

# Enviro+Geo

#### Scotland, Red Line Boundary

#### **Order Details**

Date: 01/05/2024

Your ref: Scotland, Red Line Boundary

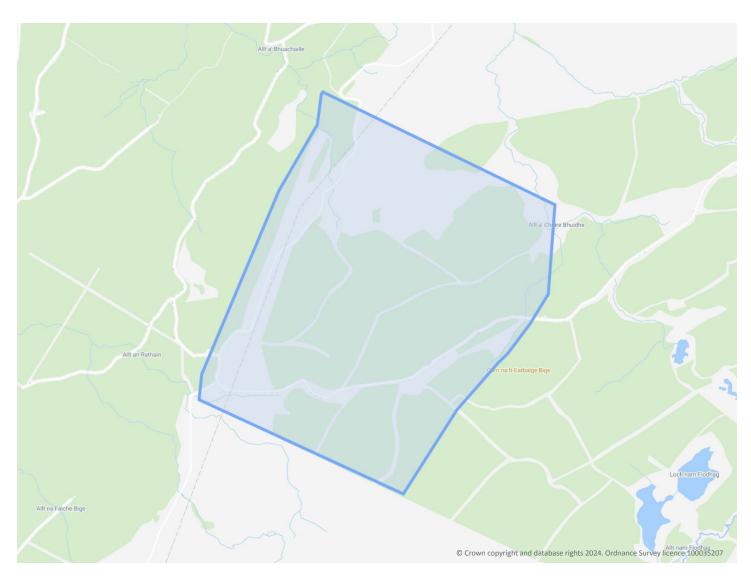
Our Ref: GSIP-2024-14714-18280 A

#### **Site Details**

Location: 230710 824321

148.76 ha Area:

**Authority:** The Highland Council *↗* 



**Summary of findings** 

<u>p. 2</u> > **Aerial image**  p. 7 >

OS MasterMap site plan

N/A: >10ha





**Grid ref**: 230710 824321

## **Summary of findings**

	-	_					
Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
<u>12</u> >	<u>1.1</u> >	<u>Historical industrial land uses</u> >	1	0	0	0	-
13	1.2	Historical tanks	0	0	0	0	-
13	1.3	Historical energy features	0	0	0	0	-
13	1.4	Historical petrol stations	0	0	0	0	-
13	1.5	Historical garages	0	0	0	0	-
14	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped >	On site	0-50m	50-250m	250-500m	500-2000m
<u>15</u> >	<u>2.1</u> >	<u>Historical industrial land uses</u> >	1	0	0	0	-
16	2.2	Historical tanks	0	0	0	0	-
16	2.3	Historical energy features	0	0	0	0	-
16	2.4	Historical petrol stations	0	0	0	0	-
16	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
17	3.1	Active or recent landfill	0	0	0	0	-
17	3.2	Historical landfill (BGS records)	0	0	0	0	-
17	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
17	3.4	Licensed waste sites	0	0	0	0	-
17	3.5	Historical waste sites	0	0	0	0	-
Page	Section	<u>Current industrial land use</u> >	On site	0-50m	50-250m	250-500m	500-2000m
<u>18</u> >	<u>4.1</u> >	Recent industrial land uses >	4	1	0	-	-
19	4.2	Current or recent petrol stations	0	0	0	0	-
19	4.3	Electricity cables	0	0	0	0	-
19	4.4	Gas pipelines	0	0	0	0	-
19	4.5	Sites determined as Contaminated Land	0	0	0	0	-
20	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
20	4.6 4.7	Control of Major Accident Hazards (COMAH)  Regulated explosive sites	0	0	0	0	-





**Grid ref**: 230710 824321

20	4.0		_		-	_		
20	4.8	Hazardous substance storage/usage	0	0	0	0	-	
20	4.9	Part A(1), IPPC and Historic IPC Authorisations	0	0	0	-		
20	4.10	Part B Authorisations	0	0	0	0	-	
21	4.11	Pollution inventory substances	0	0	0	0	-	
21	4.12	Pollution inventory waste transfers	0	0	0	0	-	
21	4.13	Pollution inventory radioactive waste	0	0	0	0	-	
Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m	
22	5.1	Superficial aquifer	None (with	in 500m)				
<u>23</u> >	<u>5.2</u> >	Bedrock aquifer >	Identified (	within 500m	1)			
Page	Section	<u>Hydrology</u> >	On site	0-50m	50-250m	250-500m	500-2000m	
<u>25</u> >	<u>6.1</u> >	Water Network (OS MasterMap) >	9	5	13	-	-	
<u>28</u> >	<u>6.2</u> >	<u>Surface water features</u> >	1	2	12	-	-	
Page	Section	River flooding >						
<u>29</u> >	<u>7.1</u> >	River flooding >	1 in 30 year	r, 0.3m - 1.0r	m (within 50	m)		
Page	Section	Coastal flooding						
31	8.1	Coastal flooding	Negligible (	within 50m)				
Page	Section	Surface water flooding >						
<u>32</u> >	<u>9.1</u> >	Surface water flooding >	1 in 30 year	r, Greater th	an 1.0m (wit	hin 50m)		
Page	Section	Groundwater flooding >						
<u>34</u> >	<u>10.1</u> >	Groundwater flooding >	Low (withir	n 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m	
<u>35</u> >	<u>11.1</u> >	Sites of Special Scientific Interest (SSSI) >	0	0	0	0	1	
36	11.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0	
<u>36</u> >	<u>11.3</u> >	Special Areas of Conservation (SAC) >	0	0	0	0	1	
<u>37</u> >	<u>11.4</u> >	Special Protection Areas (SPA) >	0	0	0	0	1	
<u>37</u> >	<u>11.5</u> >	National Nature Reserves (NNR) >	0	0	1	0	1	
37	11.6	Local Nature Reserves (LNR)	0	0	0	0	0	
<u>38</u> >	<u>11.7</u> >	Designated Ancient Woodland >	0	0	2	0	10	
38	11.8	Biosphere Reserves	0	0	0	0	0	





39	11.9	Forest Parks	0	0	0	0	0
39	11.10	Marine Conservation Zones	0	0	0	0	0
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
40	12.1	World Heritage Sites	0	0	-	-	
40	12.2	Area of Outstanding Natural Beauty	0	0	0	-	-
40	12.3	National Parks	0	0	0	-	-
40	12.4	Listed Buildings	0	0	0	-	-
41	12.5	Conservation Areas	0	0	0	-	-
41	12.6	Scheduled Ancient Monuments	0	0	0	-	-
41	12.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
<u>42</u> >	<u>13.1</u> >	Agricultural Land Classification >	Grade 5.3 (	within 250m	1)		
Page	Section	<u>Geology 1:10,000 scale</u> >	On site	0-50m	50-250m	250-500m	500-2000m
<u>44</u> >	<u>14.1</u> >	10k Availability >	Identified (within 500m)				
46	14.2	Artificial and made ground (10k)	0	0	0	0	-
<u>47</u> >	<u>14.3</u> >	Superficial geology (10k) >	17	6	15	20	-
50	14.4	Landslip (10k)	0	0	0	0	-
51	14.5	Bedrock geology (10k)	0	0	0	0	-
<u>51</u> >	<u>14.6</u> >	Bedrock faults and other linear features (10k) >	25	3	14	16	-
Page	Section	<u>Geology 1:50,000 scale</u> >	On site	0-50m	50-250m	250-500m	500-2000m
<u>55</u> >	<u>15.1</u> >	50k Availability >	Identified (	within 500m	n)		
56	15.2	Artificial and made ground (50k)	0	0	0	0	-
56	15.3	Artificial ground permeability (50k)	0	0	-	-	-
<u>57</u> >	<u>15.4</u> >	Superficial geology (50k) >	15	4	9	12	-
<u>59</u> >	<u>15.5</u> >	Superficial permeability (50k) >	Identified (	within 50m)			
60	15.6	Landslip (50k)	0	0	0	0	-
60	15.7	Landslip permeability (50k)	None (with	in 50m)			
<u>61</u> >	<u>15.8</u> >	Bedrock geology (50k) >	1	0	1	0	-
<u>62</u> >	<u>15.9</u> >	Bedrock permeability (50k) >	Identified (	within 50m)			





