.3 MOD

EO finds in the UK are handled by the MOD's Joint Service Explosive Ordnance Disposal Operations Centre (JSEODOC). At any site where an identifiable EO risk was not highlighted at project design stage, JSEODOC will not provide EOD services for frequent callouts to EO encounters. Instead, the client will be required to employ the services of a commercial EO risk management contractor to manage the ongoing EO risk.

The delay caused by retrospectively carrying out a risk assessment can have significant cost implications as site works are halted. Therefore, it is essential that EO risk is considered at the earliest possible stage, ideally through the commissioning of a Stage 1 or Stage 2 EO risk assessment.

## 1.6 Assessment Methodology

### 1.6.1 Introduction

This report is based on a traditional source-pathway-receptor-consequence (SPRC) assessment methodology and semi-quantitative risk model. The following subheadings describe how this risk assessment structure is applied to buried EO risk (in the UK).

### 1.6.2 Source

In the UK there are numerous sources of potential EO contamination. Three main factors govern the likelihood of buried EO being present at a given site today:

- ▶ Contamination: The likelihood that EO came to be buried at a site.
- ▶ Subsequent Detection: The likelihood that EO (chiefly UXO) contamination went unobserved and reported.
- ▶ Degree of (any) Risk Mitigation: Could subsequent earthworks or Explosive Ordnance Clearance (EOC) activities have mitigated the buried EO risk?

### 1.6.3 Pathway

The activities that could result in the EO hazard reaching sensitive receptors and the specific type of EO hazard.

- ▶ Encounter: The likelihood of buried EO being encountered during the proposed works depends on the total volume of soil disturbed and the type(s) of intrusion methodology. Note, site-specific bomb penetration depth (BPD) calculations must be conducted where appropriate.
- ▶ Initiation: The likelihood that an encounter results in the EO initiating.

### 1.6.4 Receptor

The number and sensitivity of receptors will vary from site to site. In the context of an EO initiation, the receptors present at the time of the event will almost always include the most sensitive category; human health.





### 1.6.5 Consequence

The consequences of an inadvertent EO initiation event vary from none to catastrophic. However, the likelihood of initiating EO is far lower than that of encountering EO. The negative consequences of an EO encounter are much more likely to be financial, resulting from project delays.

### 1.6.6 Semi-Quantitative Risk Calculation

Once all project-specific factors have been assessed, a semi-quantitative risk assessment (likelihood versus consequence risk matrix) will be carried out or multiple calculations will be carried out if the factors described above vary considerably across the site. In the latter scenario, a risk map will be drawn to illustrate the differing risk zones.

### 1.6.7 Recommendations

If a significantly elevated risk level(s) is concluded, industry standard risk mitigation measures (appropriate to the project specific intrusive methodologies) will be recommended to reduce the elevated risk level(s) to as low as reasonably practicable (ALARP) level.

## 1.7 Information Sources

To guarantee a robust assessment of risk, primary source records form the basis of this report. The following information types and information sources were accessed / contacted during the research process:

- ▶ The National Archives, Buckinghamshire Archives, Northamptonshire Archives, The MoD, The RAF Museum, Historic England, Council for British Archaeology, Buckinghamshire Historic Environment Record, British Geological Society, the Client.
- ▶ Historic OS mapping, historic aerial photography, secondary sources material, and various web resources.
- ▶ Our PIEO (potential indicators of explosive ordnance) GIS map and our physical library. Note, PIEO is the result of over fifteen years of research and is constantly growing.

## 1.8 Reporting Conditions

The accuracy of original records relating to bombing is difficult to verify. Wartime bombing records were only as detailed and accurate as the availability of time, personnel, and ease of access to information would allow. The conditions under which information was gathered in many urban locations, i.e. intense aerial bombardment, will not have been conducive to accurate record keeping. Air raids within sparsely populated locations are less likely to have been witnessed, limiting the accuracy of any corresponding records. Furthermore, such records were often based on unverifiable second-hand eyewitness accounts.

Many records of historic military activity have not survived and some of those that have are only declassified and released into the public domain decades after their creation. Consequently, pertinent records can be inaccessible at the time of requirement. Impartial Assessments cannot accept liability for any missing historic records, inaccuracies or omissions within the available historic records.

It is never possible to accurately determine, through desktop study alone, the precise location, type and condition of buried EO at a given site. Furthermore, some factors (human behavioural) make assessment of EO risk partly subjective.





## 2 The Site

### 2.1 Location

Site address: London Road, Warrington, Milton Keynes Borough, Buckinghamshire, MK46 4JQ.

The Site is centred on the approximate National Grid Ref: SP 90569 55329.

### 2.2 Description

Several agricultural fields crossed by a footpath.

A recent aerial photograph is displayed at **FIGURE 1**.

### 2.3 Proposed Works

A solar farm is planned for the Site. The solar arrays will be supported on either shallow pile foundations (to 1.5m - 2.0m bgl) or concrete pads placed on the surface or buried (very shallow mechanical excavations). Cable trenches will be excavated to depths of 0.6m - 1.0m bgl.

Note, at the time of writing an intrusive archaeological survey (comprising numerous trenches excavated to a maximum depth of ~0.60m bgl throughout the Site) had just completed.

## 3 Site History Assessment

### 3.1 OS Mapping

#### 3.1.1 Introduction

Bomb damage to structures, resulting from enemy action can be identified by comparing pre and post conflict OS maps. These maps can also help identify historic military activity, as 19<sup>th</sup> / 20<sup>th</sup> Century military structures had a typical shape and were distributed in typical patterns. Note however, the process adopted in generating these maps (mapping intervals, scale, exclusion of some features, e.g. military, in the interests of national security, etc), may result in an incomplete account of a site's history.

Those available historic OS maps covering the Site (between 1:1,056 and 1:10,560 scale) have been assessed, with relevant observations detailed in the table below.

The earliest available post-WW2 OS map is displayed at **FIGURE 2**.

#### 3.1.2 Site-Specific

		Maps	Observations
Pre-WW2	1883 1901 1907	Site occupancy?	Farmland and 'Tinick Farm' in the east. 'Northey Farm' and 'Lower Farm' are located just beyond the northwest and southeast Site boundaries, respectively.
		Evidence of local military activity?	None.
		Other significant observations?	None.
Pre-WW2	-	-	No maps available.



Post-WW2	1952 1960 1978	Site occupancy?	No significant changes.
		Evidence of local military activity?	None.
		Evidence of WW2 German bombing?	None.
		Other significant observations?	None.

TABLE 1: Historical OS Mapping Review

## 3.2 Aerial Photography

### 3.2.1 Introduction

Historical aerial photography is often key in identifying temporary wartime activity. As well as clarifying historic site occupancy, aerial photographs can elucidate the degree of bomb damage to structures and show the locations of German high explosive (HE) bomb craters. Note, the latter usually only persisted for a short time.

WW2-era aerial photography is displayed at **FIGURE 3**.

### 3.2.2 Site-Specific

	Date	Type	Observations	
WW2	16 <sup>th</sup> Jul 1943	Vertical view. Low resolution	Timing?	Approx. two years after the period of most intense Luftwaffe activity in the region had ceased.
			Site occupancy / ground cover?	As per the period OS mapping, although this image only covers the central eastern part of the Site.
			Evidence of WW2 bombing? (ruins, clearance, craters)	No obvious evidence.
			Evidence of local military activity?	No obvious evidence.
			Other significant observations?	None.
Post-WW2	7 <sup>th</sup> Jun 1946	Vertical view. Moderate resolution	Timing?	Approximately 13 months after the cessation of hostilities in Europe.
			Site occupancy / ground cover?	No significant changes.
			Evidence of WW2 bombing? (ruins, clearance, craters)	Unlikely, see below.
			Evidence of local military activity?	One of the fields contains crater-like, almost circular features (not caused by HE bomb strikes). There are other ambiguous ground disturbance features and a small triangular feature.
			Other significant observations?	None.

TABLE 2: Historical Aerial Photography Review





### 3.3 Additional Historical Information

If a site encompasses a historic landmark, significant building etc, further research might locate a written account providing details on the site's historic occupancy. Such details could prove significant when assessing the various variables relating to, for example, the likelihood of a German UXB strike going unnoticed and unreported.

No relevant information located.

## 4 WW2 Enemy Action Assessment: Aerial Bombing

### 4.1 German bombing during WW2

Between 1939 and 1945, the German air force (the Luftwaffe) dropped approximately 75,000 tonnes of HE bombs and over two million incendiary bombs (IBs) on the four nations of the UK. Almost all counties were affected to some degree.

At the time, bombing was still in its infancy. Testing showed that the accuracy of daylight, level flight bombardment would put 50% of the bombload within 91m of the centre of the target from an altitude of 3,000m. At double this altitude the error exceeded 400m. In poor visibility and at night, the error could increase by >250%.

Furthermore, these tests were conducted within an uncontested environment. The various British AA defences and navigational countermeasures greatly hindered bombing. Luftwaffe aircraft frequently abandoned their intended target and jettisoned their bombloads indiscriminately. Consequently, numerous bombing incidents occurred in open countryside throughout the UK, many miles from intended targets.

Bombs were only rarely dropped individually. The normal procedure was to drop an internally carried bombload in a single sequence, with release spacings pre-set from 10m to 100m. 20No. 50kg bombs (the most numerous HE bombload) could thus extend in a line (called a bomb-stick) varying between 200m and 2km in length. These patterns (when accurately plotted) can aid in locating unreported UXBs. It should be noted however that externally carried bombs could be released individually, creating uneven bomb-stick patterns or solitary bomb strikes.

For other types of commonly deployed ordnance, inaccuracy was inherent. 1kg / 2kg IBs and parachute retarded mines (high-capacity blast bombs) were easily blown off course by the wind.

### 4.2 Explosive Ordnance Hazards Overview

#### 4.2.1 Introduction

During WW2 the Luftwaffe deployed a variety of ordnance against the UK. The most frequently deployed large bombs achieved significant ground penetration due to their 'thick-skinned' steel construction and are therefore more likely to remain buried in the ground today. These HE (and some incendiary type) bombs are termed 'iron' bombs. The 50kg and 250kg 'iron' bombs accounted for approximately 93% of 'iron' bombs dropped on the UK.

Descriptions of these different bomb types are presented below. Data sheets detailing those bombs most likely to be encountered today are displayed at **APPENDIX 1**.

Note, the Italian Air Force participated in a small number of air raids in Essex and Kent during 1940. The Italian bombs were comparable to German general purpose 'iron' bombs, however any UXB find would be extremely rare.

#### 4.2.2 More Likely to be Unearthed in the UK Today

- **High Explosive 'iron' bombs** - General Purpose: The SC series accounted for the majority of HE bombs dropped on the UK. This design had a moderate charge to weight ratio, approximately 50% charge. The most common weights were 50kg (SC50), 250kg (SC250) and 500kg (SC500). 6No. additional models (1,000kg, 1,200kg, 1,400kg, 1,800kg, 2,000kg and 2,500kg) were deployed in much smaller numbers.





- ▶ **High Explosive 'iron' bombs - Semi Armour Piercing:** The SD series were very similar in appearance to the SC bombs but had lower charge to weight ratios, approximately 30% charge. The casing was thicker, allowing for greater penetration through structures. There were six 'iron' bombs models ranging from 50kg to 1,700kg.
- ▶ **Incendiary 'iron' bombs:** The Brand C50A used a SC50 type casing but contained a mixture of incendiary liquids (including phosphorus) that ignited on contact with the air. The C50B was the same size but mostly phosphorus filled. The Sprengbrand C50 (Firepot) also utilised a thick 'iron' bomb casing, however contained both Thermite incendiary containers and a 7kg HE charge. These bombs weighed approximately 41kg and 50kg respectively and were introduced later in the war.
- ▶ **Incendiary Sub-Munitions:** The 1kg B1E IB was the most frequently dropped German bomb. Up to 620No. B1Es could be packed into a sub-munition canister, which opened at a pre-determined height, scattering the IBs over a wide area. The Thermite fill burns at extremely high temperature. The longer 2kg B2E model incorporated a small HE charge with delay fuze. The B2E is therefore more hazardous than the B1E, however was dropped in smaller numbers. Although light weight, both had the potential to fully penetrate soft ground.

#### 4.2.3 Less Likely to be Unearthed in the UK Today

- ▶ **High Explosive 'iron' bombs - Armour Piercing:** The PC series (four models between 500kg and 1,600kg) were used against reinforced military structures and warships. Consequently, they were not commonly used against the UK mainland. Charge to weight ratios were low, approximately 15% charge.
- ▶ **High Explosive Blast Bombs - Parachute Mines:** Converted naval influence mines were dropped on urban targets. Their thin steel bodies allowed for very high charge to weight ratios, approximately 73% charge. Luftmine A (LMA) and Luftmine B (LMB) weighed 500kg and 1,000kg respectively. Each was parachute retarded, enabling detonation at ground level and therefore no ground penetration. Consequently, the only unexploded parachute mines found today, wash up along the coastline or remain on river or lake beds.
- ▶ **Oil Incendiary Bombs:** The Flam 250 and Flam 500 bombs contained a mixture of benzine and petroleum, ignited by a small HE charge. They were constructed of thin metal which broke up on impact, spreading the incendiary mixture across an area. As such they are unlikely to remain buried in the UK today. The bombs proved unreliable, often failing to ignite, and consequently were withdrawn from service in 1941.
- ▶ **Anti-Personnel (AP) Sub-Munitions:** The 2kg SD2 'Butterfly' bomb was dropped on several British cities and towns. It was a nuisance weapon incorporating both time-delay and anti-handling fuzes. It contained a small 225g HE charge, however had no ground penetration ability. A sub-munition canister could hold up to 108No. SD2s. The SD10 was a larger (10kg) AP bomb. It could achieve full penetration, however this model was dropped in very small numbers on the UK. A sub-munition canister could hold 17No. SD10s.
- ▶ **Miscellaneous:** The Luftwaffe dropped various other devices on the UK. Flares (for target illumination) were by far the most numerous, however had no ground penetration potential. Photoflash bombs (to aid reconnaissance photography) are similar in appearance to 50kg bombs. Inert concrete-filled bombs were dropped to cause disruption and unnecessarily tie up bomb disposal (BD) resources.

#### 4.2.4 'Iron' Bomb Penetration Depths

The Research & Experiments Department of the Ministry of Home Security used BD records to study German HE UXB penetration depths, publishing their findings in 1949. The British Army's BD headquarters provided details of 1,304 UXB recoveries. In addition, the ministry carried out their own tests, involving 24No. bombs dropped into Chalk under controlled conditions.

The average penetration depth of 430No. 50kg bombs (the most commonly dropped HE bomb) in London Clay was 4.6m and 6.1m for the 250kg model. Note, these bombs landed in open ground and were therefore unaffected by structures or hardstanding. Once the distribution of bomb weights against penetration depths was plotted, the mean line was extrapolated for each bomb weight to produce probable maximum depth figures.





For each bomb weight, the mean average of all observed penetration depths was calculated for each geology. The resulting figures, plus the observed minimum penetration depths, are presented in the table below. Note, bombs weighing >1,000kg have been omitted from the table as only several such UXBs were recovered during WW2.

Bomb (Kg)	Clay			Chalk			Gravel			Sand			Sandstone		
	Min (m)	Average (m)	Max (m)	Min (m)	Average (m)	Max (m)	Min (m)	Average (m)	Max (m)	Min (m)	Average (m)	Max (m)	Min (m)	Average (m)	Max (m)
50	0.7	4.0	9.1	1.0	3.5	7.7	1.0	2.8	7.8	1.0	2.8	7.8	1.8	2.7	6.0
250	1.5	6.8	15.8	1.0	6.0	13.1	0.7	4.8	13.7	1.8	4.8	13.7	2.5	4.6	10.3
500	3.8	8.7	19.8	4.0	7.6	16.4	2.5	6.0	17.3	3.0	6.0	17.3	-	5.8	13.1
1,000	4.8	10.9	24.9	4.2	9.6	20.7	2.0	7.6	21.9	6.8	7.6	21.9	-	7.3	16.4

TABLE 3: WW2 German UXB Penetration Depths Data

Although most German HE UXBs came to rest after several metres travel through the ground, these weapons can be encountered at any depth between just below WW2 ground level and the maximum BPD. There are three reasons why heavy bombs might be found at surprisingly shallow depths:

- **Low Altitude Release:** Some Luftwaffe raids (particularly those involving fast fighter-bombers) were executed at very low altitudes, to avoid RADAR detection. Bombs released over soft ground from very low altitude would impact at a shallower angle, resulting in extreme J-Curve Effect (see **Heading 4.2.5**).
- **Deflection:** 'iron' bombs had conical nosecones and were therefore susceptible to deflection. A bomb striking a structure (above or below ground), could deflect and come to rest at a shallower depth.
- **Aircraft Crash Site:** For several reasons, a pilot may not have been able to dump his bombload before impacting the ground. Any internally or externally fitted bombs could have become shallow buried on impact.

#### 4.2.5 'Iron' Bomb J-Curve Effect

WW2 BD units reported that most deep buried German HE UXBs were observed in a horizontal or up-turned orientation. As a HE UXB penetrates the ground at an angle slightly offset from the vertical, it begins to turn, creating a curved passage through the soil.

This phenomenon can be significant when assessing the risk of UXO as the J-Curve Effect results in a horizontal offset from the point of UXB entry. A HE UXB could impact soft ground adjacent to a building and then come to rest beneath that building. The degree of lateral offset is typically one third (approximately) of the bomb's ultimate penetration depth. Therefore, for locations which experienced high-altitude bombing raids, J-Curve offsets will typically be between 2.0m and 4.0m. In extreme conditions, a low altitude attack resulting in a low angle UXB strike could produce even greater horizontal offset, up to 15.0m.

### 4.3 British Records of Bombing

#### 4.3.1 Official Records

The Bomb Census was undertaken by the Ministry of Home Security. The Bomb Census was compiled using information primarily gathered by ARP (Air Raid Precautions) wardens. Standardised forms were used to keep a written record of each incident. In many areas, these reports were used to create bomb plot maps. The Ministry also calculated bombing density statistics for every administrative area and created Daily Intelligence Reports, recording the date and location of every single air raid.





The Bomb Census commenced in September 1940, more than three months after the German bombing campaign commenced. Initially, only information relating to London, Birmingham and Liverpool was collated. It was not until September 1941 that the Bomb Census was extended to cover the entire UK. Consequently, many pre-September 1941 records were not standardised and, in some cases, were poor quality.

The level of detail varied greatly with location. Furthermore, the Bomb Census did not cover air raids on military property. The armed forces had no formal process for recording air raids and processing associated records. As well as bombing incident records, some local authorities produced war damage maps. Council engineers carried out street by street surveys to create a record of the varying degrees of damage sustained by buildings. Today, many original (archived) bombing records are incomplete, some collections are missing altogether, and, in some cases, entire records were destroyed at the time by German bombs.

#### 4.3.2 Unofficial Records

In some parts of the UK where official bombing records are incomplete or missing, historic eyewitness accounts, newspaper articles, aerial photographs, etc can be used to build up a picture of WW2 air raids. The credibility of any such information, however, must be addressed and assessed.

### 4.4 Luftwaffe Targets

#### 4.4.1 Brief Overview

The Luftwaffe carried out reconnaissance flights over the UK. Numerous aerial photographs were taken with subsequent German annotations earmarking various facilities for attack. Luftwaffe crews were also given British OS maps with German annotations highlighting their target area. In the absence of detailed bombing records, the presence of a known target increases the likelihood that bombs fell locally.