<u>62</u> >	<u>15.10</u> >	Bedrock faults and other linear features (50k) >	10	0	6	6	-
Page	Section	Boreholes >	On site	0-50m	50-250m	250-500m	500-2000m
<u>64</u> >	<u>16.1</u> >	BGS Boreholes >	1	1	0	-	-
Page	Section	Natural ground subsidence >					
<u>66</u> >	<u>17.1</u> >	Shrink swell clays >	Very low (v	vithin 50m)			
<u>68</u> >	<u>17.2</u> >	Running sands >	Very low (v	vithin 50m)			
<u>70</u> >	<u>17.3</u> >	Compressible deposits >	High (withi	n 50m)			
<u>72</u> >	<u>17.4</u> >	Collapsible deposits >	Very low (v	vithin 50m)			
<u>74</u> >	<u>17.5</u> >	<u>Landslides</u> >	Moderate (	within 50m)			
<u>76</u> >	<u>17.6</u> >	Ground dissolution of soluble rocks >	Negligible (	within 50m)			
Page	Section	Mining and ground workings >	On site	0-50m	50-250m	250-500m	500-2000m
<u>78</u> >	<u>18.1</u> >	BritPits >	1	1	0	0	-
<u>79</u> >	<u>18.2</u> >	Surface ground workings >	1	0	0	-	-
79	18.3	Underground workings	0	0	0	0	0
80	18.4	Underground mining extents	0	0	0	0	-
80	18.5	Historical Mineral Planning Areas	0	0	0	0	-
<u>80</u> >	<u>18.6</u> >	Non-coal mining >	0	0	0	0	1
80	18.7	JPB mining areas	None (with	in 0m)			
81	18.8	The Coal Authority non-coal mining	0	0	0	0	-
81	18.9	Researched mining	0	0	0	0	-
81	18.10	Mining record office plans	0	0	0	0	-
81	18.11	BGS mine plans	0	0	0	0	-
82	18.12	Coal mining	None (with	in 0m)			
82	18.13	Brine areas	None (within 0m)				
82	18.14	Gypsum areas	None (with	in 0m)			
82	18.15	Tin mining	None (with	in 0m)			
82	18.16	Clay mining	None (with	in 0m)			
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
83	19.1	Natural cavities	0	0	0	0	-







83	19.2	Mining cavities	0	0	0	0	0
83	19.3	Reported recent incidents	0	0	0	0	-
83	19.4	Historical incidents	0	0	0	0	-
84	19.5	National karst database	0	0	0	0	-
Page	Section	Radon >					
<u>85</u> >	<u>20.1</u> >	Radon >	Between 19	% and 3% (w	rithin 0m)		
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
<u>87</u> >	<u>21.1</u> >	BGS Estimated Background Soil Chemistry >	27	1	-	-	-
88	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
88	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
89	22.1	Underground railways (London)	0	0	0	-	-
89	22.2	Underground railways (Non-London)	0	0	0	-	-
89	22.3	Railway tunnels	0	0	0	-	-
89	22.4	Historical railway and tunnel features	0	0	0	-	-
89	22.5	Royal Mail tunnels	0	0	0	-	-
90	22.6	Historical railways	0	0	0	-	-
90	22.7	Railways	0	0	0	-	-
90	22.8	Crossrail 1	0	0	0	0	-
90	22.9	Crossrail 2	0	0	0	0	-
90	22.10	HS2	0	0	0	0	-





Grid ref: 230710 824321

## **Recent aerial photograph**



Capture Date: 29/05/2020

Site Area: 148.76ha





Grid ref: 230710 824321

## Recent site history - 2017 aerial photograph



Capture Date: 06/05/2017

Site Area: 148.76ha





Grid ref: 230710 824321

## Recent site history - 2014 aerial photograph



Capture Date: 26/08/2014

Site Area: 148.76ha





Grid ref: 230710 824321

## Recent site history - 2009 aerial photograph



Capture Date: 13/05/2009

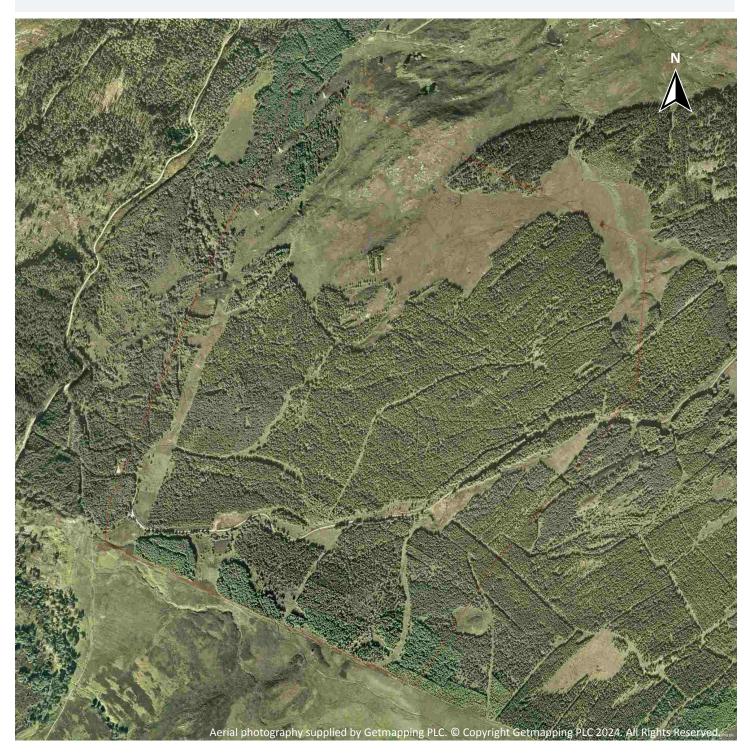
Site Area: 148.76ha





Grid ref: 230710 824321

## Recent site history - 2006 aerial photograph



Capture Date: 16/09/2006

Site Area: 148.76ha





Grid ref: 230710 824321

### 1 Past land use





#### 1.1 Historical industrial land uses

#### **Records within 500m** 1

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 1:10,560 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on page 12 >

ID	Location	Land use	Dates present	Group ID
1	On site	Unspecified Disused Quarry	1991	66342





**Grid ref**: 230710 824321

This data is sourced from Ordnance Survey / Groundsure.

#### 1.2 Historical tanks

Records within 500m 0

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

#### 1.3 Historical energy features

Records within 500m 0

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

#### 1.4 Historical petrol stations

Records within 500m 0

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

#### 1.5 Historical garages

Records within 500m 0

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.





Grid ref: 230710 824321

This data is sourced from Ordnance Survey / Groundsure.

#### 1.6 Historical military land

Records within 500m 0

Areas of military land digitised from multiple sources including the National Archives, local records, MOD records and verified other sources, intelligently grouped into contiguous features.

This data is sourced from Ordnance Survey / Groundsure / other sources.





Grid ref: 230710 824321

## 2 Past land use - un-grouped



Site Outline
Search buffers in metres (m)

Historical industrial land uses

#### 2.1 Historical industrial land uses

Records within 500m

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 10,560 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on page 15 >

ID	Location	Land Use	Date	Group ID
1	On site	Unspecified Disused Quarry	1991	66342

This data is sourced from Ordnance Survey / Groundsure.





**Grid ref**: 230710 824321

#### 2.2 Historical tanks

Records within 500m 0

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

#### 2.3 Historical energy features

Records within 500m 0

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

#### 2.4 Historical petrol stations

Records within 500m 0

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

#### 2.5 Historical garages

Records within 500m 0

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.