Although official German doctrine did not specifically target civilian residential areas, the Blitz raids on individual targets were gradually replaced by what was, for all intents and purposes, unrestricted indiscriminate bombing. This was due to the effectiveness of British countermeasures. The Luftwaffe identified city centre aiming points for some attacks, as well as identifying individual targets. Typical types of target:

- ▶ **Common Primary (strategic) Targets:** RAF airfields, Royal Navy bases, commercial docks, weapons (chiefly aircraft) factories and RADAR installations.
- ▶ **Common Secondary Targets:** engineering works, steel works, factories, depots, railway marshalling yards, gasworks, power stations, army camps / barracks, AA artillery batteries, coastal gun batteries etc.

Note, the inherent inaccuracies in WW2-era aerial bombardment resulted in many wayward bomb strikes in areas surrounding targeted facilities.

#### 4.4.2 Site-Specific

Original Luftwaffe target mapping and target reconnaissance photography of the region was accessed.

Target Category	Relevance and Proximity to the Site
Confirmed primary aiming point (indiscriminate bombing)	None within 10km
Confirmed primary individual target(s)	None within 5km
Confirmed secondary individual target(s)	None within 5km
Unconfirmed but potential secondary target(s)	None locally.

TABLE 4: WW2 Bombing Targets





## 4.5 Bombing Decoy Installations

### 4.5.1 Brief Overview

British decoys were intended to draw enemy bombers away from the true targets. 839No. decoys were built at 602No. sites in England, with approximately 200No. more established in Wales, Scotland, and Northern Ireland. Although success rates varied greatly, the confirmed presence of a bombing decoy significantly increases the likelihood that bombs fell near or on that location. 5No. types were fielded:

- ▶ **'K' and 'Q' Sites - Dummy Aerodromes.** 230No. were established. 'K' decoys (landing field, mock-up buildings, and inflatable aircraft) were for daylight use. 'Q' decoys used lights to create a flarepath simulating a runway at night.
- ▶ **'QL' Sites - Urban Lighting.** Electric lights were used to simulate poorly implemented blackout procedures. As a bomber force approached, the lights would be extinguished erratically.
- ▶ **'SF' and 'QF' Sites - Diversionary Fires.** The largest and most sophisticated decoys. When lit, 'Starfish' sites gave the impression of an urban area set alight by incendiary bombing. They were installed near cities. Similar to, however smaller than 'SF' decoys, 'QF's were installed near and for the protection of specific vulnerable points (VPs) such as factories, military sites, oil storage tank farms, etc. Some 100No. 'QF' sites were established in England.
- ▶ **'M' and 'C' Sites - Dummy Factories and AA Batteries.** The former comprised a scale model of a specific factory, vital to the war effort. They were made from wood and canvas and had other features, such as access roads and equipment.
- ▶ **ASQL - Assault.** During August and September 1943, 18No 'QL' sites were installed along the south coast of England during a deception operation. These **temporary** decoys received very little attention.

Between 1942 and 1943, most 'K' sites were dismantled, however many of the other decoys were used up until late 1944 when Luftwaffe activity over the UK had all but ceased. By the end of 1941, the airfield decoys had received 359No. attacks compared with 358No. raids carried out against the real airfields. By June 1944, approximately 730No. attacks had been recorded on all decoy types. At least 5% of the total weight of German bombs dropped are estimated to have been aimed at Britain's decoy sites.

### 4.5.2 Site-Specific

No decoy sites were installed within a significant distance of the Site. The closest being ~10km to the southwest.





## 4.6 Local Bombing Density

### 4.6.1 Official Records

The table below records the MoHS' bombing density calculations for the former Rural Districts of Newport Pagnell (Buckinghamshire) and Wellingborough (Northamptonshire). Note, the Site was located within the former, however the north Site boundary marked the border with the latter. It gives a breakdown of the number of large Luftwaffe bombs reported within the administrative area. The adjacent table displays IAL's bombing density parameters.

Administrative Area	NP.RD	W.RD	Qualitative	Quantitative
Administrative Area Size (Acres)	61,686	33,115		
HE 'iron' bombs (all types)	161	65	<b>Very Low</b>	<5 bombs per 1,000 acres (405ha)
HE Parachute Mines	1	0	Low	5 to 15 bombs per 405ha
'Flam' Oil IBs	1	1	Low to Moderate	15 to 30 bombs per 405ha
Phosphorus IBs	0	0	Moderate	30 to 75 bombs per 405ha
'Fire Pot' Phosphorus IBs	0	0	Moderate to High	75 to 150 bombs per 405ha
V1 Flying Bomb	1	0	High	150 to 300 bombs per 405ha
V2 Long Range Rocket	0	0	Very High	>300 bombs per 405ha
Total (excluding V Weapons)	163	66		
Bombs Per 1,000 Acres (405ha)	<b>2.6</b>	<b>2.0</b>		

TABLE 5: Bombing Statistics and Parameters - National Source

Note, these figures include UXBs, 1kg / 2kg IBs, or small AP bombs (2kg or 10kg models). However, it is known that no AP bombs were dropped locally during WW2.

### 4.6.2 Site-Specific

The bombing density figure for a whole administrative area is not always a good indication of the bombing density over a specific site. Within larger districts, particularly rural districts, bombing density figures may be skewed by the presence of a heavily bombed target.

Indeed, the Site occupied rural districts, where the local bombing density figure is less likely to be accurate at the local level. Also noteworthy is that Bedford Rural District (another very low bombing density area) was located immediately beyond the northeast Site corner. According to the bombing density calculation above, the Site occupied an area that experienced a very low bombing density. Further research however indicates that **the wider study area experienced a low bombing density**.





## 4.7 Bomb Failure Rate

### 4.7.1 Brief Overview

There are three reasons why German 'iron' bombs dropped during WW2 failed to function as designed:

- ▶ **Human Error: failure** of the aircraft's crew to charge the electrical condenser in the fuze.
- ▶ **Very Low Altitude Release:** the fuze would not have enough time to arm itself before impact.
- ▶ **Faulty Fuze: inadvertently** during manufacture or sabotage by POWs working in German factories.

The Bomb Census recorded a daily average of 84No. German 'iron' bomb UXBs dropped on civilian targets throughout Britain, between 21<sup>st</sup> September 1940 and 5<sup>th</sup> July 1941. 8.5% of these were Delayed Action (DA) bombs (time bombs) which exploded sometime later. The remainder were unintentional 'duds' (UXBs).

By the end of WW2, the Ministry of Home Security calculated a total figure of 200,195No. HE bombs recorded as exploded in Britain. An additional 25,195No. HE UXBs were recorded, giving a HE bomb failure rate of 12.6%.

The Luftwaffe figure for the total number of bombs dropped on the UK was approximately 11% higher than the number observed and reported by UK authorities. This suggests that the total number of UXBs remaining buried in the UK today is greater. However, anecdotal evidence suggests that German sources overstated their bombing statistics for propaganda reasons.

The average HE bomb failure rate of all boroughs and districts making up the London Civil Defence Region (the most heavily bombed part of the UK) was calculated as 10%, with rates ranging from 6% to 15%. Note, those areas of the capital that suffered the most damage, had the most ruins into which subsequent UXBs could fall unnoticed / go unrecorded. This limits the accuracy of the observed failure rates in those areas.

The discrepancy between the British and German records combined with the fact that HE UXBs are still consistently being discovered in the UK today (averaging five per year), confirms that the UK's 12.6% rate is inaccurate and is in fact higher. As rates of 15% were observed in some areas, this is considered to be a more accurate estimate of the true failure rate.

### 4.7.2 Site-Specific

No evidence has been found to suggest that the local HE bomb failure rate differs significantly from the national average.

## 4.8 Site-Specific Bombing Incident Records

### 4.8.1 Buckinghamshire - Incidents Register

An original register of bombing incidents throughout the county was accessed. This register appears to be complete, however only records general incident locations. A search of this register for local incidents located three entries:

- ▶ **20<sup>th</sup> October 1940** Serial No.20. Four HE bombs at Lodge Farm, Warrington. No damage or casualties.  
[This farmstead was located ~1.35km west of the Site].
- ▶ **14<sup>th</sup> November 1940** Serial No.34. One IB at Uphoe Farm, Lavendon. No damage or casualties.  
[This farmstead was located ~1.2km southeast of the Site].
- ▶ **4<sup>th</sup> December 1940** Serial No.44. Three HE bombs and 200No. IBs at Lavendon & Warrington. Slight damage to property. No casualties.





#### 4.8.2 Buckinghamshire - Damage to Property Reports

A collection of original reports detailing the 'particulars of war damage for information of district valuer' was accessed. It is not clear whether this record is a complete record of all property damage incidents. A search of this collection located one relevant report:

##### 4<sup>th</sup> / 5<sup>th</sup> December 1940:

- Near Lavendon Grange - one HE bomb, one broken window [~850m south of the Site].
- Near Warrendon Farmhouse, Lavendon [precise location unknown] - one HE bomb causing no damage. One UXB also reported.

#### 4.8.3 Buckinghamshire - UXO Records

An collection of original UXO incident reports and disposals produced by the county constabulary was accessed. This record covers German UXBs as well as British UX AA projectiles. A search highlighted one local incident:

One German HE bomb dropped between the **19<sup>th</sup> - 21<sup>st</sup> October 1940** was located 300 yards from Lodge Farm, Warrington, 2.5 miles north of Olney Police Station. Disposal priority category 'D'. Disposed of on the 25<sup>th</sup> November 1940.

This farmstead was located ~1.35km west of the Site.

#### 4.8.4 The 'Bombs Over Bucks' Project

The 'Bombs Over Bucks' project is a digital bomb plot map of the county which was produced using original records of the county council's Emergency Planning Officer. The map records the general locations of German bombing incidents (not necessarily all resulting individual bomb strikes), friendly fire incidents (RAF / Allied aircraft bomb strikes) and German V1 Flying Bomb strikes. The level of detail included for each incident is generally poor.

A section of the map showing the wider study area is displayed at **FIGURE 4**. Observations / comments are listed below.

- ▶ Two incidents referencing Olney (19<sup>th</sup> November 1940 and 4<sup>th</sup> December 1940) have been incorrectly plotted at Warrington village.
- ▶ The 5<sup>th</sup> December 1940 Warrendon Farm house, Lavendon incident has been plotted at the centre of Lavendon village ~800m southeast of the Site. This plotted location raises the possibility that the map creator was also unable to identify the precise location of this farmhouse and therefore plotted it at the centre of the village.
- ▶ The 15<sup>th</sup> November 1940 incident at 'Apho' Farm is almost certainly a typo for Uphoe Farm.

#### 4.8.5 Northamptonshire - Wellingborough Rural District Records

The rural district council's collection of original ARP incident message forms (produced by ARP wardens at the scene of an incident) are not available in the public domain and therefore may not have survived to the present day.

Two other potentially relevant Northamptonshire records (Air Raid Damage Record and War Damage Commission Damage Schedule) were accessed / searched. However, no references to bombing incidents within ~500m of the north Site boundary were found. Note, these two record types do not represent comprehensive records covering every bombing incident in the rural district.





#### 4.8.6 Bomb Census - Daily Intelligence Reports

The MoHS collated basic data on every air raid throughout the UK (the administrative area affected, the date and casualty figures). A complete collection of original Daily Intelligence Reports for Civil Defence Regions 3 and 6 was searched for the relevant parish names. Note, the Site was located within the parishes of Lavendon and Warrington and the parishes of Bozeat and Harrold occupied the wider study area (a 500m radius around the Site).

Two relevant reports were located (below). No raids were reported for Bozeat (Northamptonshire) or Harrold (Bedfordshire).

- ▶ **14<sup>th</sup> / 15<sup>th</sup> November 1940.** Night raid affecting Lavendon. No casualties reported.
- ▶ **4<sup>th</sup> / 5<sup>th</sup> December 1940.** Night raid affecting Warrington, Buckinghamshire. No casualties reported.

Note, the 20<sup>th</sup> October 1940 raid is missing from this record.

#### 4.8.7 Bomb Census - Incident Reports

Four separate types of MoHS incident record that could potentially describe local bombs strikes, were accessed. The level of detail varies across these different records. Only one record type (reporting minimal detail) represents a complete record of all incidents in the region. A search of these collections located one relevant report:

##### **4<sup>th</sup> December 1940:**

- At 19:40hrs 3No. HE bombs dropped at Olney, damaging one cottage.
- At 19:40hrs IBs dropped at Warrington, 2 miles northeast of Olney, damaging telephone wires.

Olney was located ~2.8km to 3.4km southwest of the Site during WW2. The reported IBs probably fell somewhere between ~200m southwest of the Site and within the southern part of the Site.

#### 4.8.8 Bomb Census - Incident Plot Maps

Collections of original MoHS bomb census maps and trace plot maps for the region were searched. Such maps were only produced from late 1941 onwards and record 'iron' bomb strikes only (not 1kg / 2kg IBs). Therefore, bomb census maps do not represent a complete picture of local bombing. No such maps covering the study area were available.

#### 4.8.9 Anecdotal and Secondary Source Evidence

A search of online resources and local history publications was carried out with the intention of locating any relevant anecdotal / eyewitness accounts or secondary source information relating to local bombing incidents. No such information was located.

### 4.9 Abandoned Bombs

#### 4.9.1 Brief Overview

When a WW2 BD team arrived at the scene of a confirmed UXO strike, they would classify the incident by its potential hazard, Categories A, B, C and D, with A the highest priority for immediate removal and disposal. Occasionally, BD engineers could not find or recover the UXO and its location was simply recorded as an 'abandoned bomb'. The reasons for abandonment could be inaccessibility, extremely soft ground (extreme burial depth) or simply a harmless location (e.g. an isolated field). Note, BD teams in heavily bombed areas were constantly overstretched due to the sheer number of UXBs reported.

The archive office of the British Army's 29 EOD&S Group holds an Abandoned Bomb Register for Britain, as does the Ministry of Housing, Communities & Local Government. The registers lack detail, particularly with regards to locations. A general address rather than a precise position (grid reference) is usually given. Some of the abandoned bombs are likely to have been subsequently recovered or discredited, however remain on the register.





#### 4.9.2 Site-Specific

No abandoned bombs are listed locally.

#### 4.9.3 WW2 Bombing Incident Records Conclusion

- ▶ **Number and intensity of local air raids:** One bombing incident has been confirmed within the wider study area - IBs dropped two miles northeast of Olney on the 4<sup>th</sup> December 1940. However, due to the lack of detail within most record types, it is conceivable that additional incidents occurred locally.
- ▶ **Number of local bombing incidents:** Unknown. Probably one cluster of 1kg / 2kg IBs (multiple bombs).
- ▶ **Local bomb-stick orientations:** The Bomb Census daily summary report (incidents at Olney and Warrington on the 4<sup>th</sup> December 1940) is inconsistent with the two Buckinghamshire County records, which reference Warrington and Lavendon as the incident locations. As the location of Warrendon farmhouse is unknown and lightweight (1kg / 2kg) IBs are not a reliable indicator of aircraft flight path direction, it is not known whether this aircraft flew over the Site.

Note, the difference in wind effect experienced by lightweight (1kg / 2kg) IBs when dropped from average to high altitude compared to heavy HE bombs, means the strike location(s) of the former bombs cannot be used to deduce the likely strike locations of any HE UXBs, if the aircraft in question was carrying a mixed HE and 1kg / 2kg incendiary bombload.

### 4.10 Aircraft Crash Sites

#### 4.10.1 Brief Overview

Numerous German aircraft came down over the UK during WW2. In most cases, the pilot was able to jettison any remaining bombload prior to impact or the aircraft belly-landed resulting in only superficial damage to the fuselage. However, in some cases, mechanical malfunction and / or crew injury meant bombs were not released. If the aircraft struck the ground at a steep angle and at high velocity, high density objects (engines and bombs) became buried, sometimes to significant depths.

#### 4.10.2 Site-Specific

No evidence has been found of a German aircraft crash site within the Site boundary.

## 5 WW2 Enemy Action Assessment: Other

### 5.1 V Weapons

#### 5.1.1 Brief Overview

In mid-1944 Germany launched the V1 Flying Bomb campaign. The V1 was a primitive cruise missile carrying an 848kg HE warhead. Between 13<sup>th</sup> June 1944 and 29<sup>th</sup> March 1945, V1s were launched from static sites in France and Belgium. 5,823No. missiles landed in England, 2,419No. of which reached London, their intended target.

Not long after, Germany launched the V2 Rocket campaign. The V2 was a primitive ballistic missile carrying a slightly smaller HE warhead (735kg). Between 8<sup>th</sup> September 1944 and 27<sup>th</sup> March 1945, V2s were launched from static and mobile sites in Holland. 1,102No. rockets landed in England, 516No. of which hit London, the initial target area. Later on, Norwich was targeted, sustaining 43No. strikes.

Both weapons were constructed of thin sheet steel and consequently had very limited ground penetration ability, if they failed to function. Therefore, V Weapons do not themselves pose a UXO risk, however the damage they caused can hamper the accurate assessment of Luftwaffe UXB risk.





### 5.1.2 Site-Specific

The V1 Bomb strike density in the region was very low. It is considered highly unlikely that such a weapon struck the Site unnoticed and the Site's wartime ground conditions would not have been conducive to UXO contamination in the extremely unlikely event that a V Weapon struck the Site and failed to detonate.

Note, the V2 Rocket campaign did not affect the region.

## 5.2 Artillery Bombardment

### 5.2.1 Brief Overview

Six German Navy artillery batteries (comprising 20No. guns of between 21cm and 40.6cm calibre) were established in the German occupied Pas-de-Calais area from July 1940. In addition, the German army brought railway-mounted guns to this area of France, seven of which (six 28.0cm calibre guns and one 21.0cm gun) were capable of striking inland targets in Kent.

The first shells were fired at Kent on the 12<sup>th</sup> August 1940 with frequent attacks occurring during each of the next four years until the final bombardment on the 26<sup>th</sup> September 1944. In all, at least 1,000No. attacks (each involving multiple projectiles fired) were recorded, an average of one every two days. The towns of Folkestone, Deal and Dover were targeted, however many shells landed in the surrounding countryside. UXO finds of this type are rare.

### 5.2.2 Site-Specific

Buckinghamshire was located well beyond the range of the cross-channel artillery batteries.

## 6 WW1 Enemy Action Assessment

### 6.1 Aerial Bombing

#### 6.1.1 Brief Overview

Between December 1914 and August 1918, the German navy air wing and army air wing carried out 51No. Zeppelin airship raids and 52No. fixed-wing aircraft raids (involving multiple aircraft) against England and south-east Scotland. Note, many more attacks involving solitary fixed-wing aircraft occurred. An estimated total of 9,000No. HE bombs and IBs were dropped, with London and the east Kent towns experiencing the most raids. During the four years long campaign, Britain suffered 4,820No. casualties.

The German bombing campaign of WW1 was significantly smaller in scale than the WW2 campaign, in terms of the number of raids, number of aircraft per raid, and size of bombloads (for fixed-wing aircraft). As it was the first time Britain had experienced aerial bombardment, the small-scale daytime attacks often attracted spectators, which increased the chance of any UXB being observed and reported. When combined with the fact that most WW1 bombsites have been redeveloped, German WW1 UXB finds are extremely rare.

#### 6.1.2 Site-Specific

The wider Lavendon / Warrington area did not experience aerial bombardment during WW1.





## 6.2 Naval Bombardment

### 6.2.1 Brief Overview

Several coastal towns in Yorkshire, Norfolk, Suffolk, and Kent were subjected to naval bombardment from German warships during seven raids in 1914, 1916 and 1917. These raids varied in intensity, both in terms of duration (number of shells expended) and calibre of artillery employed. The heaviest attack resulted in >1,000No. shells fired, with the lightest raid expending only several rounds.