**Grid ref**: 230710 824321

#### 3 Waste and landfill

#### 3.1 Active or recent landfill

Records within 500m 0

Active or recently closed landfill sites under Scottish Environment Protection (SEPA) regulation.

This data is sourced from the Scottish Environment Protection Agency.

#### 3.2 Historical landfill (BGS records)

Records within 500m 0

Landfill sites identified on a survey carried out on behalf of the DoE in 1973. These sites may have been closed or operational at this time.

This data is sourced from the British Geological Survey.

#### 3.3 Historical landfill (LA/mapping records)

Records within 500m 0

Landfill sites identified from Local Authority records and high detail historical mapping.

This data is sourced from the Ordnance Survey/Groundsure and Local Authority records.

#### 3.4 Licensed waste sites

Records within 500m 0

Active or recently closed waste sites under Scottish Environment Protection Acency (SEPA) regulation.

This data is sourced from the Scottish Environment Protection Agency.

#### 3.5 Historical waste sites

Records within 500m 0

Waste site records derived from Local Authority planning records and high detail historical mapping.

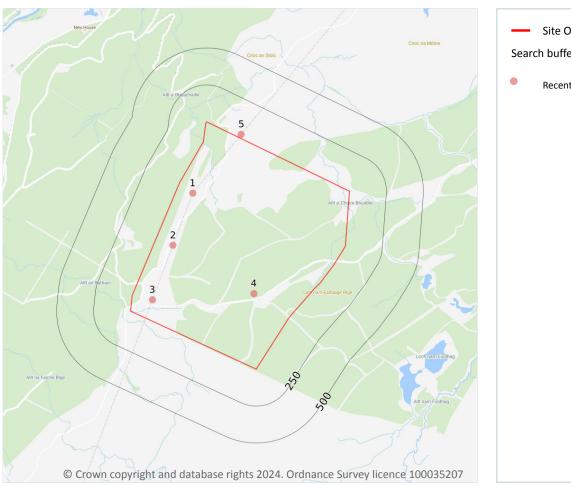
This data is sourced from Ordnance Survey/Groundsure and Local Authority records.





**Grid ref**: 230710 824321

## **4 Current industrial land use**



Site Outline
Search buffers in metres (m)
Recent industrial land uses

#### 4.1 Recent industrial land uses

Records within 250m 5

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on page 18 >

ID	Location	Company	Address	Activity	Category
1	On site	Pylon	Inverness, IV4	Electrical Features	Infrastructure and Facilities
2	On site	Pylon	Inverness, IV4	Electrical Features	Infrastructure and Facilities
3	On site	Pylon	Inverness, IV4	Electrical Features	Infrastructure and Facilities





**Grid ref**: 230710 824321

ID	Location	Company	Address	Activity	Category
4	On site	Quarry (Disused)	Inverness, IV4	Unspecified Quarries Or Mines	Extractive Industries
5	26m N	Pylon	Inverness, IV4	Electrical Features	Infrastructure and Facilities

This data is sourced from Ordnance Survey.

#### 4.2 Current or recent petrol stations

Records within 500m 0

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

#### 4.3 Electricity cables

Records within 500m 0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

#### 4.4 Gas pipelines

Records within 500m 0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

#### 4.5 Sites determined as Contaminated Land

Records within 500m 0

Contaminated Land Register of sites designated under Part 2a of the Environmental Protection Act 1990.

This data is sourced from Local Authority records.





**Grid ref**: 230710 824321

#### 4.6 Control of Major Accident Hazards (COMAH)

Records within 500m 0

Control of Major Accident Hazards (COMAH) sites. This data includes upper and lower tier sites, and includes a historical archive of COMAH sites and Notification of Installations Handling Hazardous Substances (NIHHS) records.

This data is sourced from the Health and Safety Executive.

#### 4.7 Regulated explosive sites

Records within 500m 0

Sites registered and licensed by the Health and Safety Executive under the Manufacture and Storage of Explosives Regulations 2005 (MSER). The last update to this data was in April 2011.

This data is sourced from the Health and Safety Executive.

#### 4.8 Hazardous substance storage/usage

Records within 500m

Consents granted for a site to hold certain quantities of hazardous substances at or above defined limits in accordance with the Planning (Hazardous Substances) Regulations 2015.

This data is sourced from Local Authority records.

#### 4.9 Part A(1), IPPC and Historic IPC Authorisations

Records within 500m

Records of Part A installations regulated for the release of substances to the environment.

This data is sourced from the Scottish Environment Protection Agency.

#### 4.10 Part B Authorisations

Records within 500m 0

Records of Part B installations regulated for the release of substances to the environment.

This data is sourced from the Scottish Environment Protection Agency.





**Grid ref**: 230710 824321

#### 4.11 Pollution inventory substances

Records within 500m 0

The pollution inventory (substances) includes reporting on annual emissions of certain regulated substances to air, controlled waters and land. A reporting threshold for each substance is also included. Where emissions fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

#### **4.12 Pollution inventory waste transfers**

Records within 500m 0

The pollution inventory (waste transfers) includes reporting on annual transfers and recovery/disposal of controlled wastes from a site. A reporting threshold for each waste type is also included. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

#### 4.13 Pollution inventory radioactive waste

Records within 500m

The pollution inventory (radioactive wastes) includes reporting on annual releases of radioactive substances from a site, including the means of release. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.





**Grid ref**: 230710 824321

## **5 Hydrogeology - Superficial aquifer**

#### **5.1** Superficial aquifer

Records within 500m 0

Records of groundwater classification within superficial geology.

This data is sourced from the British Geological Survey.





Grid ref: 230710 824321

## **Bedrock aquifer**



## **5.2** Bedrock aquifer

Records within 500m 2

Records of groundwater classification within bedrock geology.

Features are displayed on the Bedrock aquifer map on page 23 >

ID	Location	Description	Flow	Summary	Rock descripti on
1	On site	Low productivity aquifer	Flow is virtually all through fractures and other discontinuities	Small amounts of groundwater in near surface weathered zone and secondary fractures.	LOCH EIL GROUP







**Grid ref**: 230710 824321

ID	Location	Description	Flow	Summary	Rock descripti on
2	On site	Low productivity aquifer	Flow is virtually all through fractures and other discontinuities	Small amounts of groundwater in near surface weathered zone and secondary fractures.	LOCH EIL GROUP

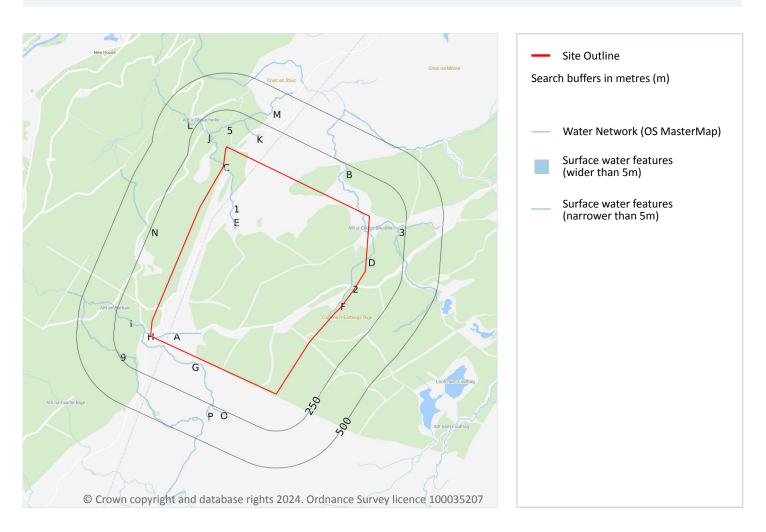
This data is sourced from the British Geological Survey.