The relatively short firing distances during these bombardments resulted in many shells failing to explode, as there was not enough time for some shells to arm themselves before striking the coast. German WW1 UX naval shell finds are extremely rare.

### 6.2.2 Site-Specific

The wider Lavendon / Warrington area did not experience naval bombardment during WW1.

## 7 Domestic Military Activity Assessment

### 7.1 Sources of Potential Explosive Ordnance Contamination

The table below lists all the modern and historical sites and activities that could have potentially resulted in British / Allied UXO and AXO contamination in the UK.

Source of EO	Examples	Associated EO Hazard Items	Relevance
Military Bases and Installations	Army camps, RAF, RN or USAAF airfields, RN shore establishments, signals or communications installations, military training centres, etc.	Various conventional and chemical EO. The types of EO will depend on the type of site and branch of the military utilising it.  Plus AXO (SAA, LSA and AA ammunition) for WW2 site defence, if applicable.	INSIGNIFICANT
Military Training Areas and Weapons Ranges	Inland and costal RAF and USAAF bombing ranges. Army / Royal Marines / RAF Regiment etc weapons ranges.	Various conventional and chemical EO. The types of EO will depend on the type of range / training area and branch of the military utilising it.	POTENTIALLY SIGNIFICANT
Munitions and Explosives Factories	Royal Ordnance Factories, National Filling Factories, National Explosives Factories, Royal Naval Cordite Factories, etc.	Various conventional and chemical EO. The types of EO and explosives contamination will depend on the type of factory.  Potentially plus AXO (SAA, LSA and AA ammunition) for WW2 defence.	INSIGNIFICANT
Munitions Storage Depots	Royal Naval Armaments Depot, Royal Naval Ordnance Depots, RAF Ammunition Depots, Air Ammunition Parks, Reserve / Forward Ammunition Depots, Central Ammunition Depots, etc	Various conventional and chemical EO. The types of EO potentially present will depend on the branch of the military utilising it.  Potentially plus AXO (SAA, LSA and AA ammunition) for WW2 defence.	INSIGNIFICANT
Fortifications and Defence Measures	Pillboxes, fortified houses, various earthworks (e.g. trenches) etc at: Nodal Points, Stop-Lines, VPs, etc.	SAA, regular army LSA, AA ammunition, Flame Fougasse, and Home Guard-specific weapons / ammunition.	UNLIKELY
Military Requisitioned Sites: WW1 and WW2	During WW1 and WW2 many private properties were requisitioned by the War Office for military use, including training.	SAA, regular army LSA and Home Guard specific weapons / ammunition.	POTENTIALLY SIGNIFICANT
Pipe Mines and Conventional Minefields: WW2	Pipe mines and improvised mines at military bases. Conventional minefields at beaches and some Nodal Points.	Canadian pipe mines, various British landmines (AT and AP) and IEDs.	INSIGNIFICANT





RAF and USAAF Crash Sites	Numerous British and American aircraft crashed in the UK, chiefly during WW2. Munitions and ammunition not always fully recovered.	Various conventional air-delivered ordnance (bombs and rockets) and machine gun / autocannon ammunition.	POTENTIALLY SIGNIFICANT
Home Guard Activity: WW2	Volunteer army tasked with home defence during WW2. An armed branch of the British Army. Battalions were active in all British counties.	SAA, regular army LSA, Home Guard specific ammunition e.g. 29mm Spigot Mortar, 3-inch Smith Gun, No.73, No.74, No.75 and No.76 grenades, etc.	UNLIKELY
Anti-Aircraft Weaponry: WW1 and WW2	Light AA (machine gun and autocannon), Heavy AA (QF guns), and ZAA (rocket projectors).	SAA, autocannon shells (20mm, 37mm, 40mm), QF shells (3, 3.7, 4.5-inch), UP rockets (2 and 3-inch).	POTENTIALLY SIGNIFICANT

TABLE 6: Sources of Potential Domestic Explosive Ordnance

## 7.2 RAF Lavendon - Practice Bombing Range

In 1944, the Air Ministry established a practice bombing range (RAF Lavendon) within the Site boundary. This range was exclusively for use with locally based squadrons of the United States Army Air Force (USAAF).

The original Air Ministry plan / drawing of the bombing range danger area and associated structures is not held by any of the relevant archives. However, alternative research has located some details. The range comprised a standard triangular target marker at the centre of a 600-yard radius danger area. The danger area extent was marked out by two quadrant markers. The range extent is illustrated at **FIGURE 5**. Additional features include a concrete direction arrow (to the south), a range observation building, and several Nissen huts. The range was operational from April 1944 (at the latest) to 1945.

RAF Lavendon was one of numerous small, inland practice bombing ranges established by the Air Ministry for temporary (largely wartime) use. Due to the relative close proximity of villages, live ordnance was strictly forbidden at such ranges. Instead, practice bombs (largely inert) were utilised. Note, the 'Bombs over Bucks' map records wayward USAAF practice bomb strikes in the parishes of Lavendon and Olney, well away from the range target.

The 1946 aerial photograph exhibits linear 'tail-like' ejecta features within the bombing range field. This was likely caused by USAAF practice bombs breaking apart on impact, with the sand fill strewn across the ground in one direction.

An official Ministry of Agriculture & Fisheries record (dated October 1945) lists Lavendon as a practice bombing range recommended for derequisitioning. And an Air Ministry report (dated December 1945) states that the bombing range was derequisitioned except for a small area, by this date (see **FIGURE 6**).

Note, a small number of WW2 bombing ranges in England were designated as locations where Allied aircraft returning from the continent could safely jettison any surplus live bombs before returning to base. RAF Lavendon does not appear to have been one such range.

## 7.3 Explosives Demolition Ground

The aforementioned December 1945 Air Ministry report alludes to the immediate post-WW2 use of RAF Lavendon and the origin of most of the ground disturbance features visible on the 1946 aerial photograph. Although detailed research has located only cursory references to this post-war use, it is known that between late 1945 and December 1947, the War Office (the government department responsible for the British Army) utilised the former bombing range as a disposal site for surplus ammunition / munitions.

The specific types of ammunition handled / disposed of on Site post-WW2 are unknown. However, as it was a War Office site, it can be assumed that EO of British Army origin was processed here, i.e. WW2-era land service ammunition (LSA) and small arms ammunition (SAA).





One disposal option involved devices being cut open and the HE fill steamed out (melted) during a controlled burn. This would not have resulted in significant EO contamination of soil. The crater features visible on the 1946 aerial photograph confirm that controlled explosions were used. These explosions will have deposited large quantities of inert 'EO scrap' metal (much of which would have been tiny fragments) over adjacent fields. There is also the possibility that some EO was only partially destroyed (still potentially hazardous) or corners were cut and EO was simply buried to speed up the process. Note, examples of the latter option have been found in recent years (through EO finds) at similar sites in the UK.

## 7.4 Home Guard Activity

As the original operational records (including defence scheme documentation) of the local HG battalion are unavailable, the day-to-day activities of local HG troops are unknown and therefore commentary on any potentially significant activities is limited.

However, it can be said that as no defensive stop-lines, perimeter defences (associated with a fortified urban area or vital point) or areas that could have been requisitioned as ad-hoc live firing ranges were situated nearby, significant HG activity is highly unlikely to have affected the Site.

It is conceivable that HG soldiers accessed the Site during armed patrols, especially during 1940 and 1941 when the invasion threat was highest. However, patrols would not have involved / required LSA (e.g. grenades), with only live SAA (a low hazard EO variant) for rifles and sidearms being carried.

Training exercises in open countryside (not within an established training area) typically involved blank SAA and battle simulants (e.g. smoke grenades and pyrotechnics), neither of which pose a significant EO hazard. Therefore, although the possibility that such items were accidentally dropped or intentionally discarded on Site cannot be discounted, the potential EO hazards involved are low.

## 7.5 Aircraft Crash Sites

On the 6<sup>th</sup> October 1944 a Vickers Wellington X (medium bomber aircraft) serial No: LN536 of No.12 OTU (Operational Training Unit) based at RAF Chipping Warden crashed locally at 22:45hrs with the loss of all six crew on board. The aircraft experienced an engine fire and exploded above Lavendon village with most of the wreckage falling about half a mile from the village (precise position not known). For some time, no one could approach the wreckage because of exploding ammunition.

As the Site's southeast extent was situated approximately half a mile from the village, it is conceivable (although unlikely) that the wreckage fell here, however the likelihood that this OTU aircraft was carrying live bombs at the time is very low. The aforementioned ammunition was almost certainly SAA or practice bombs.

On the 21<sup>st</sup> January 1957 a de Havilland Vampire crashed in a field close to Lower Farm, Lavendon (southeast extent of the Site), however as this trainer aircraft was on a navigational exercise at the time, it is highly unlikely to have been carrying live EO.

## 7.6 British Anti-Aircraft Weaponry

### 7.6.1 WW1

AA artillery was in its infancy during WW1 and therefore British AA gun deployments were on a far smaller scale than during WW2. Initial activity saw guns installed on top of some buildings and at other key facilities in London and Kent during 1914. By the end of WW1, the London Air Defence Area comprised 286No. guns.

London was the most heavily defended region. Some other cities were defended; however Kent had the most AA batteries outside of the capital. Note, many of Britain's AA guns were not static. Single guns were mounted on trucks and moved around. RN installations also received protection. At the beginning of the conflict, 58No. guns were distributed between naval facilities at Dover, Harwich, Liverpool, the Tyne and the Humber.





The 3-inch QF gun was the mainstay of British AA artillery. UX 3-inch shells typically landed between 8km and 10km away. The smaller calibre 1-Pounder QF autocannon was also used in the LAA role.

### 7.6.2 WW2

During WW2, the British Army's AA Command utilised three types of AA weapon for home defence: heavy AA (HAA) guns, light AA (LAA) guns, and Unrotated Projectile (UP) rocket projectors. From 1940 to 1945, BD units dealt with approximately 7,000No. UX AA projectiles in the UK, however such UXO is still unearthed today.

- ▶ **HAA Guns:** The vast majority of HAA guns (3.7 and 4.5-inch calibre) were deployed in static batteries of between four and eight guns. HAA batteries were used to engage bombers at high altitudes and were the main constituent of most city's (and some town's) Gun Defence Area (GDA). Mobile gun mounts were also available for temporary deployments to key military and civilian targets. Note, a very small number of British 5.25-inch guns were deployed from 1942 onwards, as well as batteries of US Army 90mm guns during 1944.

Some 2,000No. of these guns were available during the 1940 / 1941 Blitz. GDAs could expend vast quantities of ammunition during each engagement. The most numerous 3.7-inch gun variant had a firing ceiling of approximately 9km. Although a number of factors will have affected the range of falling UX shells, most typically landed 10km to 15km away. Note, greater distances were achievable.

- ▶ **LAA Guns:** Smaller calibre guns (machine guns, 20mm and 40mm autocannon) were used for point (individual target) defence of strategic targets / vulnerable points (VPs). At the time, government policy mandated that (where possible) every VP should be protected, however in reality, a chronic shortage of effective LAA guns (autocannon) during the early years meant that only priority VPs received adequate protection. These smaller guns were easily transportable, and LAA regiment deployments were often temporary. British WW2 40mm guns had a firing ceiling of approximately 7.1km. Although a number of factors will have affected the range of falling UX shells, most typically landed <10km away.

- ▶ **ZAA Rockets:** A ZAA battery comprised a grid of typically 64No. UP rocket projectors firing single and (later) multiple 2-inch (UP-2) and 3-inch (UP-3) rockets in a volley, creating a 'box of effect' at preselected altitudes. Although a number of factors will have affected the range of falling UX rockets, they typically landed within 10km of the battery.

Prototype ZAA weapons were fielded in late 1940 and deployed in cities around Britain from 1941. However, they were only deployed in significant numbers after the initial nine-month Blitz campaign had ended. Consequently, ZAA batteries saw far less action than AA guns. By the end of the war, >50No. ZAA batteries were operational across Britain.

### 7.6.3 Site-Specific

- ▶ No static AA gun batteries were established within firing range of the Site during WW1 and the likelihood of temporary mobile AA gun deployments to the local area is low. The associated UXO risk to the Site can be discounted.
- ▶ 2No. HAA gun batteries (totalling at least eight gun emplacements) were established within firing range of the Site during WW2. However, as local Luftwaffe activity was infrequent and low intensity, these guns almost certainly expended an insignificant quantity of ammunition.
- ▶ No LAA gun sites armed with significant weapons (20mm or 40mm calibre autocannon) were deployed within firing range of the Site during WW2. Three local military airfields will almost certainly have relied solely on machine guns for LAA defence, with the associated ammunition (SAA) posing no UXO hazard.
- ▶ No ZAA rocket batteries were active within firing range of the Site during WW2.





## 7.7 Explosive Ordnance Hazards Overview

### 7.7.1 Introduction

The following subheadings detail the EO hazards most likely to be relevant to the study area. Note, this is not an exhaustive list of potential local EO contaminates.

### 7.7.2 Artillery Projectiles: Anti-Armour and Anti-Aircraft

AT guns, AA guns, and howitzers have been in use with the British Army for over a hundred years. The former ranged from the Ordnance QF 2 Pounder (40mm) to the Ordnance QF 17 Pounder (76mm) in calibre. The latter ranged from the Ordnance QF 25 Pounder (87.6mm) to the BL 60 Pounder (127mm). HAA gun calibres are medium. Note, from 1942 / 1943, many HG units were armed with a variety of small / medium calibre AT guns.

A wide variety of artillery projectiles have been deployed in the UK historically, by British and allied nation armies. In general, projectiles fall into two categories; shot and shell. The former are inert; solid metal projectiles containing no hazardous element, whereas the latter are hollow (like bombs), containing a variety of potentially hazardous fills.

Solid shot falls into four categories, mainly for gun proofing, target practice, and AT use, however as they are inert they are relatively irrelevant with regards to present day UXO risk. Historically, there were three types of WW2-era British artillery shell:

- ▶ **Bursting Type** - The filling (or part of it) caused the shell to burst. The most common filling was HE where the shell caused damage to material by the force of the burst or to personnel and aircraft by fragmentation of the shell casing producing shrapnel. WW2 HAA shells were of the bursting type. Note, bursting shells were also used with chemical fillings.
- ▶ **Shrapnel Type** - These usually burst in the air and projected their 'payload' forwards acting like a shotgun. The usual payload was shrapnel bullets however Thermite 'pots' were used during WW1. By the start of WW2 shrapnel shells were obsolete for field artillery.
- ▶ **Carrier Type** - These also burst in the air, however ejected their payload backwards after blowing the base plate off the shell. The most common fills used were smoke, star and flare shells. The latter two being designed to illuminate an area or target. Smoke shells were used to produce smoke screens and used various fillings (the most common being white Phosphorus).

Artillery projectiles were always painted, this protected the steel from rust but was also used to indicate the nature of the ammunition. The basic body colours for artillery were; Yellow (HE), Light Green (smoke), Black (Flare / Star) and Grey (chemical). Note, artillery shell fuzes found on their own can also represent a hazard. Although small, such items can contain enough HE to cause serious injury if mishandled.

With regards to HAA shells, British mechanical time-delay and barometric pressure fuzes of WW2 were poorly designed, resulting in high HAA ammunition failure rates (around 30%) during 1940 and 1941. By 1944 however, new fuzes had reduced the rate to approximately 2%.

Unlike bombs, AA shells were not designed to strike the ground nose first and therefore UX AA shell strikes on soft ground did not always create recognisable circular entry holes. This, combined with their lower mass (compared to a UXB) resulted in shallower ground penetration depths, typically <1.0m bgl in soil. Although, in very soft / saturated ground, UX HAA shells were observed to penetrate to >1.5m bgl.

Data sheets detailing examples of this EO type are displayed at **APPENDICES 2 and 3**.





### 7.7.3 Grenades

Grenades are the most commonly encountered type of WW2-era British LSA in the UK. Other types of LSA include mortars, artillery projectiles (e.g. AT guns), infantry rocket systems and mines (AP and AT).

Hand grenades and rifle (projected) grenades are small devices with a delay fuze that detonates three to five seconds after initiation / launch. They are divided into two categories, explosive (fragmentation or blast) and carrier. The latter are used for signalling (smoke) and incendiary (chiefly white phosphorus for AP and AT use).

A wide variety of grenades have been deployed in the UK historically. The first modern British fragmentation grenade (the Mills Bomb) was used from 1915 onwards, with later models used well into the post-WW2 period. Consequently, this model accounts for the majority of UX grenade finds in Britain. A Mills Bomb (the No.36 grenade in British service) is approximately 95mm x 61mm and contains approximately 71g of HE.

Another common UK grenade find is the No.76 Self-Igniting Phosphorus (SIP) grenade. These cheap and simple devices comprised a glass bottle (152mm x 63mm) containing a composition that reacts with air (when broken) creating an intense white phosphorus incendiary effect (burns hazard). They equipped most HG units during WW2.

Data sheets detailing examples of this EO type are displayed at **APPENDIX 3**.

### 7.7.4 Mortars

A mortar is a compact infantry support weapon that fires a projectile (mortar bomb) in a high-arching ballistic trajectory, at low velocity. The first British mortars were used during WW1.

A mortar bomb / round is usually tear-drop shaped or cylindrical, nosed-fused and fitted with its own propelling charge. A small tail fin assembly stabilises the round in flight and a 'spigot tube' containing the propellant charge is screwed or welded to the base of the round.

During WW2, the 2-inch and 3-inch calibre mortars were the most commonly used by the British Army. These systems utilised several different types of ammunition (HE, smoke, illumination, signal, chemical and drill). The most commonly deployed round (the 2-inch HE variant) weighed approximately 1kg, 200g of which was the HE bursting charge. As such, mortars pose a hazard similar to grenades.

Data sheets detailing examples of this EO type are displayed at **APPENDIX 3**.

### 7.7.5 Autocannon Shells (LAA)

In Britain, two types of autocannon were used in the LAA home defence role by the Royal Artillery and later the RAF Regiment, the Hispano (20mm calibre) and Bofors (40mm calibre). These guns are similar to machine guns, however fire larger calibre rounds at a lower rate of fire (<750 rounds / min and 120 rounds / min, respectively).

Although cannon ammunition looks similar to SAA, these larger projectiles incorporate a small, simple impact fuse and hazardous charge. 20mm projectiles were typically 41mm in length and included a 6g - 11g HE and / or incendiary composition charge. 40mm projectiles were typically 130mm in length and included a 70g HE charge. Although small, when compared to artillery shells, each projectile still has the potential to cause serious injury.

Most WW2 autocannon ammunition incorporated a self-destruct mechanism, detonating the projectile after five seconds if no impact occurred. This resulted in less collateral damage and far less unexploded shells falling back to earth. If this mechanism failed, a UXO strike would occur at ground level.

Data sheets detailing examples of this EO type are displayed at **APPENDIX 2**.





### 7.7.6 Small Arms Ammunition

SAA (or bullets colloquially) is primarily cartridge-type ammunition with a calibre of <20mm. Each 'round' comprises a cartridge case, projectile (bullet), propellant and primer. Side arms (pistols), rifles and light to heavy machine guns utilise SAA.

Generally, SAA poses a relatively low EO hazard due to the small amount of explosive contained within the cartridge case and the low sensitivity / stable nature of the complete round. Although a cache of unspent rounds subjected to high temperatures (e.g. fire) could function and create a hazard.

Expendable SAA (the projectile) is almost always solid shot, i.e. inert. Note, During WW1, experimental incendiary and explosive .303-inch SAA saw limited use with the Royal Flying Corps and the RAF. Consequently, such SAA encounters today are very rare.

In the UK, the most commonly encountered historic SAA is .303-inch calibre. This was the standard cartridge used by British and Commonwealth armed forces from 1889 until the 1950s. However, many other calibres have been deployed in the UK by British and Allied forces.

### 7.7.7 USAAF Practice Bombs

During WW2, the USAAF used larger practice bombs than the RAF. By far the most numerous type was the Mk38A2 model, weighing 100lb. This sand filled bomb was painted blue and incorporated two different types of spotting charge, for day or night training. The M1A1 spotting charge (night training) included 3lb of black powder, whereas the M3 spotting charge (day training) comprised a ~2.3lb dark smoke emitting composition with a small (425 grains) black powder igniter. The M85 bomb used the same casing as the Mk38A2 model, however with a concrete filling.

There were several other smaller practice bombs (cluster / sub-munitions) for more specialist training, e.g. the M71 parachute fragmentation bomb, however these were used in small numbers on UK bombing ranges. Furthermore, their hazardous charges were smaller than that of the ubiquitous Mk38A2 model. USAAF practice bombs pose a relatively low hazard due to their inert main 'charges'.

A data sheet detailing the most common WW2-era USAAF practice bomb is displayed at **APPENDIX 4**.

### 7.7.8 RAF Practice Bombs

During WW2 the RAF used two types of practice bomb. Service bomb shells loaded with water or a chalk lime solution (for high altitude training) and dedicated small practice bombs (for low altitude training). The former were inert and used in very small numbers. The latter however, although small, contained hazardous material. There were four sizes, 8.5lb, 10lbs, 11.5lbs and 25lbs. The smoke-filled variant was used for daylight practice with the flash (explosive) filled variant for night. Post-war finds indicate that the smoke type of bomb was more commonly deployed.

The flash bombs only contained a 1lb black powder (a type of low - not high - explosive) charge which although small is nevertheless still potentially dangerous, if handled incorrectly. The smoke bombs contained a liquid that poses a corrosive chemical hazard. Note, both bombs also contained a very small explosive detonator.

A data sheet detailing WW2-era RAF practice bombs is displayed at **APPENDIX 5**.





## 8 Explosive Ordnance Migration

### 8.1 Introduction

Any fill material deposited on a site is unlikely to be contaminated with EO, as the material will have experienced excavation, transport, and processing during which any large objects are likely to have been observed and removed. However, EO encounters within such material do occur, confirming that items can be missed.

One known reason is WW2 Blitz rubble. The Blitz resulted in vast quantities of bombsite rubble. This material was put to use in a variety of ways. >750,000 tonnes of London's rubble were used to build runways for new military airfields and Liverpool's rubble was used to create and maintain flood defences throughout Merseyside. Blitz rubble was also commonly used for smaller scale construction works, immediately following WW2.

In 2010, two German HE UXBs were encountered in, what was later identified as, Blitz rubble at a Plymouth building site. Such incidents are rare however, and such contamination is much more likely to take the form of smaller items e.g. UX AA projectiles or UX 1kg / 2kg German IBs.

### 8.2 Site-Specific

No evidence of such activity found. It is highly unlikely that any Blitz rubble or any other EO-contaminated material was inadvertently deposited on Site historically.

## 9 Local Explosive Ordnance Encounters

### 9.1 Introduction

Even if research does not identify potential sources of EO contamination at a given site, knowledge of a recent EO encounter in the vicinity could indicate an elevated risk at that site. EO encounters on civilian land are often reported in the media and therefore a web search of media outlets was carried out.

### 9.2 Site-Specific

#### 9.2.1 Archaeological Magnetometer Survey

Prior to the aforementioned archaeological trenching works, an archaeological non-intrusive magnetometer survey of the Site was carried out, which modelled numerous ferrous anomalies as potential EO items (see survey results map displayed at **FIGURE 7**). The area of highest density was the field containing the former explosives disposal ground / the practice bombing range target and its environs. Numerous sporadic potential EO anomalies are plotted throughout the wider Site.

#### 9.2.2 Intrusive Archaeological Survey

EO risk mitigation measures were employed in support of these recent ground works, provided by a UXO risk management contractor. In addition, prior to ground works commencing in the fields around the former explosives disposal ground, an EOD engineer carried out a surface search. The results of both these activities were shared with IAL and are summarised below.

#### 9.2.3 Walk Over Survey

The search area (divided into four sections, Areas 1 to 4) is illustrated at **FIGURE 8**. The field containing the former explosives demolition ground and practice bombing target marker (Area 3) was found to be heavily contaminated. Numerous items were found on the surface.





**Items found:**

- ▶ 71No. ANM-104 fuzes (USAAF bomb component)
- ▶ 5No. ANM-103 fuzes (USAAF bomb component)
- ▶ No.1 Mk221 fuze (USAAF bomb component)
- ▶ 2No. arming vanes (USAAF bomb component)
- ▶ 2No. pieces of (destroyed) British Army mortars - one smoke type, one HE type
- ▶ 3No. British RAF 4lb IB nose weights (bomb component)

**Key Findings:**

All EO / EO-related items found were free from explosives.

Areas 2 and 3 showed the greatest surface contamination.

Over 90% of surface EO related contamination was the AN-M104 nose fuze.

All AN-M104 fuzes identified had safety pins fitted and showed signs of being part of a bulk demolition.

The safety arming pins and arming cups on the fuzes remained intact, suggesting the items were part of a demolition rather than being dropped from the air and armed, as originally intended. The only exception was the MK221 nose fuze, where both the arming cup and internal components were missing, making it impossible to determine the mechanism of detonation.

Strong magnetometry signals detected throughout the search area indicate significant subsurface contamination.

#### 9.2.4 EOD Engineer 'Watching brief'

The contractor provided an EOD engineer 'watching brief' service during archaeological trenching within Areas 1, 2 and 4, as well as a few other fields surrounding Areas 1 to 4. It was decided that no archaeological excavations should be carried out within Area 3, due to this being an especially high threat area (i.e. significantly elevated likelihood of encountering intact items of British LSA and potentially other munitions).

Over 50No. USAAF practice bombs were unearthed during the very shallow depth excavations. The positions of the most numerous EO type (USAAF practice bomb - type Mk38A2) are plotted at **FIGURE 8**. Note, a few more of this EO type were found during trenching in the other fields.

**Key Findings:**

All Mk38A2 bombs uncovered were very heavily corroded, with many disintegrating during investigation.

All Mk38A2 bombs uncovered had no residual black powder charge. Presumably they either functioned as intended or for any UXBs, corrosion resulted in expose of the powder to moisture.

It would be assumed that Area 3 (the field containing the WW2 practice bombing target marker) would have the highest density of practice bombs.





## 10 Site-Specific Risk Assessment

### 10.1 Introduction

Two key Site-specific considerations must be assessed, the likelihood of an EO linkage (source-pathway-receptor) becoming complete and the severity of the resulting consequences. The 'likelihood' consideration itself is a function of the likelihood of contamination, the degree of subsequent risk mitigation (if any), the likelihood of encounter and the likelihood of initiation. These factors (in relation to the Site) are assessed at **Headings 10.2 to 10.5**.

### 10.2 The Likelihood of Contamination

#### 10.2.1 Hazard Items

The table below details the most common EO types encountered in the UK today. The / those EO type(s) relevant to the study area (the Site-specific hazard item / items) are:

- ▶ USAAF practice bombs (possibly also RAF practice bombs)
- ▶ British LSA
- ▶ British SAA
- ▶ German UXBs
- ▶ British AA shells

Note, as a few components of WW2 RAF 4lb IBs have been found on Site (on the surface of the former explosives demolition ground), it is likely that other similar finds and the possibility cannot be completely ruled out that live RAF munitions remain buried here today.

EO Type	NEQ or Incendiary Hazard	Likely Contamination Depth	Hazard Class
German HE 'iron' bombs	25kg to 220kg HE (most common) 530kg to 990kg HE (least common)	Deep (3.0m to 10.0m+)	Very High
German 41kg and 50kg Incendiary 'iron' bombs	13kg incendiary composition or 7kg HE	Shallow / Deep (2.0m to 6.0m)	High
British HE HAA Shells and Rockets	1.1kg - 2.2kg HE	Shallow (0.5m to 2.0m)	
Some British HE Land Service Ammunition	1 - 2kg HE	Very Shallow (<1.0m)	
Some British HE Land Service Ammunition	<1kg HE	Very Shallow (<1.0m)	Moderate
German 2kg Incendiary + HE Bombs	680g thermite (incendiary) + 100g HE	Very Shallow (<1.0m)	
German 1kg Incendiary Bombs	680g thermite	Very Shallow (<1.0m)	Low to Moderate
British HE LAA Autocannon Shells	4g to 70g HE and / or incendiary composition	Very Shallow (<0.5m)	
British Small Arms Ammunition	Small quantity of black powder. Inert projectile or <1g incendiary composition	Very Shallow (<0.5m)	Low

TABLE 7: Most Common Hazard Items





## 10.2.2 Subsequent Detection

There are many variables that affect the likelihood that a German UXB or British UX AA projectile strike was detected and reported, either as it fell to the ground or subsequently. Accurately assessing the precise conditions that existed at a given site >75 years ago is problematic. The most pertinent variables are addressed below.

Historic Ground Cover	
Risk Elevating Ground Cover	Site-Specific Comment
<b>Bombsite:</b> a UXO strike to a building in ruin will likely have remained undetected. The entry hole of a UXB will have been easily obscured under the rubble / debris. However, a small UX AA projectile or UX 1kg / 2kg IB may not have achieved ground penetration, instead coming to rest within the rubble.	n/a
<b>Water:</b> UXO landing in a stream, canal, river, pond, lake, or the sea would have been immediately lost beneath the waterline and would not have resulted in any persistent evidence of its incidence.	n/a
<b>Soft / Waterlogged / Unconsolidated Ground:</b> a UXO entry hole within marshland, tidal riverbank sediment, tidal coastal sediment / sand dunes, etc will have closed up / collapsed relatively soon after it occurred.	No evidence found.
<b>Dense Vegetation:</b> Peripheral unmaintained vegetation or woodland in an urban location. Or rural forest, heathland, etc. A UXO entry hole within inaccessible vegetation could have been overlooked.  Note, WW2-era woodland obscures the view of the ground cover beneath and therefore it must be assumed that vegetation exists beneath the canopy.	No significant quantities.
<b>Arable Land:</b> a field under dense crop growth or ploughed soil. A UXO entry hole within this dense foliage or broken soil could have been overlooked.	The whole Site.
Risk Reducing Ground Cover	Site-Specific Comment
<b>Undamaged Building / Structures:</b> any UXO strike would have caused substantial damage and incontrovertible evidence of the incident.	One farmstead. WW2 condition unknown.
<b>Undamaged Hardstanding:</b> A UXO strike on historic hard surfacing (roads, pavements, commercial yards, etc) would have created an easily recognisable entry hole.	n/a
<b>Maintained Grass Lawns:</b> a grass lawn known to have been in use throughout WW2 and therefore subject to regular grounds maintenance, e.g playing fields, parkland, sports pitches, golf course fairways.  A UXO strike would have created an easily recognisable entry hole.	n/a
Less Easily Assessed Ground Cover Types	Site-Specific Comment
<b>Waste / scrap / aggregate etc storage area:</b> a UXO strike to a heap of unconsolidated material could have collapsed / become obscured. However, if the ground cover beneath was hard surfaced, a large UXB entry hole could have been subsequently observed and reported.	n/a
<b>Wasteland:</b> the ground cover on such land may not be easily identifiable. Weed-covered bare earth or broken up made ground could conceivably obscure a UXO entry hole. Alternatively, a UXO strike to hard unvegetated earth could have been recognisable.	n/a
<b>Railway Tracks:</b> a small UXO entry hole within unconsolidated track ballast material in between tracks could conceivably have collapsed. Alternatively, a large UXB strike to rail track would have caused obvious damage.	n/a





**Quarry:** clay pit, gravel pit, etc. The type and condition of the ground cover might not be easily identifiable. Note, disused quarries could easily become flooded.

n/a

TABLE 8: Historic Ground Cover

Historic Site Occupancy and Access	
UXO Observed as it Occurred	Site-Specific Comment
<p><b>Air Raid Timing:</b> If most local air raids occurred during the hours of darkness, there is a greater chance that any UXO fall occurred unobserved.</p> <p>If the study area only experienced daylight attacks, there is a greater chance that any UXO strike was witnessed as it occurred.</p>	The one potentially significant air raid occurred during the hours of darkness (evening).
<p><b>Population Density:</b> If the study area was sparsely populated, there is a greater chance that any UXO strike could occur unobserved.</p> <p>Within a densely populated built up area, the opposite is true. Note however, most people would have been sheltering during large scale night raids.</p>	The wider study area was sparsely populated.
<p><b>Civil Defence and Military Defence:</b> Many vital facilities (factories, dockyards, etc) had their own teams of Fire Watchers tasked with extinguishing small IBs. These observers would have also reported any UXB strikes.</p> <p>AA batteries, searchlight batteries, barrage balloon sites, and Royal Observer Corps posts. Associated personnel would have reported any UXB strikes.</p>	<p>There was a Royal Artillery searchlight battery just ~130m west of the Site. During its period of operation (timing unknown), the military personnel based here would have been on stand-by every night, throughout the night to engage any Luftwaffe aircraft. Therefore, any bombs dropped locally (including UXBs) will almost certainly have been witnessed and reported.</p> <p>Note, as bombing range became operational after all local air raids had occurred, this establishment and its personnel are irrelevant.</p>
<p><b>Civil Defence Requisition:</b> many schools, churches and other public buildings in frequently bombed areas were requisitioned by Civil Defence for use as first aid posts, reception centres and canteens for bombed out civilians. Such buildings were therefore in use during night raids.</p>	n/a
UXO Subsequently Observed	Site-Specific Comment
<p><b>Bomb Damage:</b> If substantial bomb damage occurred, parts or all of a site would have been abandoned for the remainder of the war. Any subsequent evidence of a UXO strike is more likely to have remained unobserved for a significant period.</p>	n/a
<p><b>Site Occupancy:</b> If a site was occupied by buildings that survived the war intact, it likely remained inhabited or in use during the bombing campaign. Probably accessed on a daily basis, evidence of a UXO strike is highly unlikely to have gone unreported. Undeveloped sites could have been neglected for significant periods. Any UXO is more likely to have remained unobserved and gone unreported.</p>	The Site will have only experienced infrequent accessed (agricultural activities) between 1940 and 1943.
<p><b>UXB Searches:</b> the Luftwaffe used delayed-action (DA) bombs, designed to detonate up to 72hrs after impact. As a result, ARP wardens, residents and workers often carried out specific searches for DA / UXB entry holes within the environs of their buildings, following local raids. Undeveloped isolated land is unlikely to have been searched.</p>	The Site would not have been routinely / regularly searched for UXB entry holes throughout WW2.

TABLE 9: Historic Site Occupancy and Access





### 10.2.3 Site-Specific Conclusion

#### **British EO:**

Only practice bombs (low hazard EO variant) were authorised for use at RAF Lavendon, partly due to its close proximity to a village. Although official RAF records report occasions when inexperienced USAAF aircrew (newly arrived in England) accidentally released live HE bombs over the wrong bombing range, no evidence of such an incident at Lavendon was found, and as Lavendon was a practice range exclusively used by USAAF squadrons, such an incident is considered highly unlikely.

Official RAF records relating to another WW2 practice bombing range (similar to RAF Lavendon) confirm 16No. incidents of wayward practice bombs falling in and around a village up to ~1.37km east of the range target marker. This highlights the inaccuracies of WW2-era bomb aiming in Britain during training sorties. It suggests that practice bombs could conceivably have landed anywhere on Site, well beyond the perimeter of the 600-yard radius danger area. Indeed, wayward practice bomb strikes were recorded in Lavendon village during WW2. Although it can be assumed that the likelihood of such EO contamination decreases as the distance from the bombing target marker increases.

The explosives demolition ground will have seen various EO types burnt, destroyed (controlled explosions) or simply buried (unauthorised disposal). Recent experience (EO finds) at similar sites in the UK indicates that the latter option probably resulted from military personnel cutting corners to speed up the processing of huge quantities of EO in the immediate post-war period.

Controlled explosions will have deposited large quantities of inert 'EO scrap' metal (much of which would have been tiny fragments) over the demolition ground and adjacent fields. However, the possibility that some EO was only partially destroyed (still potentially hazardous) or was simply buried on land neighbouring (just outside the official demolition ground area) cannot be discounted.

The types of all EO disposed of on Site are not known. As a War Office site, one might assume that it was all of British Army origin. However, as numerous USAAF fuzes (from live bombs) have been found in this area as well as components of RAF IBs, it is likely that a wide variety of EO (British and American) was processed at this explosives demolition ground.

Although two HAA gun batteries were located within firing range of the Site during WW2, the likelihood that any unexploded AA shells fired from these batteries fell within the Site boundary, is very low.

#### **German UXBs:**

The Site experienced a low bombing density during WW2, with research identifying a single aircraft sortie incident (one or more 1kg / 2kg IB clusters) in the wider study area (500m radius from the Site boundary). However, the records do not contain the level of detail required to deduce whether this aircraft flew over the Site. Although unlikely, it is conceivable that this aircraft released a HE bomb over the Site which struck the ground as a UXB.

Had a German HE UXB been released over the Site, it could have occurred unwitnessed and the entry hole could have gone undetected. Note, the Site was isolated, infrequently accessed farmland potentially occupied by tall / dense crop growth which could obscure a UXB entry hole from view. However, the likelihood of a HE UXB strike to the Site in the first instance is low.

If the reported 1kg / 2kg IBs fell in the south of the Site, any UXBs are unlikely to have passed unnoticed. As these bombs were dropped in clusters, those IBs that functioned as designed would have created clear evidence of this type of bombing incident (burnt vegetation / scared ground), with a subsequent investigation / search by ARP wardens and farm workers almost certainly recovering all unexploded examples. That said, if dropped from a significant height, these lightweight UXBs were able to fully penetrate soft soil, leaving only a very small (easily obscured) entry hole.

It is of course conceivable that a second German aircraft flew over the local area and released a single bomb that struck the Site unwitnessed and failed to detonate, thereby leaving no recordable evidence of the air raid. However, the probability of such a scenario occurring is extremely remote.





## 10.3 Degree of Risk Mitigation

### 10.3.1 Ground Works

Ground works on an EO contaminated site could have resulted in the partial or complete removal of the buried EO threat. If EO was uncovered during intrusive ground works, the incident would have been reported and dealt with by the armed forces. Note, it is usually not possible to accurately determine the volume of soil disturbance associated with historic or even recent ground works at a given site.

### 10.3.2 Explosive Ordnance Clearance

EOC was not as effective historically as it is today. Surveys were not always undertaken to set parameters and degrees of certainty. Recent EO finds on land known to have been previously surveyed for EO confirm that older detection equipment was ineffective. Furthermore, some EOC tasks did not result in 100% clearance of all EO, by design. Magnetometer surveys can be calibrated to ignore magnetic anomalies that model under a certain mass.

A standard notice accompanying British Army EOC documentation states that 'the presence of EO can never be completely discounted. Although considered unlikely, there still remains the possibility of buried or stray [EO] items.' EOC tasks are not conducted on all MOD land prior to disposal / sale. An EOC task will only be carried out on land where there is a known risk of EO contamination, e.g. a former firing range.