Grid ref: 230710 824321

## **6 Hydrology**



### **6.1 Water Network (OS MasterMap)**

Records within 250m 27

Detailed water network of Great Britain showing the flow and precise central course of every river, stream, lake and canal.

Features are displayed on the Hydrology map on page 25 >

ID	Location	Type of water feature	Ground level	Permanence	Name
1	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-





ID	Location	Type of water feature	Ground level	Permanence	Name
2	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
3	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Allt a' Choire Bhuidhe
Α	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
В	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Allt a' Choire Bhuidhe
С	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
F	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
G	22m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Allt an Rathain
Н	27m SW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
Н	33m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Н	38m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Allt an Rathain
I	38m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Allt an Rathain





**Grid ref**: 230710 824321

ID	Location	Type of water feature	Ground level	Permanence	Name
Н	66m SW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Allt an Rathain
5	119m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Allt a' Bhuachaille
J	144m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Allt a' Bhuachaille
K	153m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
K	160m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
K	160m N	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
9	179m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
J	188m N	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Allt a' Bhuachaille
L	193m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Allt a' Bhuachaille
M	210m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Allt a' Bhuachaille
N	232m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
0	243m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Р	243m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.



Contact us with any questions at:



**Grid ref**: 230710 824321

#### **6.2 Surface water features**

Records within 250m 15

Covering rivers, streams and lakes (some overlap with OS MasterMap Water Network data in previous section) but additionally covers smaller features such as ponds. Rivers and streams narrower than 5m are represented as a single line. Lakes, ponds and rivers or streams wider than 5m are represented as polygons.

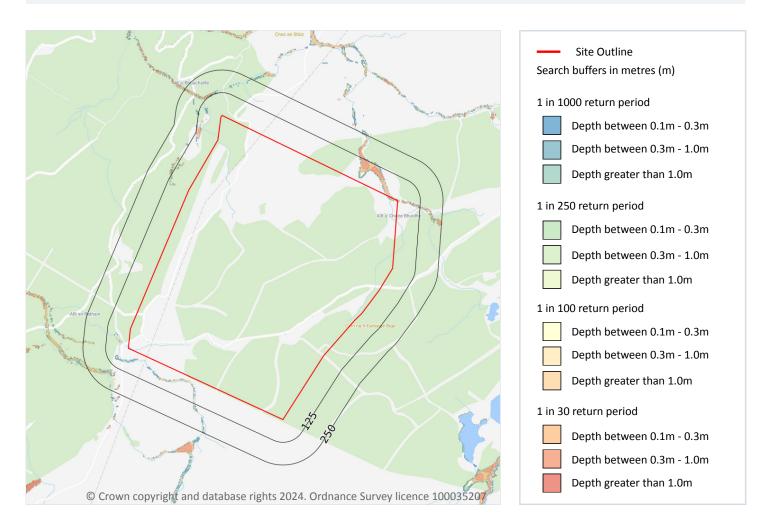
Features are displayed on the Hydrology map on page 25 >

This data is sourced from the Ordnance Survey.



**Grid ref**: 230710 824321

## 7 River flooding



#### 7.1 River flooding

Highest risk on site	1 in 30 year, 0.1m - 0.3m
Highest risk within 50m	1 in 30 year, 0.3m - 1.0m

This is an assessment of flood risk for rivers in Scotland produced using modelled data, provided by Ambiental Risk Analytics. It also takes account of flood defence information provided by the Scottish Environment Protection Agency (SEPA). It shows the chance of flooding from rivers presented in the following categories:

- 1 in 30 year (3.33%)
- 1 in 100 year (1%)
- 1 in 250 year (0.4%)





**Grid ref**: 230710 824321

#### and 1 in 1,000 year (0.1%)

The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site. The table below shows the maximum flood depths for a range of return periods for the site.

Features are displayed on the River flooding map on page 29 >

Return period	Maximum modelled depth
1 in 1000 year	Between 0.3m and 1.0m
1 in 250 year	Between 0.3m and 1.0m
1 in 100 year	Between 0.3m and 1.0m
1 in 30 year	Between 0.1m and 0.3m

This data is sourced from Ambiental Risk Analytics.





Negligible

**Grid ref**: 230710 824321

## 8 Coastal flooding - Coastal flooding

#### 8.1 Coastal flooding

Highest risk on site Negligible

#### Highest risk within 50m

This is an assessment of coastal flood risk in Scotland produced using modelled data, provided by Ambiental Risk Analytics. It also takes account of flood defence information provided by the Scottish Environment Protection Agency (SEPA). It shows the chance of coastal flooding presented in the following categories:

- 1 in 30 year (3.33%)
- 1 in 100 year (1%)
- 1 in 250 year (0.4%)
- and 1 in 1,000 year (0.1%)

The data shown on the map shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site. The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Negligible
1 in 250 year	Negligible
1 in 100 year	Negligible
1 in 30 year	Negligible

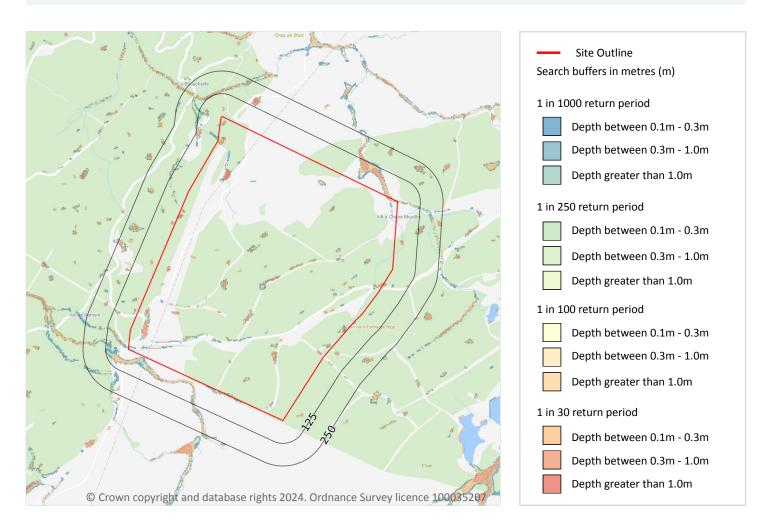
This data is sourced from Ambiental Risk Analytics.





**Grid ref**: 230710 824321

## 9 Surface water flooding



#### 9.1 Surface water flooding

Highest risk on site 1 in 30 year, Greater than 1.0m

#### Highest risk within 50m

1 in 30 year, Greater than 1.0m

**Date**: 1 May 2024

Ambiental Risk Analytics surface water (pluvial) FloodMap identifies areas likely to flood as a result of extreme rainfall events, i.e. land naturally vulnerable to surface water ponding or flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1,000 year rainfall events. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though some older ones may flood in a 1 in 5 year rainfall event.

Features are displayed on the Surface water flooding map on page 32 >

The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.





**Grid ref**: 230710 824321

The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Greater than 1.0m
1 in 250 year	Greater than 1.0m
1 in 100 year	Greater than 1.0m
1 in 30 year	Greater than 1.0m

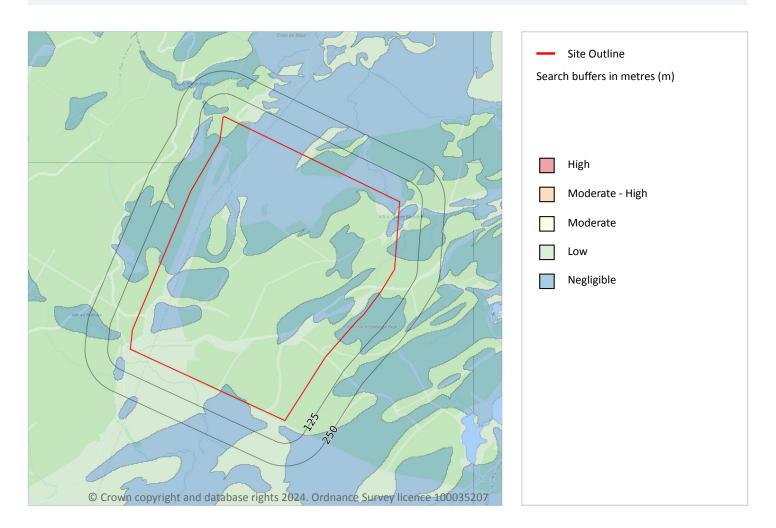
This data is sourced from Ambiental Risk Analytics.