IAL has access to a database of historic EOC tasks carried out by the British Army's 33 Engineer Regiment EOD (now part of 29 EOD&S Group). However, this database is only complete up until the early 2000s and only provides basic details on each task. Freedom of Information requests lodged by IAL confirm that the MOD will almost always withhold any historic EOC task documentation for civilian sites in the UK.

### 10.3.3 Site-Specific Conclusion

Ground Works: Post-WW2 / Post Military Use	Site-Specific Comment
<b>EOC Activity:</b> evidence of EOC task(s) affecting the Site. Or, is there an increased chance that the Site has experienced partial or complete EOC?	No evidence found.
<b>Phases of Development / Redevelopment:</b> How many phases of ground work have affected the Site?	None.
<b>Greenfield Land:</b> Does the Site contain any significant areas of undisturbed greenfield land?	Yes, the whole Site.
<b>Very Shallow Buried EO:</b> Have any parts of the Site experienced very shallow level soil / made ground disturbance? e.g. demolition works, soil stripping, site enabling works, minor grading, agricultural ploughing, etc.	Confirmed evidence of agricultural ploughing.
<b>Shallow Buried EO:</b> Have any parts of the Site experienced shallow level soil disturbance? e.g. grading works, strip / pad foundations, buried services installation (drainage), etc.	Unlikely.
<b>Deep Buried German 'Iron' UXBs:</b> Have any parts of the Site experienced deep level soil disturbance? e.g. bulk excavations (basement levels), dense pile layout, installation of large subsurface tanks, cut and fill, etc.	Highly unlikely.





## Conclusion

MoD responses to FOI requests confirm that they will not search for or release to the public any historic records of British Army or RAF EO clearance tasks relating to RAF Lavendon. However, as this was a practice bombing range (assumed to pose a low EO hazard), it is quite possible that no such range-wide EO surveying / clearance tasks were ever carried out post-WW2. And as the explosives demolition ground was a location where EO was disposed of, it will have been assumed that no EO contamination could have persisted after disposal activities ceased in 1947, and therefore a subsequent survey of the site by EOD engineers would have been unnecessary.

Recent aerial photographs confirm evidence of arable farming activity within the field containing the explosives disposal ground and bombing range target marker and neighboring fields. However, numerous EO-related items remain on the surface here and magnetometer surveying confirms very high density buried contamination as well. Assuming this land has been ploughing multiple times, this soil disturbance has had no risk mitigating effect.

Even if bombing range personnel did search parts of the Site for 'dud' practice bombs, the soft ground conditions may have seen such UXO fully penetrate the soil, making recovery more difficult. Any such bombs may have been simply abandoned. Note, no empirical data on the penetration depths of USAAF practice bombs is available. However, as RAF practice bombs (weighing considerably less) are known to have penetrated topsoil / surficial geology to 1.3m bgl, it can be assumed that a USAAF practice bomb could be encountered intact at greater depths on Site.

TABLE 10: The Degree of Risk Mitigation: Site-Specific Comments

## 10.4 The Likelihood of Encounter

### 10.4.1 Introduction

The likelihood of an EO encounter at a given site will vary depending on the hazard items, the EO burial depth and the type(s) of intrusive methodology employed. The greater the volume of soil disturbed within the Zone of Potential EO Contamination (ZPC), the greater the likelihood of an EO encounter.

Most domestic AXO and UXO (LSA and SAA), British UXAA projectiles and small (1kg and 2kg) German IBs will typically be encountered at very shallow or shallow burial levels (<1.0m and <2.0m). Whereas heavy German 'iron' bombs will typically be encountered at deeper levels.

The ZPC is defined as the site-specific volume of soil which could contain EO. The size of a ZPC will depend on the history of the site. At a site where the hazard items are German UXBs only, the ZPC will exist between just below WW2 ground level and the maximum BPD. Alternatively, at an active military site where the threat items are known to be British AXO only, the ZPC will exist between just below present-day ground level and approx. 1.0m bgl.

The smaller the mass of the individual EO threat item, the shallower the likely 'as found' depth, generally speaking. There are however some noteworthy exceptions regarding German 'iron' UXBs. In extreme cases, heavy UXBs can be encountered at shallow depths (see **Heading 4.2.5**).

### 10.4.2 Bomb Penetration Depth Calculations

To calculate BPDs for a given site, one must make assumptions based on the most likely bomb impact scenario:

- ▶ **Impact Velocity:** The majority of German HE bombs dropped on the UK resulted from large-scale carpet-bombing raids. These attacks were carried out at altitudes exceeding 5,000m which would have resulted in a 500kg HE UXB impacting the ground at approximately 260m/s.
- ▶ **Impact Angle:** Luftwaffe high altitude bombing resulted in bomb impact angles of 10 to 15 degrees from the vertical. Note, it will be assumed that the bomb was stable at the point of impact.
- ▶ **Bomb Design:** Some larger German bombs had metal 'Kopfrings' fitted around the nose of the bomb to limit ground penetration. It must be assumed that no such retarder units were fitted.





### 10.4.3 Site-Specific Maximum Bomb Penetration Depth

As the proposed ground works will not involve any deep level (>3.0m bgl) intrusions, a Site-specific calculation of the maximum BPD is unnecessary.

### 10.4.4 Site-Specific Conclusion

- ▶ The likelihood of encountering hazardous EO (undamaged, live devices) is probably limited to the former explosives disposal ground field and its environs - the primary area of potential concern. USAAF practice bombs could be (and have been) encountered in fields beyond this area. This secondary area of potential concern cannot be easily demarcated as it relates to wayward bomb drops by trainee air crew. It is conceivable that USAAF practice bombs could be encountered anywhere on Site.
- ▶ As numerous USAAF practice bombs have been encountered within archaeological trenches on Site, it can be assumed that all future intrusive works (even those disturbing very shallow depth soil only) would be exposed to encountering this type of EO. If a cache of complete EO devices (buried not destroyed) exists within the primary area of potential concern it would also likely be encountered at shallow depth.
- ▶ If a German aircraft flying at average or higher altitude released even the smallest / lightest German HE UXB over the Site, it would almost certainly have penetrated the soil and geology on Site to depths beyond the reach of the planned mechanical excavations. Note, most of the Site area was underlain by topsoil and a layer of superficial Diamicton geology (almost certainly soft / unconsolidated at this shallow depth).
- ▶ If piled foundations are utilised, the likelihood of forcefully encountering / striking EO is greater due to the 'blind' nature of such intrusive methodologies. Note, during 'open' mechanical excavations an item of EO could be partially unearthed without the excavator bucket striking it. At which point, work could be halted if the suspicious object were to be spotted.

## 10.5 The Likelihood of Initiation

### 10.5.1 Introduction

The likelihood of initiating EO depends on the type of EO and how aggressively it is encountered. Various types of EO buried in the UK require an impact, vibration or heat to initiate. Most EO contains a fuze and most fuzes contain a small quantity of shock-sensitive primary explosive. An impact to a fuze can therefore cause it to initiate, in turn detonating the main explosive charge.

German UXBs buried in the UK do not spontaneously self-detonate. The vast majority of German WW2 'iron' bombs contained an electrical fuze. Decades of burial (exposure to environmental conditions) will have caused these fuzes to corrode and lose their electrical charge. Consequently, during any such UXO encounter, it would be almost impossible for the fuze to initiate via its original (electrical) explosive train.

In theory, German UXBs could still initiate if the bomb were impacted with enough force. Percussive piling and bore-holing are engineering works that could impart enough force to detonate the main explosive charge of an EO, without requiring the fuze to function. Furthermore, the 'blind' nature of these intrusions elevates the likelihood of an EO impact.

Excavators and loaders impart less energy via their buckets and site workers might be able to notice a partially unearthed EO and halt works prior to an impact. For these reasons, IAL conducts separate risk rating calculations for different intrusive methodologies.

During WW2, the Allied air forces used mechanical (not electrical) fuzes, which pose a greater long-term UXB hazard on the continent. Furthermore, in Germany, 1No. buried Allied WW2 HE bomb per year (on average) self-detonates due to degradation of the chemical detonator in its time-delay fuze.

Sensitive types of EO include German 2kg (mechanically fuzed) 'Butterfly' bombs, types of British (mechanically fuzed) unexploded LSA ('blind' / 'dud' items), and bombs with chemical time-delay fuzes.





### 10.5.2 Site-Specific Conclusion

- ▶ There is no reason to believe that the Site-specific hazard items are more sensitive to an initiation when compared to similar EO contamination elsewhere in the UK.
- ▶ It has been demonstrated that the USAAF practice bomb contamination on Site does not pose a significant hazard. Furthermore, this type of device did not contain a significant quantity of HE or any other very hazardous substance. Striking the corroded remnants of these practice bombs during ground works will not cause an initiation / detonation event of any consequence.
- ▶ However, if during piling works or mechanical excavations, a cache of live, undamaged EO were to be encountered within the primary area of concern, the likelihood of an EO initiation would be significantly elevated. Note, some types of WW2-era British LSA were part constructed of glass and therefore especially sensitive. Such a scenario would also raise the possibility of additional sympathetic explosions - a chain reaction of initiations due to multiple / numerous devices in close proximity.

## 11 The Historical Record: Extent and Accuracy

### 11.1 Introduction

The availability of key documents and data will affect the completeness and accuracy of the Site-specific risk assessment. Furthermore, historical records can sometimes be proven inaccurate, when compared with other records. Some inaccuracies could significantly affect the outcome of a risk assessment and therefore a Site-specific review must be conducted.

### 11.2 Site-Specific

Inconsistencies between the bombing records have been identified and some incident records are incomplete. However, a sufficient picture of local bombing incidents has likely been identified. IAL is confident that an accurate German UXB risk assessment can be performed.

Although gaps have been identified, the quality of the historic record relating to USAAF and British military activity in the local area is deemed sufficient to confidently draw conclusions. IAL is confident that an accurate British / Allied EO risk assessment can be performed.





## 12 Site-Specific Risk Calculation

### 12.1 Introduction

The first stage of the semi-quantitative risk model considers potential sources of buried EO on Site. The next stage evaluates the possible linkages, identifying whether significant harm could occur (as a result of the proposed Site works) and the impact of such harm. To provide a numerical evaluation of risk, the two key considerations must be assigned a score and then multiplied together to provide a final risk rating / risk level:

- ▶ The likelihood of an EO linkage becoming complete: **FACTOR 3** (= Factors 1 x 2)
- ▶ The severity of the consequence(s) resulting from this linkage completion: **FACTOR 6** (= Factors 4 x 5)

### 12.2 Factor 1 (F1): Explosive Ordnance Presence

The Likelihood of EO contamination of the Site combined with the degree of subsequent risk mitigation. This factor is described and scored in the table below.

Classification	Example Descriptions	F1 Rating
<b>Impossible</b>	No EO contamination due to complete subsequent excavation / removal of the ZPC.	<b>0</b>
<b>Highly Unlikely</b>	EO contamination is highly unlikely to have occurred. Most of the ZPC subsequently excavated or EOC task(s) have been conducted.	<b>1</b>
<b>Unlikely</b>	EO contamination is unlikely to have occurred. Part of the ZPC subsequently excavated or EOC task(s) have been conducted.	<b>2</b>
<b>Possible</b>	EO contamination could have occurred. Part or none of the ZPC subsequently excavated.	<b>3</b>
<b>Likely</b>	EO contamination is likely to have occurred. Only a fraction or none of the ZPC subsequently excavated.	<b>4</b>
<b>Almost Certain</b>	Confirmed evidence of local EO contamination. Greenfield land / ZPC remains undisturbed.	<b>5</b>

TABLE 11: Factor 1 Scoring

### 12.3 Factor 2 (F2): Explosive Ordnance Initiation

The likelihood of encountering EO during the proposed works combined with the likelihood of initiating EO during the proposed works. This factor is described and scored in the table below.

Classification	Example Descriptions	F2 Rating
<b>Impossible</b>	The ZPC will not be disturbed during the proposed ground works.	<b>0</b>
<b>Highly Unlikely</b>	Fraction of the ZPC will be intruded / excavated. Hand-dug trial pits. Vegetation clearance / soil stripping. Hazard items include relatively insensitive EO.	<b>1</b>
<b>Unlikely</b>	Part of the ZPC will be intruded / excavated. Mechanically excavated trial pits. Shallow excavations for traditional foundations. Piling or boreholes. Hazard items include relatively insensitive EO.	<b>2</b>
<b>Possible</b>	Moderate to high intrusion / excavation of the ZPC. Large-scale shallow excavations for traditional foundations. Single basement level construction. Piling or boreholes. Hazard items include relatively insensitive and possibly sensitive EO.	<b>3</b>
<b>Likely</b>	Most of the ZPC will be excavated. Multi-level basement construction. Large scale piling works (including percussive piling). Hazard items include sensitive EO.	<b>4</b>
<b>Almost Certain</b>	Almost the entire ZPC will be excavated. Multi-level basement construction. Large scale piling works (including percussive piling). Hazard items include highly sensitive EO.	<b>5</b>

TABLE 12: Factor 2 Scoring





## 12.4 Factor 3 (F3): Calculating the Likelihood of an Explosive Ordnance Initiation Event

The table below includes the calculations of 'Likelihood' and descriptions of the resulting scores.

F1 x F2 = F3	Classification	Example Descriptions	F3 Rating
F3 = 0	<b>Impossible</b>	Confirmed evidence that no EO is present or no pathway to sensitive receptors present.	<b>0</b>
F3 = 1 to 4	<b>Highly Unlikely</b>	EO is highly unlikely to be present. No pathway to sensitive receptors present. Initiation of EO is highly unlikely.	<b>1</b>
F3 = 5 to 8	<b>Unlikely</b>	EO is unlikely to be present. There is an established pathway to sensitive receptors. Initiation of EO unlikely.	<b>2</b>
F3 = 9 to 13	<b>Possible</b>	EO could be present. There is an established pathway to sensitive receptors. Initiation of EO is unlikely but possible.	<b>3</b>
F3 = 14 to 20	<b>Likely</b>	EO is likely to be present. There is an established pathway to sensitive receptors. Initiation of EO could occur.	<b>4</b>
F3 = 21 to 25	<b>Almost Certain</b>	Confirmed evidence of EO contamination. There is an established pathway to sensitive receptors. Initiation of EO is likely.	<b>5</b>

TABLE 13: Factor 3 Scoring

## 12.5 Factor 4 (F4): Explosive Ordnance Event Magnitude

The potential hazard associated with each hazard item combined with the likely depth of EO initiation. This factor is described and scored in the table below.

Classification	Example Descriptions	F4 Rating
<b>None</b>	British military training device (inert).	<b>0</b>
<b>Very Small</b>	British SAA at depth. 1kg German bomb at depth.	<b>1</b>
<b>Small</b>	British LSA or HAA projectile at depth. British LAA projectile near the surface. 2kg German bomb at depth. 1kg German bomb near the surface. British SAA near the surface.	<b>2</b>
<b>Medium</b>	British LSA or HAA projectile near the surface. 2kg German bomb near the surface. Medium German 'iron' bombs at depth.	<b>3</b>
<b>Large</b>	Large 'iron' bombs at depth. Medium 'iron' bombs near the surface.	<b>4</b>
<b>Very Large</b>	Large 'iron' bombs near the surface.	<b>5</b>

TABLE 14: Factor 4 Scoring

## 12.6 Factor 5 (F5): Sensitive Receptors

The presence and sensitivity of receptors in the vicinity at the time of the proposed works. This factor is described and scored in the table below.

Classification	Example Descriptions	F5 Rating
<b>Single</b>	Plant / equipment.	<b>1</b>
<b>Few</b>	Human, plant / equipment.	<b>2</b>
<b>Medium</b>	Human, plant / equipment, buried services.	<b>3</b>





<b>Most</b>	Human, plant / equipment, buried services, buildings.	<b>4</b>
<b>All</b>	Human, plant / equipment, buried services, buildings, listed buildings, scheduled ancient monuments, protected environment (e.g. TPO).	<b>5</b>

TABLE 15: Factor 5 Scoring

## 12.7 Factor 6 (F6): Calculating the Consequence of an Explosive Ordnance Initiation Event

The table below includes the calculations of 'Consequence' and descriptions of the resulting scores.

F4 x F5 = F6	Classification	Example Descriptions	F6 Rating
F6 = 0	<b>None</b>	Contact with inert military device. No initiation event. No risk to human health or damage sustained.	<b>0</b>
F6 = 1 to 4	<b>Insignificant</b>	Very small magnitude inadvertent initiation at depth. Possible cosmetic damage to plant. No risk to human health or buildings damaged.	<b>1</b>
F6 = 5 to 8	<b>Mild</b>	Small magnitude inadvertent initiation. Possible damage to plant. Possible risk to human health (minor first aid injury).	<b>2</b>
F6 = 9 to 13	<b>Moderate</b>	Medium magnitude inadvertent initiation. Damage to plant. Possible damage to buried services. Possible cosmetic damage to buildings. Possible risk to human health (minor injury).	<b>3</b>
F6 = 14 to 20	<b>Severe</b>	Large magnitude inadvertent initiation. Severe damage to plant, buried services and buildings. Fatality and / or severe injuries.	<b>4</b>
F6 = 21 to 25	<b>Catastrophic</b>	Large magnitude inadvertent initiation. Catastrophic damage to plant, buried services and buildings (including listed buildings, scheduled ancient monuments, etc). Multiple fatalities and severe injuries.	<b>5</b>

TABLE 16: Factor 6 Scoring

## 12.8 Calculating the Final Risk Level(s)

The 'Likelihood' and 'Consequence' factors are combined in the risk matrix below to produce a final risk score.

		Consequence (F6)						Final Risk Score
		0	1	2	3	4	5	
Likelihood (F3)	5	0	5	10	15	20	25	
	4	0	4	8	12	16	20	
	3	0	3	6	9	12	15	
	2	0	2	4	6	8	10	
	1	0	1	2	3	4	5	
	0	0	0	0	0	0	0	
Final Risk Rating (score)								
0 - 1	2 - 5	6 - 9	10 - 12	15 - 16	20	25		
Very Low	Low	Low-to-Moderate	Moderate	Moderate-to-High	High	Very High		
Risk Levels								

TABLE 17: Risk Matrix





12.9 Conceptual Site Model

Risk assessment calculations have identified three risk zones, illustrated on a Risk Map displayed at **FIGURE 9**. The conceptual model is displayed in the tables below.

High Risk Table							
Hazard Item		Pathway	Receptor	Likelihood (F3)	Consequence (F6)	Final Risk Rating	Risk Level
German	HE and Incendiary 'Iron' Bombs	Mech excavations. Blast + heat + frag.	Human, Plant, Structures.	1 (F1:1 x F2:2)	4 (F4:4 x F5:4)	4 (1 x 4)	Low
		Piling. Blast + heat + frag.	Human, Plant, Structures.	1 (F1:1 x F2:4)	4 (F4:4 x F5:4)	4 (1 x 4)	Low
	1kg Incendiary and 2kg Incendiary (+ HE) Bombs	Mech excavations. Blast + heat.	Human, Plant.	1 (F1:2 x F2:2)	2 (F4:3 x F5:2)	2 (1 x 2)	Low
		Piling. Blast + heat.	Human, Plant.	1 (F1:2 x F2:2)	2 (F4:3 x F5:2)	2 (1 x 2)	Low
British / Allied	RAF and USAAF HE and Incendiary Bombs and Rockets	Mech excavations. Blast + heat + frag.	Human, Plant, Structures.	4 (F1:5 x F2:3)	4 (F4:5 x F5:4)	16 (4 x 4)	Moderate-to-High
		Piling. Blast + heat + frag.	Human, Plant, Structures.	5 (F1:5 x F2:5)	4 (F4:5 x F5:4)	20 (5 x 4)	High
	Land Service Ammunition	Mech excavations. Blast + heat + frag.	Human, Plant, Structures.	4 (F1:5 x F2:4)	3 (F4:3 x F5:3)	12 (4 x 3)	Moderate
		Piling. Blast + heat + frag.	Human, Plant, Structures.	4 (F1:5 x F2:4)	3 (F4:3 x F5:3)	12 (4 x 3)	Moderate
	Anti-Aircraft Projectiles	Mech excavations. Blast + frag.	Human, Plant, Structures.	1 (F1:1 x F2:2)	3 (F4:3 x F5:3)	3 (1 x 3)	Low
		Piling. Blast + frag.	Human, Plant, Structures.	1 (F1:1 x F2:3)	3 (F4:3 x F5:3)	3 (1 x 3)	Low
	RAF and USAAF Practice Bombs	Mech excavations. Burn or smoke.	Human.	2 (F1:5 x F2:1)	1 (F4:1 x F5:2)	2 (2 x 1)	Low
		Piling. Burn or smoke.	Human.	2 (F1:5 x F2:1)	1 (F4:1 x F5:2)	2 (2 x 1)	Low
	Small Arms Ammunition	Mech excavations.	Human.	1 (F1:4 x F2:1)	1 (F4:1 x F5:1)	1 (1 x 1)	Very Low
		Piling.	Human.	1 (F1:4 x F2:1)	1 (F4:1 x F5:1)	1 (1 x 1)	Very Low

TABLE 18: High Risk Table



Low-to-Moderate Risk Table						
Hazard Item	Pathway	Receptor	Likelihood (F3)	Consequence (F6)	Final Risk Rating	Risk Level
German  HE and Incendiary 'Iron' Bombs	Mech excavations. Blast + heat + frag.	Human, Plant, Structures.	1 (F1:1 x F2:2)	4 (F4:4 x F5:4)	4 (1 x 4)	Low
	Piling. Blast + heat + frag.	Human, Plant, Structures.	1 (F1:1 x F2:4)	4 (F4:4 x F5:4)	4 (1 x 4)	Low
	Mech excavations. Blast + heat.	Human, Plant.	1 (F1:2 x F2:2)	2 (F4:3 x F5:2)	2 (1 x 2)	Low
	Piling. Blast + heat.	Human, Plant.	1 (F1:2 x F2:2)	2 (F4:3 x F5:2)	2 (1 x 2)	Low
RAF and USAAF HE and Incendiary Bombs and Rockets	Mech excavations. Blast + heat + frag.	Human, Plant, Structures.	1 (F1:1 x F2:3)	4 (F4:5 x F5:4)	4 (1 x 4)	Low
	Piling. Blast + heat + frag.	Human, Plant, Structures.	2 (F1:1 x F2:5)	4 (F4:5 x F5:4)	8 (2 x 4)	Low-to-Moderate
	Mech excavations. Blast + heat + frag.	Human, Plant, Structures.	2 (F1:2 x F2:4)	3 (F4:3 x F5:3)	6 (2 x 3)	Low-to-Moderate
	Piling. Blast + heat + frag.	Human, Plant, Structures.	2 (F1:2 x F2:4)	3 (F4:3 x F5:3)	6 (2 x 3)	Low-to-Moderate
British / Allied  Anti-Aircraft Projectiles	Mech excavations. Blast + frag.	Human, Plant, Structures.	1 (F1:1 x F2:2)	3 (F4:3 x F5:3)	3 (1 x 3)	Low
	Piling. Blast + frag.	Human, Plant, Structures.	1 (F1:1 x F2:3)	3 (F4:3 x F5:3)	3 (1 x 3)	Low
	Mech excavations. Burn or smoke.	Human.	2 (F1:5 x F2:1)	1 (F4:1 x F5:2)	2 (2 x 1)	Low
	Piling. Burn or smoke.	Human.	2 (F1:5 x F2:1)	1 (F4:1 x F5:2)	2 (2 x 1)	Low
Small Arms Ammunition	Mech excavations.	Human.	1 (F1:2 x F2:1)	1 (F4:1 x F5:1)	1 (1 x 1)	Very Low
	Piling.	Human.	1 (F1:2 x F2:1)	1 (F4:1 x F5:1)	1 (1 x 1)	Very Low

TABLE 19: Low-to-Moderate Risk Table



Low Risk Table						
Hazard Item	Pathway	Receptor	Likelihood (F3)	Consequence (F6)	Final Risk Rating	Risk Level
HE and Incendiary 'Iron' Bombs	Mech excavations. Blast + heat + frag.	Human, Plant, Structures.	1 (F1:1 x F2:2)	4 (F4:4 x F5:4)	4 (1 x 4)	Low
	Piling. Blast + heat + frag.	Human, Plant, Structures.	1 (F1:1 x F2:4)	4 (F4:4 x F5:4)	4 (1 x 4)	Low
1kg Incendiary and 2kg Incendiary (+ HE) Bombs	Mech excavations. Blast + heat.	Human, Plant.	1 (F1:2 x F2:2)	2 (F4:3 x F5:2)	2 (1 x 2)	Low
	Piling. Blast + heat.	Human, Plant.	1 (F1:2 x F2:2)	2 (F4:3 x F5:2)	2 (1 x 2)	Low
RAF and USAAF HE and Incendiary Bombs and Rockets	Mech excavations. Blast + heat + frag.	Human, Plant, Structures.	1 (F1:1 x F2:2)	4 (F4:5 x F5:4)	4 (1 x 4)	Low
	Piling. Blast + heat + frag.	Human, Plant, Structures.	1 (F1:1 x F2:4)	4 (F4:5 x F5:4)	4 (1 x 4)	Low
Land Service Ammunition	Mech excavations. Blast + heat + frag.	Human, Plant, Structures.	1 (F1:1 x F2:4)	3 (F4:3 x F5:3)	3 (1 x 3)	Low
	Piling. Blast + heat + frag.	Human, Plant, Structures.	1 (F1:1 x F2:4)	3 (F4:3 x F5:3)	3 (1 x 3)	Low
Anti-Aircraft Projectiles	Mech excavations. Blast + frag.	Human, Plant, Structures.	1 (F1:1 x F2:2)	3 (F4:3 x F5:3)	3 (1 x 3)	Low
	Piling. Blast + frag.	Human, Plant, Structures.	1 (F1:1 x F2:3)	3 (F4:3 x F5:3)	3 (1 x 3)	Low
RAF and USAAF Practice Bombs	Mech excavations. Burn or smoke.	Human.	1 (F1:4 x F2:1)	1 (F4:1 x F5:2)	1 (1 x 1)	Very Low
	Piling. Burn or smoke.	Human.	1 (F1:4 x F2:1)	1 (F4:1 x F5:2)	1 (1 x 1)	Very Low
Small Arms Ammunition	Mech excavations.	Human.	1 (F1:2 x F2:1)	1 (F4:1 x F5:1)	1 (1 x 1)	Very Low
	Piling.	Human.	1 (F1:2 x F2:1)	1 (F4:1 x F5:1)	1 (1 x 1)	Very Low

TABLE 20: Low Risk Table



## 13 Risk Mitigation

### 13.1 ALARP Principle

ALARP is a risk principle associated with the Health and Safety at Work Act 1974. It is used in the regulation and management of construction industry risks and states that risk must be averted unless there is a gross disproportion between the costs and benefits of doing so.

The ALARP principle arises from the fact that infinite time, effort and money could be spent attempting to eliminate a risk entirely. It should not be understood as simply a quantitative measure of benefit against detriment. Instead, a best common practice of judgement, balancing risk and societal benefit.

### 13.2 Risk Levels and Risk Tolerance

The table below outlines the relationship between final risk scores / levels (the output of the IAL semi-quantitative risk model), risk tolerance and the available industry standard risk mitigation measures. An elevated UXO risk should always be reduced to ALARP level.

Risk Level	IAL Recommendation	Risk Tolerance	Mitigation Measures
Very High	<b>Proactive</b> mitigation measures considered essential	Intolerable risk level in all but extreme circumstances.	<ul style="list-style-type: none"> <li>▶ EOD Engineer supervision of ground works</li> <li>▶ Magnetometer surveying prior to ground works</li> <li>▶ Explosive Ordnance Safety &amp; Awareness Briefing(s)</li> <li>▶ Explosive Ordnance Site Safety Instructions</li> </ul>
High			
Moderate-to-High	<b>Proactive</b> mitigation measures recommended	Intolerable level of risk where risk mitigation to ALARP is cost effective. A client may consider the risk tolerable due to impracticability of the available risk mitigation measures or disproportionately high cost of mitigation.	
Moderate		Tolerable risk level providing the recommended mitigation measures have been adopted.	
Low-to-Moderate	<b>Reactive</b> mitigation measures recommended	Possibly tolerable risk level, however <b>reactive</b> risk mitigation measures would be the prudent course of action. For sensitive, high value sites, a zero-tolerance policy may exist, mandating <b>proactive</b> risk mitigation measures.	<ul style="list-style-type: none"> <li>▶ Explosive Ordnance Safety &amp; Awareness Briefing(s)</li> <li>▶ Explosive Ordnance Site Safety Instructions</li> </ul>
Low		Likely to be a tolerable risk level for most clients. However, adoption of the basic precautionary mitigation measure would be the prudent (and very cost effective) course of action, especially for greenfield sites.	<ul style="list-style-type: none"> <li>▶ Explosive Ordnance Safety &amp; Awareness Briefing(s) considered prudent.</li> <li>▶ Explosive Ordnance Site Safety Instructions considered prudent.</li> </ul>
Very Low	No mitigation measures	N/A	N/A

TABLE 21: Risk Levels and Risk Tolerance



### 13.3 Site-Specific Recommendation(s)

The following table describes the available industry standard risk mitigation measures and identifies those (if any) that are recommended to reduce an elevated risk to ALARP level.

Mitigation Measure	Appropriate For	Site-Specific
<p><b>Explosive Ordnance Safety Instructions / Emergency Response Plan:</b></p> <p>EO Safety Instructions (compiled by an EO specialist) provide a written record of the key points that make up an EO Safety &amp; Awareness Briefing.</p> <p>Including instructions on making a preliminary suspicious object threat assessment, a visual catalogue of commonly found EO types, and the steps to take in the event of a potential EO find.</p> <p>The instructions should be included within the site-specific Health &amp; Safety Manual.</p>	<ul style="list-style-type: none"> <li>▶ Provided to Site personnel prior to commencement of excavations.</li> </ul>	<p><b>Recommended</b></p> <p>to be held on Site for the duration of the ground works within the Low Risk and Low-to-Moderate Risk zones.</p>
<p><b>Explosive Ordnance Safety &amp; Awareness Briefings:</b></p> <p>All personnel conducting ground works on Site should receive this briefing. It should feature as a key element of the CDM Regulations 2015 Health &amp; Safety training package for the site.</p> <p>The briefing should be conducted by a trained EO specialist. Such briefings instruct recipients in the identification of EO hazards and actions to be taken in the event of an EO incident.</p>	<ul style="list-style-type: none"> <li>▶ Not appropriate for 'blind' intrusions (e.g. boreholes)</li> </ul>	<p><b>Recommended</b></p> <p>to all Site personnel prior to breaking ground anywhere on Site.</p>
<p><b>Explosive Ordnance Disposal (EOD) Engineer Supervision:</b></p> <p>An EOD engineer (banksman) providing a 'watching brief' of mechanical excavations.</p> <p>Any suspicious objects will be quickly identified, allowing works to continue if the object is not EO. This reduces the risk of delays to the project.</p> <p>EOD engineers can use portable / handheld magnetometer instruments to scan ground ahead of boreholes.</p>	<ul style="list-style-type: none"> <li>▶ SI (including some boreholes)</li> <li>▶ Small volume earthworks on greenfield land</li> <li>▶ Excavations within made ground</li> </ul>	<p><b>Recommended</b></p> <p>'Watching brief' in support of any mechanical excavations within the High Risk Zone only.</p>
<p><b>Intrusive Magnetometer Survey:</b></p> <p>A range of intrusive magnetometer methodologies can be deployed. Which equipment is most appropriate will depend upon the ground conditions and site access.</p> <p>This survey will scan the ground down to the maximum bomb penetration depth and therefore is the most appropriate option for clearing pile locations ahead of 'blind' piling works.</p> <p>Multiple overlapping surveys can be conducted, providing matrix clearance of made ground, e.g. basement dig.</p>	<ul style="list-style-type: none"> <li>▶ Piling</li> <li>▶ Boreholes</li> <li>▶ Large volume earthworks on brownfield land</li> </ul>	<p><b>Recommended</b></p> <p>at all / any pile positions within the High Risk Zone only.</p>
<p><b>Non-Intrusive Magnetometer Survey:</b></p> <p>A range of non-intrusive magnetometer survey methodologies can be deployed to survey ground to a limited depth.</p> <p>Such surveys can typically detect a 50kg 'iron' bombs at a depth of 4.5m bgl, providing the ground is 'magnetically clean'.</p> <p>Such surveys are not appropriate for brownfield land where 'magnetic noise' will result in unusable data.</p>	<ul style="list-style-type: none"> <li>▶ Large volume earthworks on magnetically clean land</li> </ul>	<p><b>Not Recommended</b></p>

TABLE 22: Recommendations for Risk Mitigation





# Figures: 1 - 9





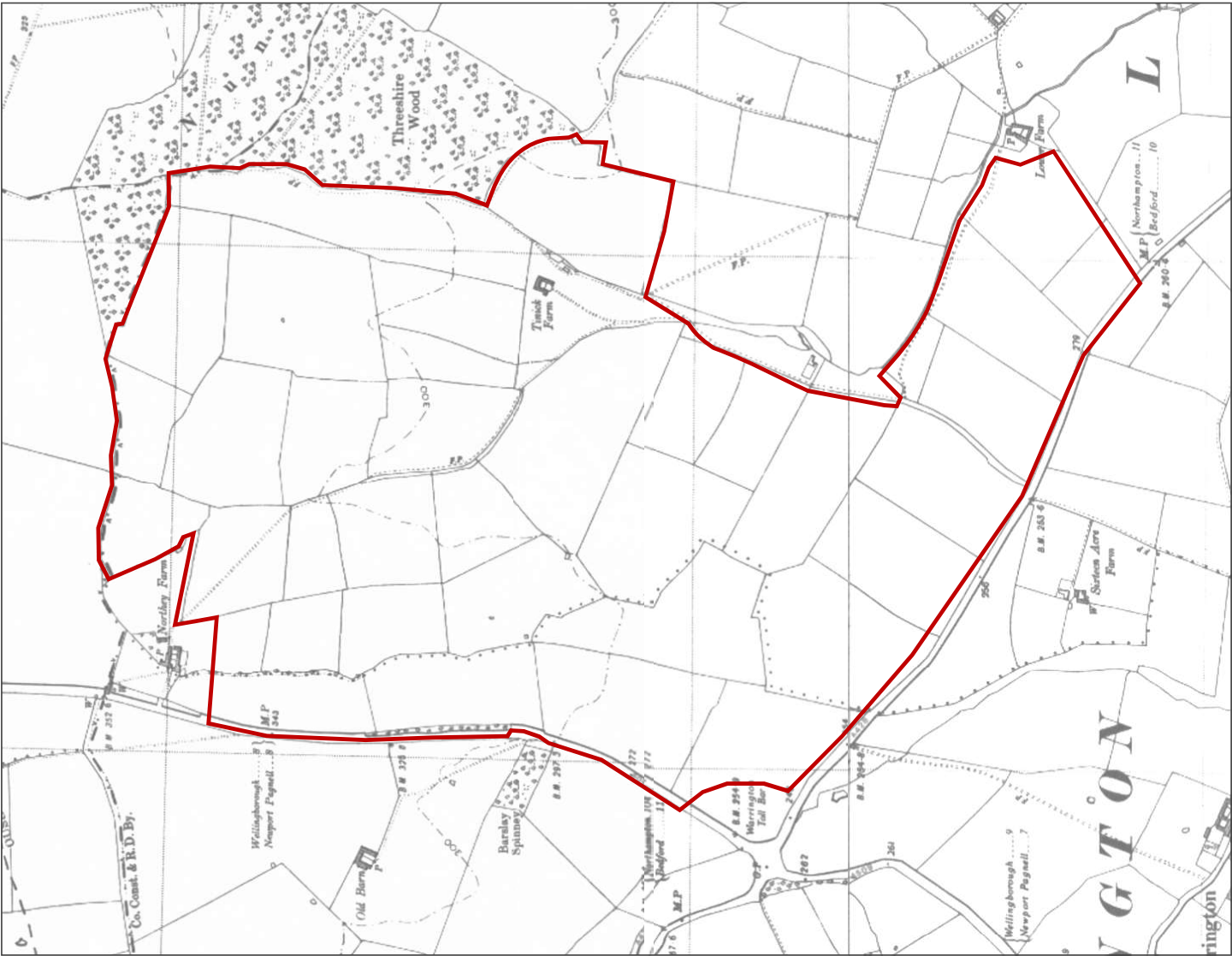


<p><b>Figure: 01.0</b></p>	<p><b>Figure Title:</b> Recent Aerial Photograph</p>		<p><b>Legend:</b></p> <div> <div></div> <p>Approx. Site boundary</p> </div>	<p><b>Notes:</b></p>	<p><b>Source:</b> Google</p>	<div> <div>N</div>  </div>	<p><b>Project:</b> Green Hill Solar Project - Site G, Buckinghamshire</p>	<p><b>Client:</b> Lucion Delta-Simons</p>	<p><b>Doc Ref:</b> DRA.10219.25</p>	<p><b>Version:</b> 1</p>	<div>  <p><b>Explosive Ordnance Risk Assessments</b></p> </div>	<p> <b>Tel:</b> +44 (0) 2071 268 164  <b>Web:</b> <a href="http://www.impartialassessments.com">www.impartialassessments.com</a>  <b>Email:</b> <a href="mailto:info@impartialassessments.com">info@impartialassessments.com</a> </p>
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<b>Figure: 02.0</b>	
<b>Figure Title:</b> Historic OS Mapping - 1951/52	
<b>Legend:</b>  <div><div></div>Approx. Site boundary</div>	
<b>Notes:</b>	
<b>Source:</b>  Groundsure	
<div><div>N</div></div>	
<b>Project:</b> Green Hill Solar Project - Site G, Buckinghamshire	
<b>Client:</b> Lucion Delta-Simons	
<b>Doc Ref:</b> DRA.10219.25	<b>Version:</b> 1
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**Figure: 03.1**

**Figure Title:**  
Historic Aerial Photography:  
16<sup>th</sup> July 1943

**Legend:**

--- Approx. Site boundary

**Notes:**

**Source:** Historic England



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Figure: 03.2

Figure Title:  
Historic Aerial Photography:  
7<sup>th</sup> June 1946

- Legend:
- Approx. Site boundary
  - See Figure 3.2
  - Bombing range structures (2No. danger area quadrants and 1No. concrete navigation arrow)

Notes:

Source: Historic England



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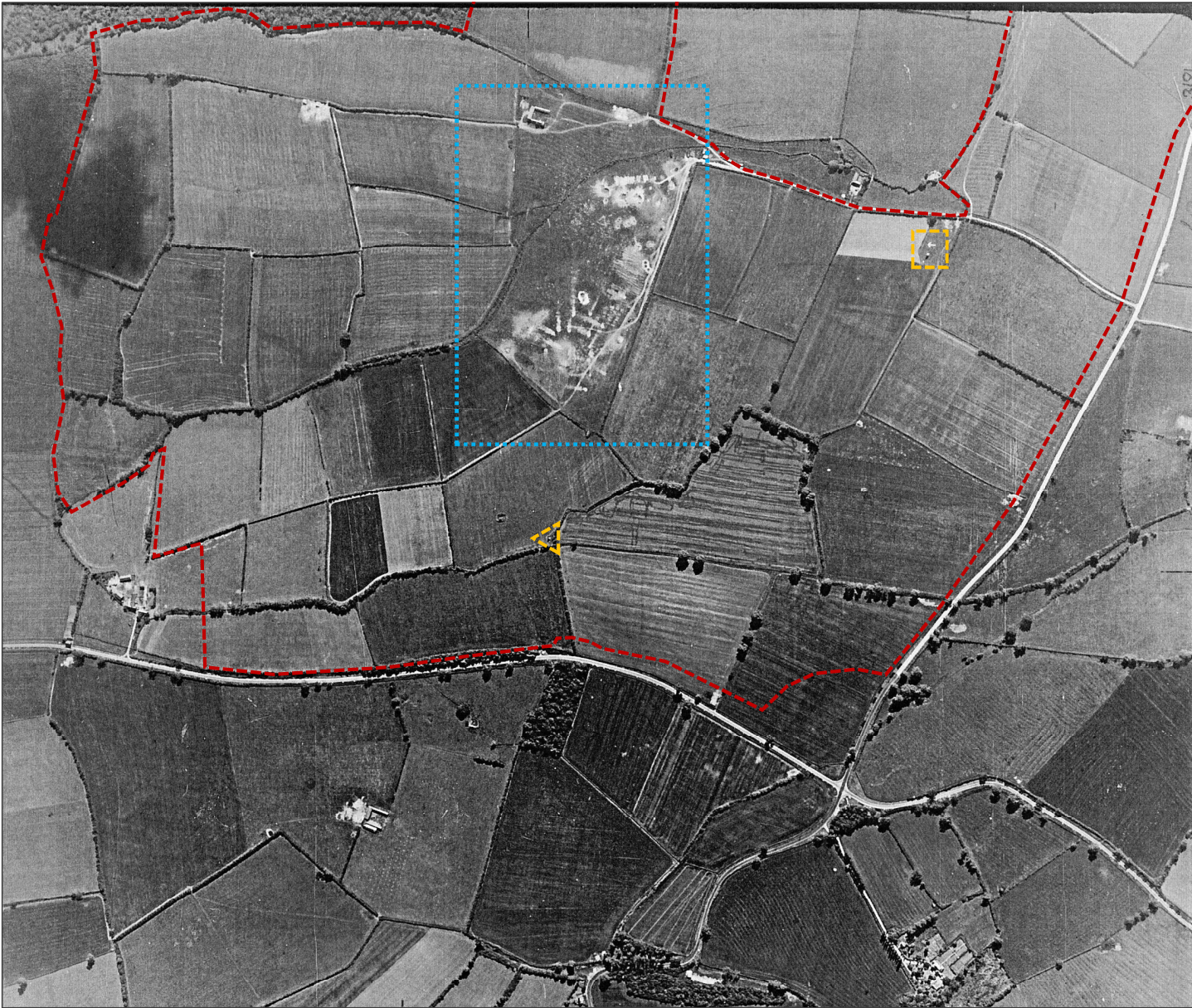


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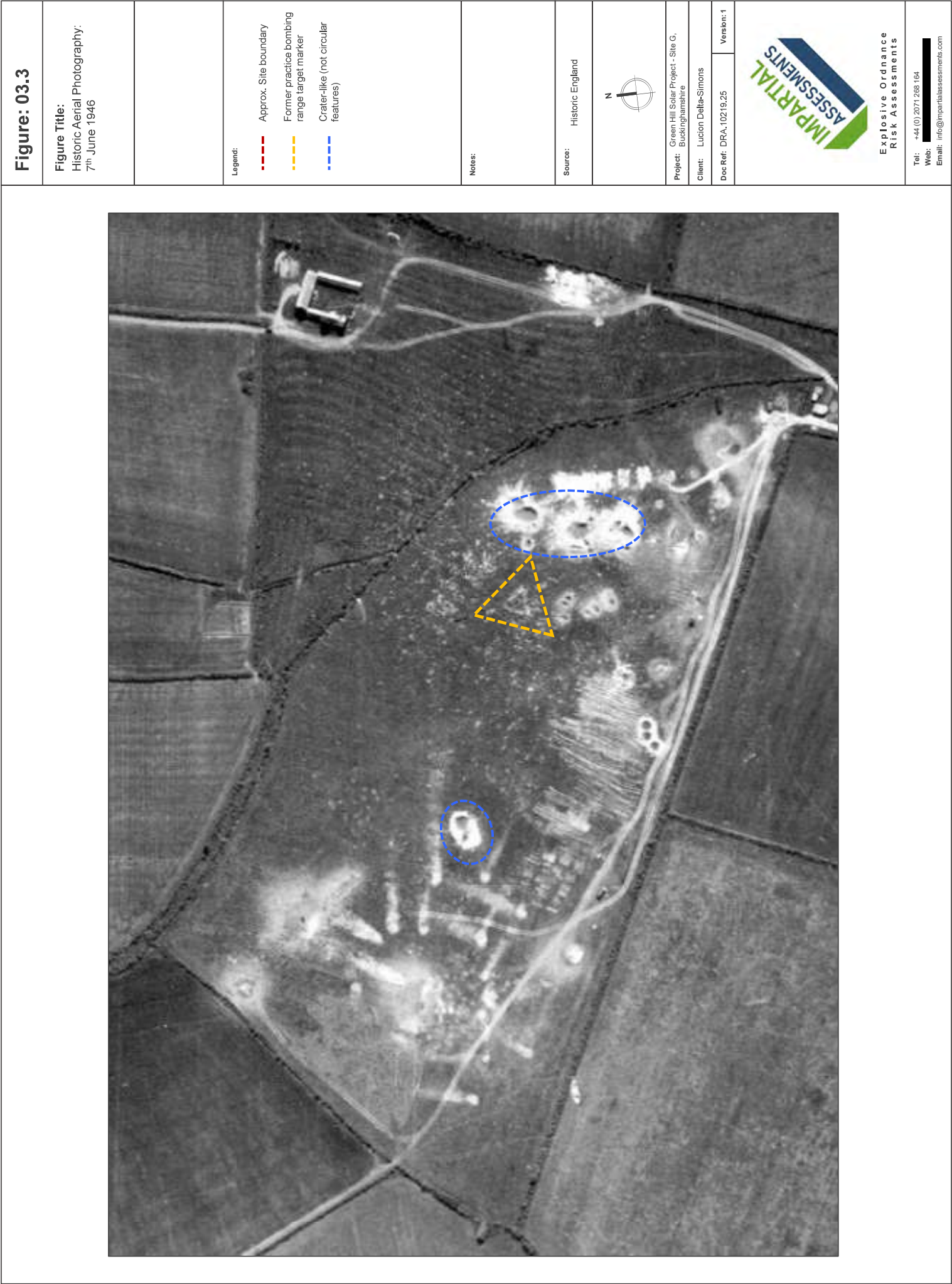




Figure: 04.0

Figure Title:  
'Bombs Over Bucks' Map

Legend:

Approx. Site boundary

County boundary

German air raids

Flying bombs

Friendly fire

Notes:

Map produced using a number of sources of information (mainly original council-held records).

Source: Buckinghamshire Archives



Project: Green Hill Solar Project - Site G,

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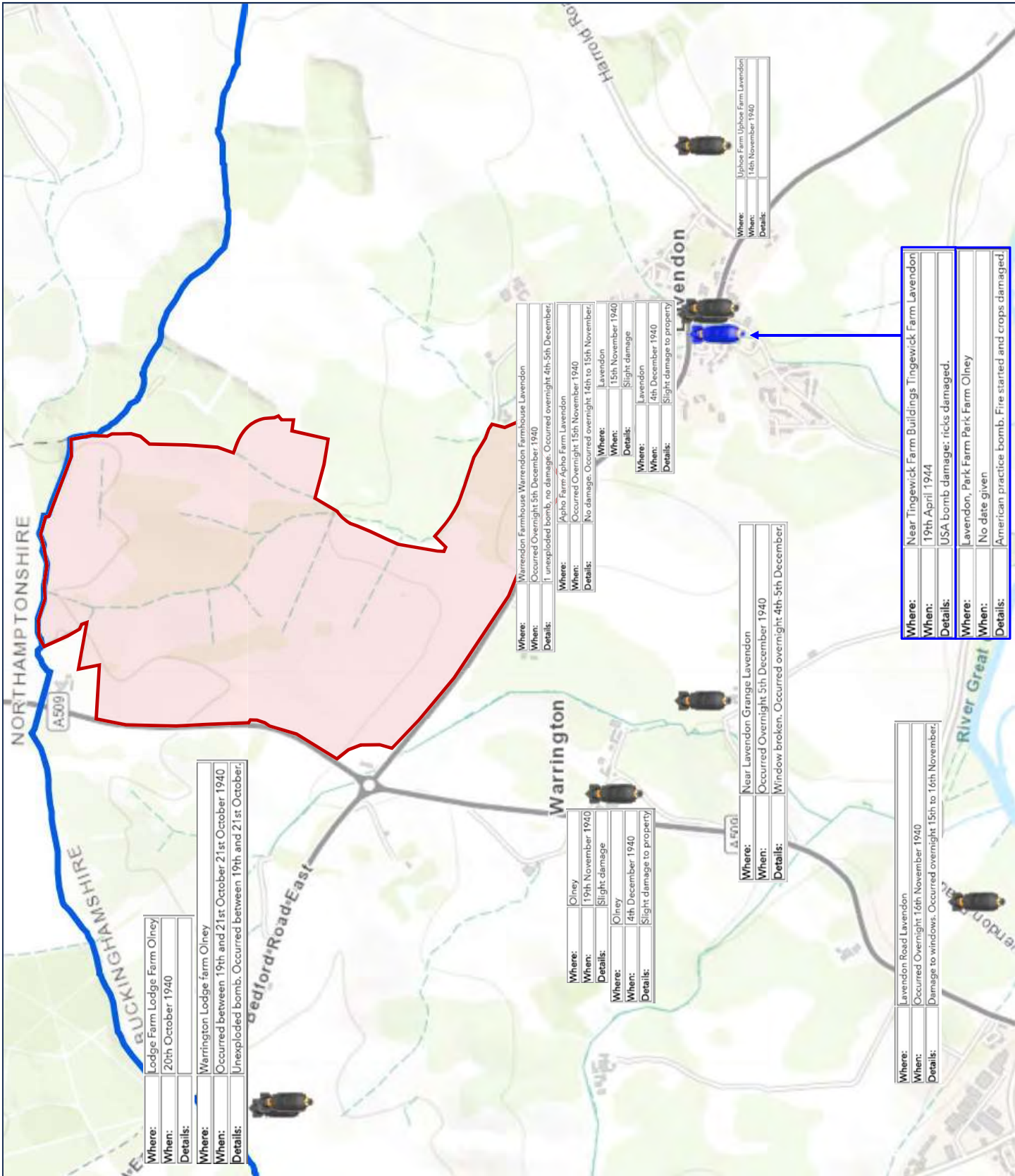




Figure: 05.0

Figure Title:

Plan of RAF Lavendon  
Practice Bombing Range

Legend:



Approx. Site boundary



Bombing range target  
marker location

Notes:

The white circle marks the perimeter of  
the bombing range danger area (800  
yards radius from the bombing target)

Source: Airfield Research Group &  
RAF Air Historical Branch



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<b>Figure: 06.0</b>	
<b>Figure Title:</b> Air Ministry Report - December 1945	
<b>Legend:</b>	
<b>Notes:</b>	
<b>Source:</b> The National Archives	
<b>Project:</b> Green Hill Solar Project - Site G, Buckinghamshire	
<b>Client:</b> Lucion Delta-Simons	
<b>Doc Ref:</b> DRA.10219.25	<b>Version:</b> 1
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<b>Figure Title:</b> Air Ministry Report - December 1945	
<b>Legend:</b>	
<b>Notes:</b>	
<b>Source:</b>  The National Archives	
<b>Project:</b> Green Hill Solar Project - Site G, Buckinghamshire	
<b>Client:</b> Lucion Delta-Simons	
<b>Doc Ref.</b> DRA_10219.25	<b>Version:</b> 1
 <p style="text-align: center;"><b>Explosive Ordnance Risk Assessments</b></p> <p>Tel: +44 (0) 2071 288 164 Web: <a href="http://www.impartialassessments.com">www.impartialassessments.com</a> Email: <a href="mailto:info@impartialassessments.com">info@impartialassessments.com</a></p>	

Air Ministry Report - December 1945	
Legend:	
Notes:	
Source: The National Archives	
Project: Green Hill Solar Project - Site G, Buckinghamshire	
Client: Lucdon Delta-Simons	
Doc Ref: DRA.10219.25	Version: 1
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Legend:	
Notes:	
Source:	The National Archives
Project:	Green Hill Solar Project - Site G, Buckinghamshire
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Notes:		
Source:	The National Archives	
Project:	Green Hill Solar Project - Site G, Buckinghamshire	
client:	Lucien Delfe-Simons	
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Source:	The National Archives		
	Green Hill Solar Project - Site G, Buckinghamshire		
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AIR MINISTRY RANGES RELINQUISHED			
SCOTLAND			
DUMFRIES	Moving Target Range		88/555010
ENGLAND AND WALES			
CHETTON, Salop.	Practice Bombing Range		71/104116
DEE MARSHES, Cheshire	" "		A.F. 64
FLAMBOROUGH HEAD, Yorks.	Bombing Range		A.F. 8 (Pt.)
FRAMPTON River SANDS, Severn	" "		103/153255
LAVERDON, Bucks	Practice Bombing Range (Derequisitioned except for small area required by War Office until Dec. '47)		84/358747



Figure: 07.0

Figure Title:  
Magnetometer Survey  
Results Map

Legend:

Approx. Site boundary



Notes:

Source:

Lucion Delta-Simons



Project: Green Hill Solar Project - Site G,

Buckinghamshire

Client: Lucion Delta-Simons

Doc Ref: DRA-10219.25

Version: 1

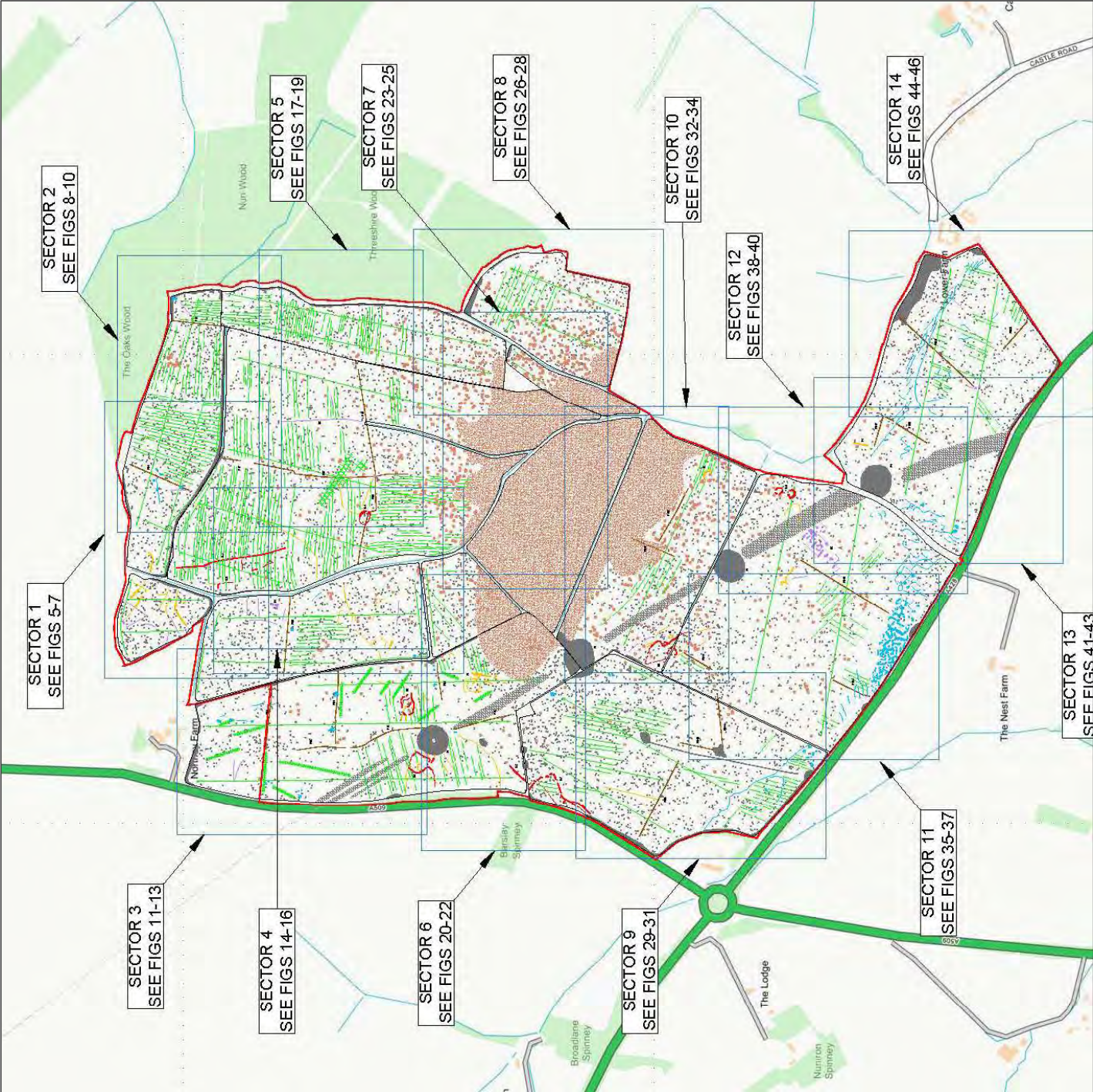


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# Appendices: 1 - 6

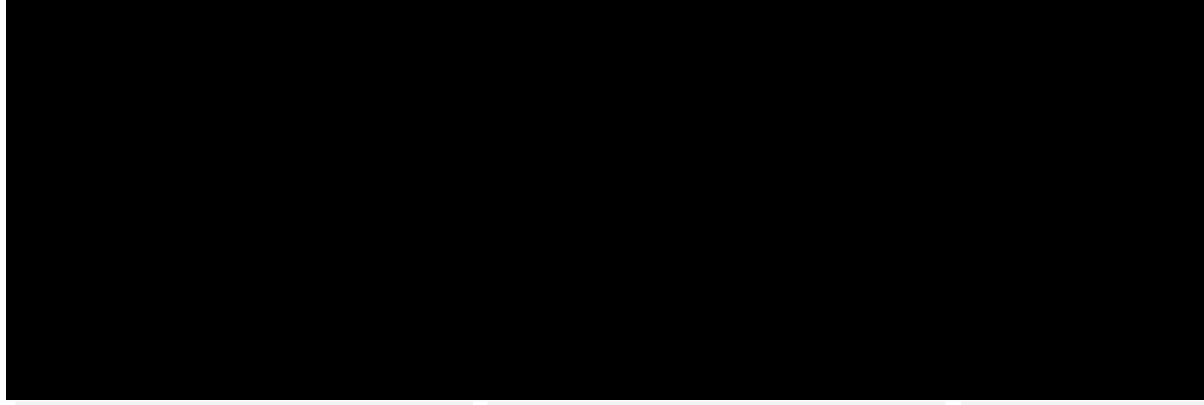




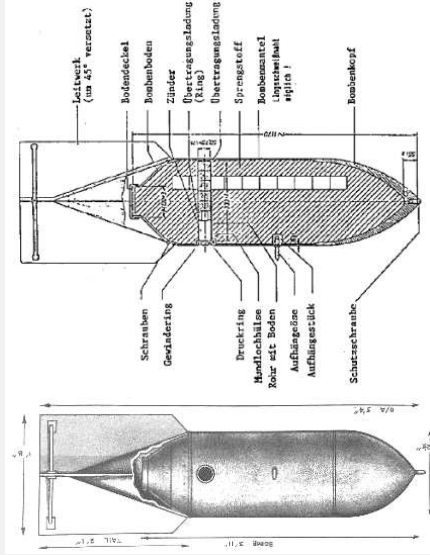
## Appendix: 01.1

delay

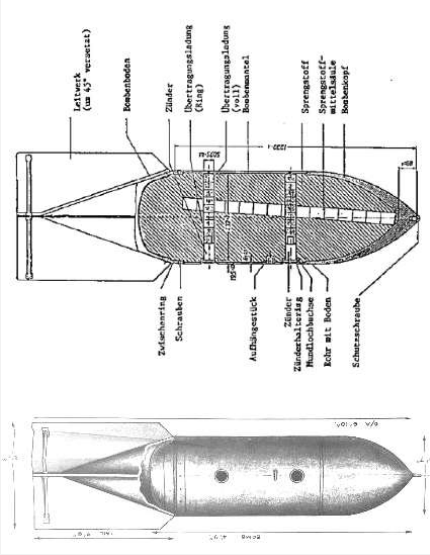
**Variants:** Grades I, II and III. Body length / construction