**Grid ref**: 230710 824321

## 10 Groundwater flooding



#### **10.1 Groundwater flooding**

Highest risk on site	Low
Highest risk within 50m	Low

Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property. This risk assessment is based on a 1 in 100 year return period and a 5m Digital Terrain Model (DTM).

Features are displayed on the Groundwater flooding map on page 34 >

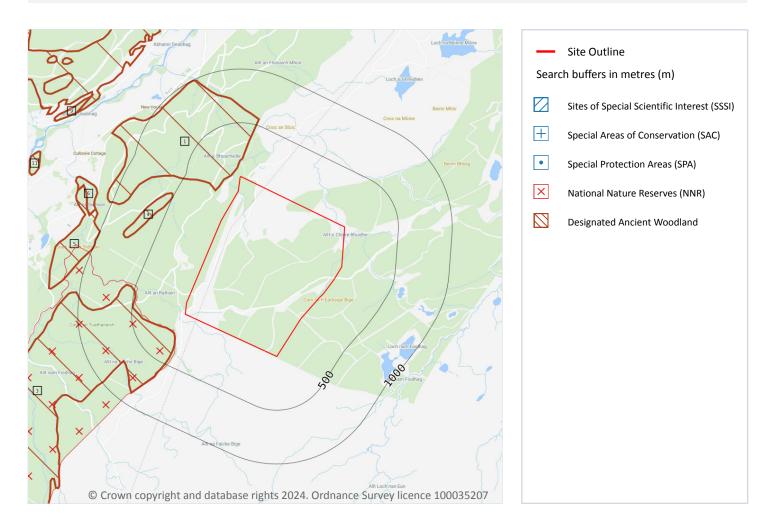
This data is sourced from Ambiental Risk Analytics.





**Grid ref**: 230710 824321

## 11 Environmental designations



#### 11.1 Sites of Special Scientific Interest (SSSI)

#### Records within 2000m 1

Sites providing statutory protection for the best examples of UK flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were renotified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and (in Scotland) by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2010.

Features are displayed on the Environmental designations map on page 35 >

ID	Location	Name	Data source
-	1981m NW	Glen Affric	Scottish Natural Heritage





**Grid ref**: 230710 824321

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

#### 11.2 Conserved wetland sites (Ramsar sites)

Records within 2000m 0

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. They cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. These sites cover a broad definition of wetland; marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, and even some marine areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

#### 11.3 Special Areas of Conservation (SAC)

Records within 2000m 1

Areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive.

Features are displayed on the Environmental designations map on page 35 >

ID	Location	Name	Features of interest	Habitat description	Data source
-	1981m NW	Strathgla ss Complex	Clear-water lakes or lochs with aquatic vegetation and poor to moderate nutrient levels; Wet heathland with cross-leaved heath; Dry heaths; Alpine and subalpine heaths; Mountain willow scrub; Montane acid grasslands; Species-rich grassland with mat-grass in upland areas; Tall herb communities; Blanket bog; Very wet mires often identified by an unstable 'quaking' surface; Calcium-rich springwater-fed fens; High-altitude plant communities associated with areas of water seepage; Acidic scree; Plants in crevices in base-rich rocks; Plants in crevices on acid rocks; Caledonian forest; Bog woodland; Atlantic salmon; Otter.	Bogs, Marshes, Water fringed vegetation, Fens; Heath, Scrub, Maquis and Garrigue, Phygrana; Alpine and sub-Alpine grassland; Humid grassland, Mesophile grassland; Broad-leaved deciduous woodland; Dry grassland, Steppes; Inland water bodies (Standing water, Running water); Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites); Inland rocks, Screes, Sands, Permanent Snow and ice; Coniferous woodland	Scottish Natural Heritage

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.





**Grid ref**: 230710 824321

### 11.4 Special Protection Areas (SPA)

Records within 2000m 1

Sites classified by the UK Government under the EC Birds Directive, SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union.

Features are displayed on the Environmental designations map on page 35 >

ID	Location	Name	Species of interest	Habitat description	Data source
-	1981m NW	Glen Affric to Strathconon	Golden eagle	Inland water bodies (Standing water, Running water); Mixed woodland; Humid grassland, Mesophile grassland; Bogs, Marshes, Water fringed vegetation, Fens; Coniferous woodland; Inland rocks, Screes, Sands, Permanent Snow and ice; Broad-leaved deciduous woodland; Heath, Scrub, Maquis and Garrigue, Phygrana; Improved grassland; Alpine and sub-Alpine grassland	Scottish Natural Heritage

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

### 11.5 National Nature Reserves (NNR)

### Records within 2000m 2

Sites containing examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats, provide special opportunities for scientific study or to provide public recreation compatible with natural heritage interests.

Features are displayed on the Environmental designations map on page 35 >

ID	Location	Name	Data source
2	182m SW	Glen Affric	Scottish Natural Heritage
-	1990m NW	Glen Affric	Scottish Natural Heritage

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

### 11.6 Local Nature Reserves (LNR)

### Records within 2000m

Sites managed for nature conservation, and to provide opportunities for research and education, or simply enjoying and having contact with nature. They are declared by local authorities under the National Parks and Access to the Countryside Act 1949 after consultation with the relevant statutory nature conservation agency.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.





**Grid ref**: 230710 824321

### 11.7 Designated Ancient Woodland

Records within 2000m 12

Ancient woodlands are classified as areas which have been wooded continuously since at least 1600 AD. This includes semi-natural woodland and plantations on ancient woodland sites. 'Wooded continuously' does not mean there is or has previously been continuous tree cover across the whole site, and not all trees within the woodland have to be old.

Features are displayed on the Environmental designations map on page 35 >

ID	Location	Name	Woodland Type
1	76m N	Unknown	Long-Established (of plantation origin)
3	202m SW	Coille An Tuathanaich	Long-Established (of plantation origin)
4	502m NW	Unknown	Long-Established (of plantation origin)
5	997m W	Unknown	Long-Established (of plantation origin)
6	1118m W	Unknown	Long-Established (of plantation origin)
-	1448m N	Unknown	Long-Established (of plantation origin)
8	1458m NW	Unknown	Ancient (of semi-natural origin)
9	1577m NW	Unknown	Ancient (of semi-natural origin)
-	1693m N	Unknown	Long-Established (of plantation origin)
11	1752m NW	Unknown	Long-Established (of plantation origin)
-	1767m W	Unknown	Long-Established (of plantation origin)
-	1817m W	Unknown	Long-Established (of plantation origin)

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

### 11.8 Biosphere Reserves

Records within 2000m 0

Biosphere Reserves are internationally recognised by UNESCO as sites of excellence to balance conservation and socioeconomic development between nature and people. They are recognised under the Man and the Biosphere (MAB) Programme with the aim of promoting sustainable development founded on the work of the local community.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.





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Grid ref: 230710 824321

#### 11.9 Forest Parks

Records within 2000m

These are areas managed by the Forestry Commission designated on the basis of recreational, conservation or scenic interest.

This data is sourced from the Forestry Commission.

#### 11.10 Marine Conservation Zones

Records within 2000m 0

A type of marine nature reserve in UK waters established under the Marine and Coastal Access Act (2009). They are designated with the aim to protect nationally important, rare or threatened habitats and species.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.