**Variants:** Grades I and II. Body length and doubled fuzed type



**Variants:** Grades I, II and III. Body length / construction





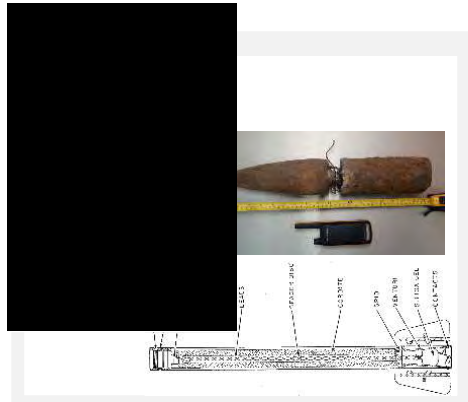




Appendix Title:  
Data Sheets - Commonly  
Deployed British Anti-  
Aircraft Projectiles

3.7-inch QF Heavy AA Gun (WW2)	
Shell Weight:	12.7kg
Fill Weight:	1.1kg
Filling:	Amatol, TNT or RDX and TNT
Fuze Type:	Nose mechanical time delay fuze
Shell Dimensions:	94mm x 360 or 438mm
Shell Appearance:	Yellow or Grey body, copper driving bands, brass neck, grey nose fuze
Max Range:	12,000m
Rate of Fire:	10 to 20rpm

3.7-inch UP Rocket - Z Battery (WW2)	
cket Weight:	24.5kg
arhead Weight:	3.4kg
Weight:	0.96kg
ding:	TNT warhead. Black Powder solid fuel rocket motor
ze Type:	Nose mechanical time delay fuze
cket Dimensions:	1,930mm x 82mm
ell Appearance:	Pointed bronze or black nose
x Range:	6,770m



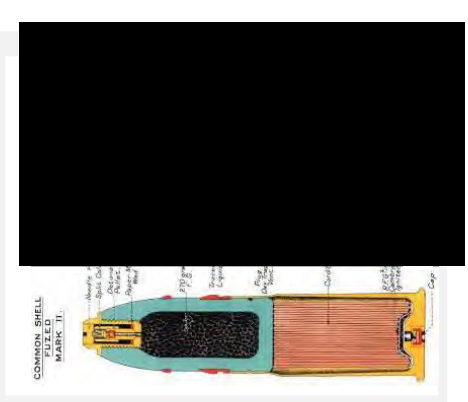
20mm Light AA Gun (WW2)	
Shell Weight:	123g or 116g or 130g
Fill Weight:	6.0 to 11.0g
Filling:	Incendiary comp and/or TNT or Tetrl
Fuze Type:	Nose impact fuze
Shell Dimensions:	20mm x 110mm or 128mm
Shell Appearance:	Blue, orange, red or green bodies indicate TNT fill
Max Range:	4,389m
Rate of Fire:	250 to 450rpm

37mm Light AA Gun (WW1)	
Shell Weight:	0.84kg
Fill Weight:	68g
Filling:	TNT
Fuze Type:	Nose impact fuze
Shell Dimensions:	40mm x 180mm
Shell Appearance:	Yellow or orange body, copper driving band, grey nose fuze
Max Range:	7,160m
Rate of Fire:	120rpm



3 inch QF Heavy AA Gun (WW1)	
Shell Weight:	5.7kg or 7.3kg
Fill Weight:	<0.6kg (explosive)
Filling:	TNT or TNT plus ball bearings
Fuze Type:	Nose mechanical time delay fuze
Shell Dimensions:	76.2mm x 384mm or 420mm
Shell Appearance:	Black body, copper driving bands, brass nose fuze
Max Range:	6,700m
Rate of Fire:	16 to 18rpm

37mm Light AA Gun (WW1)	
Shell Weight:	0.45kg
Fill Weight:	17.0g
Filling:	Gunpowder / black powder
Fuze Type:	Nose impact fuze
Shell Dimensions:	93mm x 37mm
Shell Appearance:	Brown body, copper driving bands and brass fuze.
Max Range:	4,110m
Rate of Fire:	300rpm





2-inch SBML Mortar (HE)

Shell Weight:	1.02kg
Fill Weight:	200g
Filling:	RDX or TNT (high explosive)
Dimensions:	51mm x 290mm
Material:	Steel
Appearance:	Cylindrical shape. Brown body, green and red bands, five finned.
Variants	Smoke, signal multi-star, parachute illumination, white phosphorus.



3-inch ML Mortar (HE)

Shell Weight:	4.5kg
Fill Weight:	882g
Filling:	RDX or TNT (high explosive)
Dimensions:	81mm x 490mm
Material:	Steel
Appearance:	Pear-drop shape. Brown body, green and red bands, five finned tail.
Variants	Smoke, signal multi-star, parachute illumination, white phosphorus.



Ordnance QF 2-pounder Gun - HE

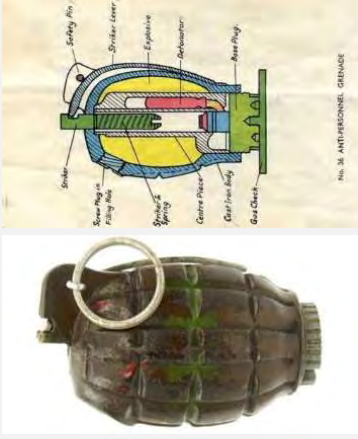
HE Round Weight:	1.86kg (full cartridge)
Fill Weight:	85g (plus propellant)
Filling:	RDX or TNT (high explosive)
Dimensions:	40mm x 304mm
Material:	Steel projectile, Brass case.
Appearance:	Brass body, Buff nose with red and green bands. Note, the HE round was brought into service in 1942.
Remark	



Anti-tank solid shot variant pictured

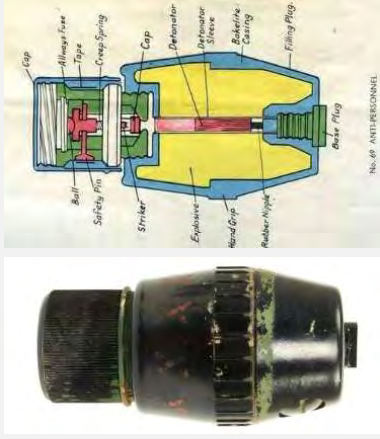
No.36 Hand Grenade - Frag

Weight:	760g
Fill Weight:	71g
Filling:	Baratol (high explosive)
Dimensions:	95mm x 61mm
Material:	Cast iron
Appearance:	Black grooved lemon shaped body. Fragmentation 'pineapple' design.
Fuze:	4 second time delay fuze.



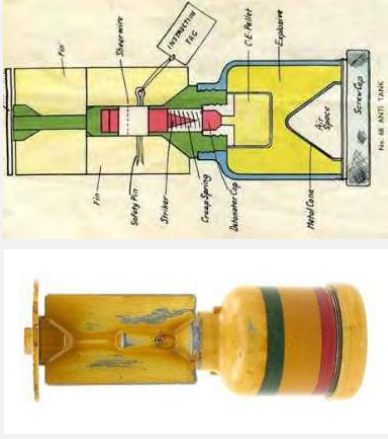
No.69 Hand Grenade - Blast

Weight:	383g
Fill Weight:	92g
Filling:	Baratol, Amatol or Lyddite (high explosive)
Dimensions:	114mm x 60mm
Material:	Bakelite (plastic)
Appearance:	Smooth black lemon shaped body. Green band.
Fuze:	4 second time delay fuze.



No.68 Anti-Tank Rifle Grenade

Weight:	893g
Fill Weight:	425g
Filling:	DX, Lyddite or Pentolite (high explosive)
Dimensions:	178mm x 64mm
Material:	Steel
Appearance:	Bell-shaped buff coloured body. Tail unit. Red and green bands.
Remark	These grenades were fired from a rifle using a special 'cup' attachment.





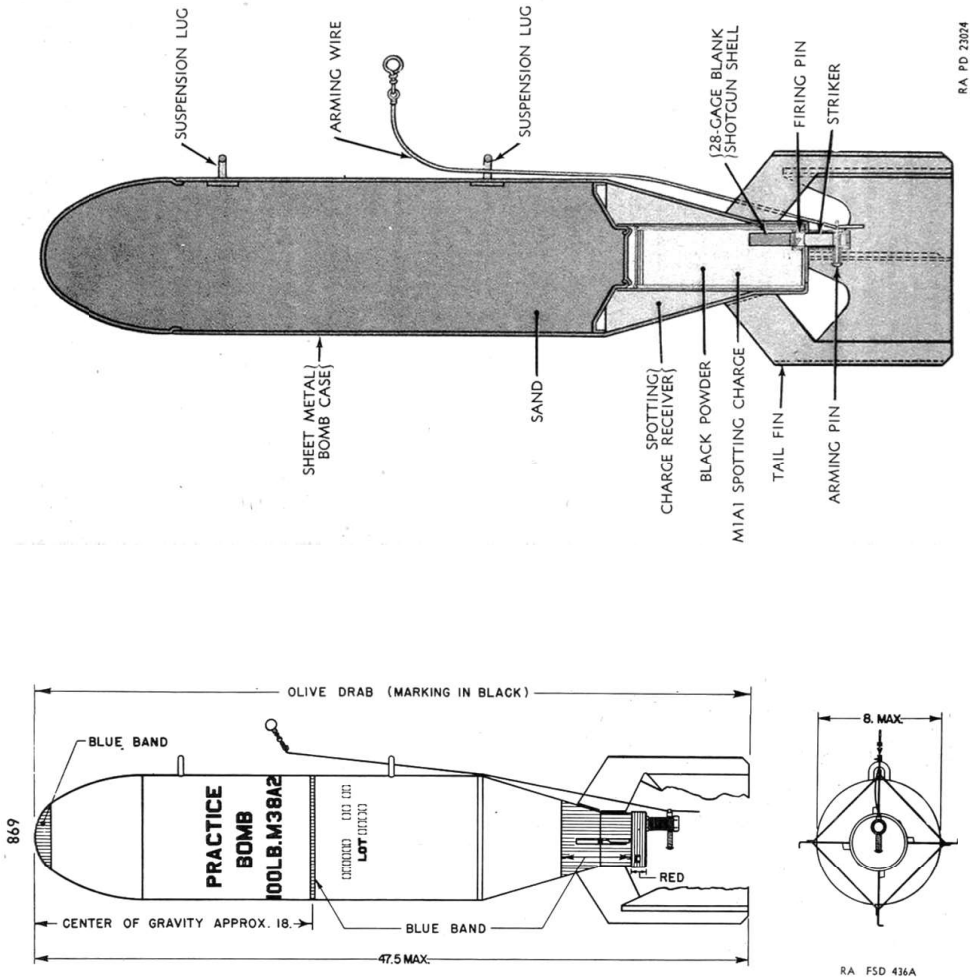
Appendix Title:  
Data Sheets - Most  
Commonly Deployed  
USAAF WW2-era  
Practice Bomb

M38A2 Smoke and Flash Bomb

Variants:	Flash and smoke spotting charges (M1A1, M3, and M4).
Weight:	100lb (including inert sand fill and spotting charge)
Filling:	Flash: black powder (~3lb). Smoke: stannic chloride, sodium phosphate and titanium tetrachloride (1lb)
Dimensions:	47.5" x 8.13"
Material:	Steel
Appearance:	Blue paint, white text.

Fuze: Impact fuse. The spotting charge is assembled in a sleeve at the base of the bomb, within the fin assembly.

Note, the M85 bomb was a concrete filled version of the M38A2, ordered to relieve a temporary wartime shortage of the M38A2 model.



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Version: 1



WW2-era Practice Bombs - RAF

Smoke and Flash Bombs

Variants:	Smoke emitting and flash (pyrotechnic)
Weights:	8.5lb, 10lb, 11.5lb, 25lb
Filling:	Flash: gunpowder and Magnesium (1lb). Smoke: stannic chloride, sodium phosphate and titanium tetrachloride (1lb)
Dimensions:	Lengths: 16", 18" and 22", Diameters: 3", 4" and 8"
Material:	Bakelite and steel
Appearance:	White paint, black text, 2 x green lines (smoke) or 2 x red lines (flash).
Fuze:	Impact fuze

Note, RAF WW2 practice bombs are one of the most frequently encountered types of EO at former military airfield sites.



10lb bomb

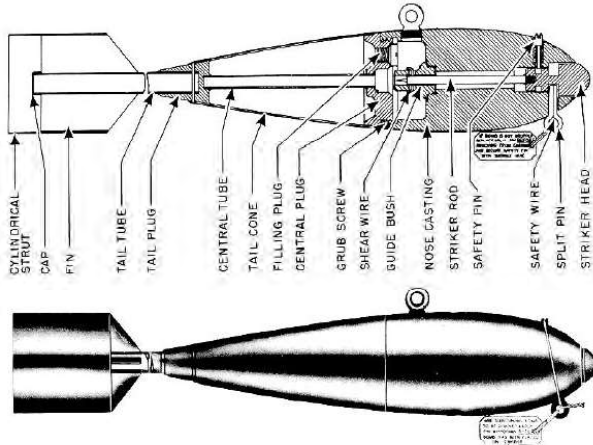


Figure 6d—Profile 10lb. Bomb

11.5lb bomb

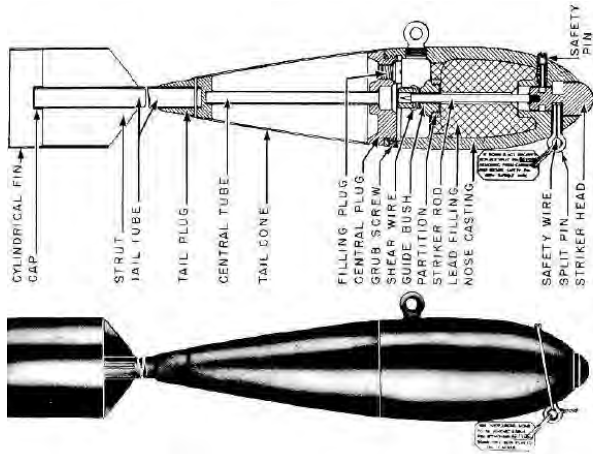


Figure 57—Profile 11.5 lb. Bomb

25lb bomb

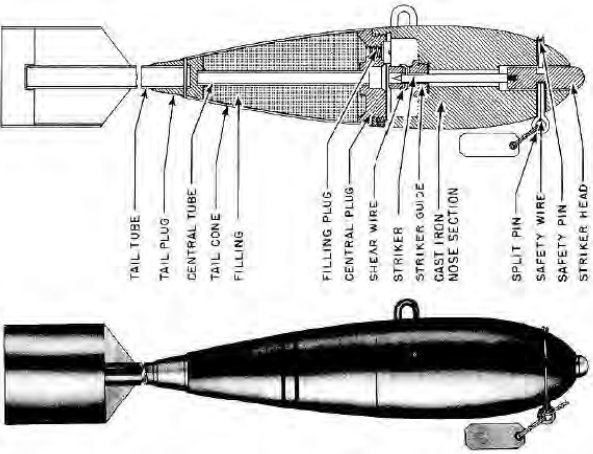


Figure 58—Profile 25lb. Bomb

Appendix: 05.0


Appendix Title:  
Data Sheets - Commonly  
Deployed RAF WW2-era  
Practice Bombs



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<p><b>Appendix: 06.0</b></p>	<p><b>Appendix Title:</b> Bibliography</p>
<div>  <p><b>Explosive Ordnance Risk Assessments</b></p> </div>	
<p><b>Project:</b> Green Hill Solar Project - Site G, Buckinghamshire</p>	<p><b>Client:</b> Lucdon Delta-Simons</p>
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## Appendix G - Hotspot Protocol



## Protocol for Addressing Previously Unidentified 'Hotspots' of Contamination

As with any Brownfield development, there is a possibility that an unknown area of soil contamination may be encountered during excavation works. Should an area of contamination be identified by visual or olfactory means the following procedure will be followed:

- Immediately stop all works in the area where contamination is suspected;
- Immediately inform the Site Agent who should then contact the Environmental Consultant;
- The Environmental Consultant will contact the Environment Agency or relevant regulatory authorities if conditions impact receptors within their jurisdiction;
- The Environmental Consultant will provide a verbal response outlining immediate actions with regard to Site Health and Safety and to limit the potential for contaminants to migrate;
- The Environmental Consultant will judge each occurrence on merit and should it be deemed necessary. The Environmental Consultant will attend Site to assess and delineate the source material through lateral and vertical examination;
- If deemed the most appropriate course of action the Environmental Consultant will oversee the removal of the 'hotspot' and collect validation samples;
- If contamination is suspected within groundwater samples, a delineation exercise will be undertaken to determine the source and monitoring of groundwater would be undertaken at an occurrence basis;
- Any excavated material should be isolated from all other material at the Site, on plastic sheeting and covered with plastic sheeting until the material can be tested for contamination and an appropriate disposal route can be identified;
- Any 'hotspot' stockpiles and excavations should be fenced off, have appropriate signage and their locations recorded on a Site drawing;
- Should any excavated material be required to be disposed of at an off-Site location, the material will be isolated from all other material at the Site prior to disposal at a suitably licensed facility. All documentation associated with the movement and disposal of any such material will be supplied to The Environmental Consultant, including waste transfer documentation;
- Subject to appropriate Site Health & Safety controls (typically comprising fencing off the excavation) the excavation will remain open until the validation has been completed. Alternatively, for Site Health & Safety reasons, it may be necessary to backfill the excavation with Site derived material. In this case, the location of the excavation will be accurately recorded and the excavation reopened if required, based on the validation results; and
- The Regulatory Authorities shall be informed by the Environmental Consultant of any remedial activities required and associated validation testing results. Representatives of these organisations may also wish to visit the Site.
- The proposed remedial measures are to remain flexible, depending on the nature and extent of the contamination identified and the conditions at hand.