**Grid ref**: 230710 824321

## 12 Visual and cultural designations

### **12.1 World Heritage Sites**

Records within 250m 0

Sites designated for their globally important cultural or natural interest requiring appropriate management and protection measures. World Heritage Sites are designated to meet the UK's commitments under the World Heritage Convention.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

### 12.2 Area of Outstanding Natural Beauty

Records within 250m 0

Areas of Outstanding Natural Beauty (AONB) are conservation areas, chosen because they represent 18% of the finest countryside. Each AONB has been designated for special attention because of the quality of their flora, fauna, historical and cultural associations, and/or scenic views. The National Parks and Access to the Countryside Act of 1949 created AONBs and the Countryside and Rights of Way Act, 2000 added further regulation and protection. There are likely to be restrictions to some developments within these areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

#### 12.3 National Parks

Records within 250m 0

In England and Wales, the purpose of National Parks is to conserve and enhance landscapes within the countryside whilst promoting public enjoyment of them and having regard for the social and economic well-being of those living within them. In Scotland National Parks have the additional purpose of promoting the sustainable use of the natural resources of the area and the sustainable social and economic development of its communities. The National Parks and Access to the Countryside Act 1949 established the National Park designation in England and Wales, and The National Parks (Scotland) Act 2000 in Scotland.

This data is sourced from Natural England, Natural Resources Wales and the Scottish Government.

### 12.4 Listed Buildings

Records within 250m 0

Buildings listed for their special architectural or historical interest. Building control in the form of 'listed building consent' is required in order to make any changes to that building which might affect its special interest. Listed buildings are graded to indicate their relative importance, however building controls apply to all buildings equally, irrespective of their grade, and apply to the interior and exterior of the building in its entirety, together with any curtilage structures.



40



**Grid ref**: 230710 824321

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

#### 12.5 Conservation Areas

Records within 250m 0

Local planning authorities are obliged to designate as conservation areas any parts of their own area that are of special architectural or historic interest, the character and appearance of which it is desirable to preserve or enhance. Designation of a conservation area gives broader protection than the listing of individual buildings. All the features within the area, listed or otherwise, are recognised as part of its character. Conservation area designation is the means of recognising the importance of all factors and of ensuring that planning decisions address the quality of the landscape in its broadest sense.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

#### 12.6 Scheduled Ancient Monuments

Records within 250m 0

A scheduled monument is an historic building or site that is included in the Schedule of Monuments kept by the Secretary of State for Digital, Culture, Media and Sport. The regime is set out in the Ancient Monuments and Archaeological Areas Act 1979. The Schedule of Monuments has c.20,000 entries and includes sites such as Roman remains, burial mounds, castles, bridges, earthworks, the remains of deserted villages and industrial sites. Monuments are not graded, but all are, by definition, considered to be of national importance.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

#### 12.7 Registered Parks and Gardens

Records within 250m 0

Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process, meaning that planning authorities must consider the impact of any proposed development on the special character of the landscape.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.



Grid ref: 230710 824321

## 13 Agricultural designations



## **13.1** Agricultural Land Classification

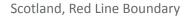
### Records within 250m 4

Classification of the quality of agricultural land taking into consideration multiple factors inclusing climate, physical geography and soil properties. It should be noted that the categories for the grading of agricultural land are not consistent across England, Wales and Scotland.

Features are displayed on the Agricultural designations map on page 42 >

ID	Location	Classification	Description
1	On site	Grade 5.2	Land Suited only to Improved Grassland and Rough Grazings
2	On site	Grade 6.3	Land Suited only to Improved Grassland and Rough Grazings
3	On site	Grade 6.3	Land Suited only to Improved Grassland and Rough Grazings







**Grid ref**: 230710 824321

4	On site	Grade 5.3	Land Suited only to Improved Grassland and Rough Grazings
ID	Location	Classification	Description

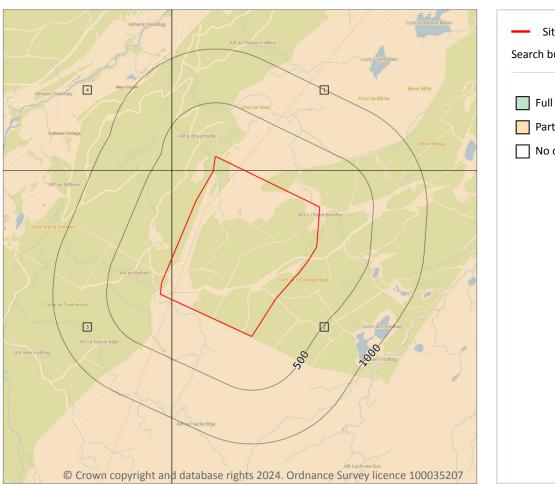
This data is sourced from the James Hutton Institute.

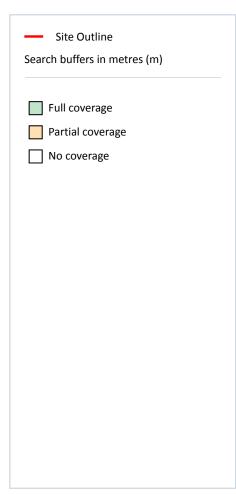




Grid ref: 230710 824321

# 14 Geology 1:10,000 scale - Availability





## 14.1 10k Availability

#### Records within 500m 4

An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on page 44 >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	No coverage	No coverage	NH32NW
2	On site	No coverage	Full	No coverage	No coverage	NH32SW
3	On site	No coverage	Full	No coverage	No coverage	NH22SE
4	336m NW	Full	Full	No coverage	No coverage	NH22NE

info@groundsure.com ↗

01273 257 755



Contact us with any questions at: Date: 1 May 2024

/ 2024





**Grid ref**: 230710 824321

This data is sourced from the British Geological Survey.





Grid ref: 230710 824321

# Geology 1:10,000 scale - Artificial and made ground

## 14.2 Artificial and made ground (10k)

Records within 500m 0

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

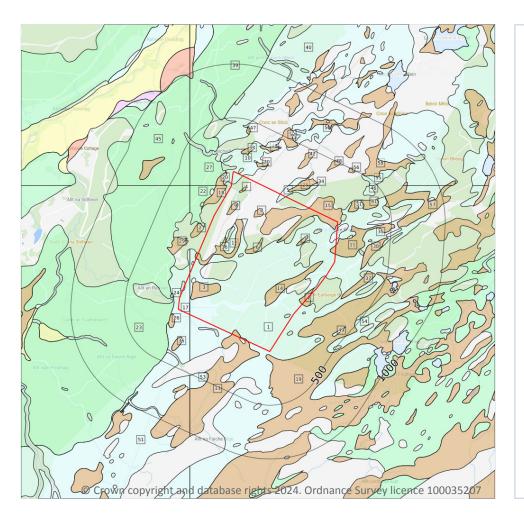
This data is sourced from the British Geological Survey.





**Grid ref**: 230710 824321

# Geology 1:10,000 scale - Superficial



Site OutlineSearch buffers in metres (m)

Landslip (10k)

Superficial geology (10k)
Please see table for more details.

## 14.3 Superficial geology (10k)

Records within 500m 58

Superficial geological deposits at 1:10,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:10,000 scale - Superficial map on page 47 >

ID	Location	LEX Code	Description Rock description	
1	On site	TILLD- DMTN	Till, Devensian - Diamicton	Diamicton
2	On site	PEAT-P	Peat - Peat	Peat
3	On site	PEAT-P	Peat - Peat	Peat





**Grid ref**: 230710 824321

ID	Location	LEX Code	Description	Rock description
4	On site	PEAT-P	Peat - Peat	Peat
5	On site	TILLD- DMTN	Till, Devensian - Diamicton	Diamicton
6	On site	PEAT-P	Peat - Peat	Peat
7	On site	PEAT-P	Peat - Peat	Peat
8	On site	PEAT-P	Peat - Peat	Peat
9	On site	PEAT-P	Peat - Peat	Peat
10	On site	TILLD- DMTN	Till, Devensian - Diamicton	Diamicton
11	On site	PEAT-P	Peat - Peat	Peat
12	On site	TILLD- DMTN	Till, Devensian - Diamicton	Diamicton
13	On site	PEAT-P	Peat - Peat	Peat
14	On site	PEAT-P	Peat - Peat	Peat
15	On site	PEAT-P	Peat - Peat	Peat
13	0.1.0.1.0			
16	On site	PEAT-P	Peat - Peat	Peat
				Peat Diamicton
16	On site	PEAT-P TILLD-	Peat - Peat	
16 17	On site	PEAT-P TILLD- DMTN	Peat - Peat Till, Devensian - Diamicton	Diamicton
<b>16 17</b> 18	On site On site	PEAT-P TILLD- DMTN PEAT-P	Peat - Peat  Till, Devensian - Diamicton  Peat - Peat	<b>Diamicton</b> Peat
16 17 18 19	On site On site 31m NW 32m S	PEAT-P TILLD- DMTN PEAT-P PEAT-P	Peat - Peat  Till, Devensian - Diamicton  Peat - Peat  Peat - Peat	<b>Diamicton</b> Peat  Peat
16 17 18 19 20	On site On site  31m NW 32m S 41m N	PEAT-P TILLD- DMTN PEAT-P PEAT-P PEAT-P	Peat - Peat  Till, Devensian - Diamicton  Peat - Peat  Peat - Peat  Peat - Peat	Diamicton  Peat  Peat  Peat
16 17 18 19 20 21	On site On site  31m NW 32m S 41m N 45m NW	PEAT-P TILLD- DMTN PEAT-P PEAT-P PEAT-P HMGDD-	Peat - Peat  Till, Devensian - Diamicton  Peat - Peat  Peat - Peat  Peat - Peat  Peat - Peat  Hummocky (moundy) Glacial Deposits, Devensian -	Peat Peat Peat Peat Diamicton, Sand And Gravel [unlithified Deposits Coding
16 17 18 19 20 21 22	On site On site  31m NW 32m S 41m N 45m NW	PEAT-P TILLD- DMTN  PEAT-P PEAT-P PEAT-P HMGDD- XDSV  HMGDD-	Peat - Peat  Till, Devensian - Diamicton  Peat - Peat  Peat - Peat  Peat - Peat  Peat - Peat  Hummocky (moundy) Glacial Deposits, Devensian - Diamicton, Sand And Gravel  Hummocky (moundy) Glacial Deposits, Devensian -	Peat Peat Peat Peat Diamicton, Sand And Gravel [unlithified Deposits Coding Scheme - Extended] Diamicton, Sand And Gravel [unlithified Deposits Coding
16 17 18 19 20 21 22 23	On site On site  31m NW 32m S 41m N 45m NW 45m NW	PEAT-P TILLD- DMTN  PEAT-P  PEAT-P  PEAT-P  HMGDD- XDSV  HMGDD- XDSV	Peat - Peat  Till, Devensian - Diamicton  Peat - Peat  Peat - Peat  Peat - Peat  Peat - Peat  Hummocky (moundy) Glacial Deposits, Devensian - Diamicton, Sand And Gravel  Hummocky (moundy) Glacial Deposits, Devensian - Diamicton, Sand And Gravel  Hummocky (moundy) Glacial Deposits, Devensian - Diamicton, Sand And Gravel	Peat Peat Peat Peat Diamicton, Sand And Gravel [unlithified Deposits Coding Scheme - Extended] Diamicton, Sand And Gravel [unlithified Deposits Coding Scheme - Extended] Diamicton, Sand And Gravel [unlithified Deposits Coding Scheme - Extended] Diamicton, Sand And Gravel [unlithified Deposits Coding





**Grid ref**: 230710 824321

ID	Location	LEX Code	Description	Rock description
27	67m N	HMGDD- XDSV	Hummocky (moundy) Glacial Deposits, Devensian - Diamicton, Sand And Gravel	Diamicton, Sand And Gravel [unlithified Deposits Coding Scheme - Extended]
28	107m N	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
29	130m W	PEAT-P	Peat - Peat	Peat
30	136m N	PEAT-P	Peat - Peat	Peat
31	138m NE	PEAT-P	Peat - Peat	Peat
32	142m NE	PEAT-P	Peat - Peat	Peat
33	183m N	PEAT-P	Peat - Peat	Peat
34	200m NE	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
35	223m E	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
36	225m SW	PEAT-P	Peat - Peat	Peat
37	231m E	PEAT-P	Peat - Peat	Peat
38	250m E	PEAT-P	Peat - Peat	Peat
39	251m N	HMGDD- XDSV	Hummocky (moundy) Glacial Deposits, Devensian - Diamicton, Sand And Gravel	Diamicton, Sand And Gravel [unlithified Deposits Coding Scheme - Extended]
40	266m N	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
41	268m NE	PEAT-P	Peat - Peat	Peat
42	286m NE	PEAT-P	Peat - Peat	Peat
43	308m N	PEAT-P	Peat - Peat	Peat
44	335m N	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
45	336m NW	HMGDD- XDSV	Hummocky (moundy) Glacial Deposits, Devensian - Diamicton, Sand And Gravel	Diamicton, Sand And Gravel [unlithified Deposits Coding Scheme - Extended]
46	349m NE	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
47	372m N	PEAT-P	Peat - Peat	Peat
48	381m NE	PEAT-P	Peat - Peat	Peat
49	397m SE	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
50	398m N	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
51	405m SW	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton



questions at: Date: 1 May 2024



**Grid ref**: 230710 824321

ID	Location	LEX Code	Description	Rock description
52	423m N	PEAT-P	Peat - Peat	Peat
53	426m SW	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
54	432m SE	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
55	450m NE	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
56	461m NE	PEAT-P	Peat - Peat	Peat
57	464m NE	PEAT-P	Peat - Peat	Peat
58	495m NE	PEAT-P	Peat - Peat	Peat

This data is sourced from the British Geological Survey.

## 14.4 Landslip (10k)

Records within 500m 0

Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

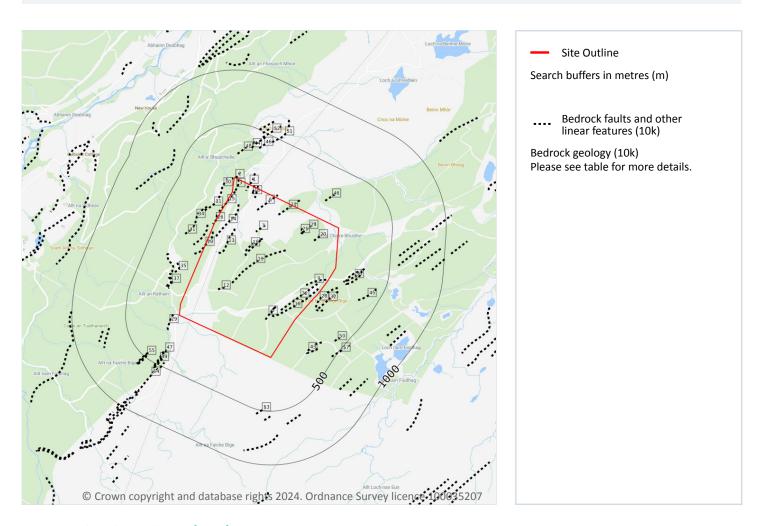
This data is sourced from the British Geological Survey.





**Grid ref**: 230710 824321

## Geology 1:10,000 scale - Bedrock



## 14.5 Bedrock geology (10k)

Records within 500m 0

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

This data is sourced from the British Geological Survey.

### 14.6 Bedrock faults and other linear features (10k)

**Records within 500m** 58

Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.



Contact us with any questions at: Date: 1 May 2024



**Grid ref**: 230710 824321

### Features are displayed on the Geology 1:10,000 scale - Bedrock map on page 51 >

ID	Location	Category	Description
1	On site	LANDFORM	Ice mariginal glacial meltwater channel, single side right
2	On site	LANDFORM	Ice mariginal glacial meltwater channel, single side right
3	On site	LANDFORM	Ice mariginal glacial meltwater channel, single side right
4	On site	LANDFORM	Ice mariginal glacial meltwater channel, single side right
5	On site	LANDFORM	Ice mariginal glacial meltwater channel, single side right
6	On site	LANDFORM	Axis of large-scale glacial flute
7	On site	LANDFORM	Axis of large-scale glacial flute
8	On site	LANDFORM	Marked concave break of slope, arrowheads denote uphill side
9	On site	LANDFORM	Marked concave break of slope, arrowheads denote uphill side
10	On site	LANDFORM	Marked concave break of slope, arrowheads denote uphill side
11	On site	LANDFORM	Marked concave break of slope, arrowheads denote uphill side
12	On site	LANDFORM	Marked concave break of slope, arrowheads denote uphill side
13	On site	LANDFORM	Ice mariginal glacial meltwater channel, single side right
14	On site	LANDFORM	Ice mariginal glacial meltwater channel, single side right
15	On site	LANDFORM	Ice mariginal glacial meltwater channel, single side right
16	On site	LANDFORM	Ice mariginal glacial meltwater channel, single side right
17	On site	LANDFORM	Ice mariginal glacial meltwater channel, single side right
18	On site	LANDFORM	Ice mariginal glacial meltwater channel, single side right
19	On site	LANDFORM	Marked concave break of slope, arrowheads denote uphill side
20	On site	LANDFORM	Axis of large-scale glacial flute
21	On site	LANDFORM	Axis of large-scale glacial flute
22	On site	LANDFORM	Axis of large-scale glacial flute
23	On site	LANDFORM	Axis of large-scale glacial flute
24	On site	LANDFORM	Axis of large-scale glacial flute
25	On site	LANDFORM	Marked concave break of slope, arrowheads denote uphill side
26	0m NW	LANDFORM	Ice mariginal glacial meltwater channel, single side right
27	41m NW	LANDFORM	Ice mariginal glacial meltwater channel, single side right





**Grid ref**: 230710 824321

ID	Location	Category	Description
28	43m SE	LANDFORM	Marked concave break of slope, arrowheads denote uphill side
29	54m SW	LANDFORM	Marked concave break of slope, arrowheads denote uphill side
30	66m N	LANDFORM	Ice mariginal glacial meltwater channel, single side right
31	80m NW	LANDFORM	Ice mariginal glacial meltwater channel, single side right
32	96m SE	LANDFORM	Axis of large-scale glacial flute
33	128m E	LANDFORM	Axis of large-scale glacial flute
34	132m NW	LANDFORM	Ice mariginal glacial meltwater channel, single side right
35	139m W	LANDFORM	Glacial meltwater channel, undifferenciated, centre line
36	145m E	LANDFORM	Form line
37	153m W	LANDFORM	Crestline of linear feature
38	157m W	LANDFORM	Marked concave break of slope, arrowheads denote uphill side
39	172m W	LANDFORM	Marked concave break of slope, arrowheads denote uphill side
40	173m NE	LANDFORM	Axis of large-scale glacial flute
41	179m NW	LANDFORM	Ice mariginal glacial meltwater channel, single side right
42	222m N	LANDFORM	Axis of large-scale glacial flute
43	258m SE	LANDFORM	Marked concave break of slope, arrowheads denote uphill side
44	295m N	LANDFORM	Ice mariginal glacial meltwater channel, single side right
45	333m E	LANDFORM	Axis of large-scale glacial flute
46	345m N	LANDFORM	Axis of large-scale glacial flute
47	349m SW	LANDFORM	Marked concave break of slope, arrowheads denote uphill side
48	366m N	LANDFORM	Axis of large-scale glacial flute
49	367m SW	LANDFORM	Crestline of linear feature
50	409m SE	LANDFORM	Crestline of linear feature
51	448m N	LANDFORM	Ice mariginal glacial meltwater channel, single side right
52	450m N	LANDFORM	Axis of large-scale glacial flute
53	454m S	LANDFORM	Axis of large-scale glacial flute
54	458m SW	LANDFORM	Crestline of linear feature
55	460m SW	LANDFORM	Marked concave break of slope, arrowheads denote uphill side







**Grid ref**: 230710 824321

ID	Location	Category	Description
56	469m SW	LANDFORM	Crestline of linear feature
57	473m SE	LANDFORM	Axis of large-scale glacial flute
58	487m N	LANDFORM	Axis of large-scale glacial flute

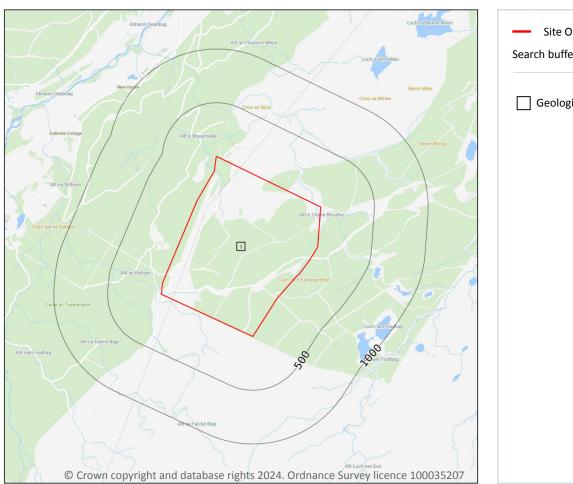
This data is sourced from the British Geological Survey.

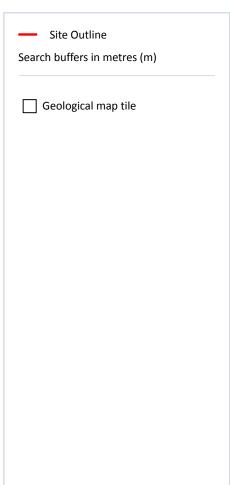




Grid ref: 230710 824321

# 15 Geology 1:50,000 scale - Availability





### 15.1 50k Availability

Records within 500m

An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:50,000 scale - Availability map on page 55 >

1	On site	No coverage	Full	Full	No coverage	SC073w_Invermoriston_v4
ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.

This data is sourced from the British Geological Survey.





**Grid ref**: 230710 824321

## Geology 1:50,000 scale - Artificial and made ground

### 15.2 Artificial and made ground (50k)

Records within 500m 0

Details of made, worked, infilled, disturbed and landscaped ground at 1:50,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

This data is sourced from the British Geological Survey.

### 15.3 Artificial ground permeability (50k)

Records within 50m 0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

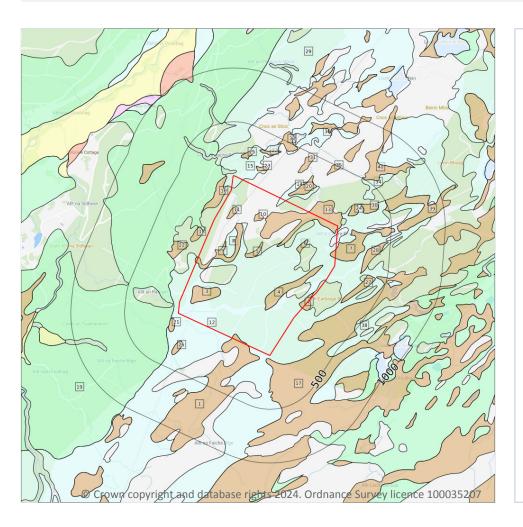
This data is sourced from the British Geological Survey.





Grid ref: 230710 824321

# Geology 1:50,000 scale - Superficial



Site OutlineSearch buffers in metres (m)

Landslip (50k)

Superficial geology (50k) Please see table for more details.

## 15.4 Superficial geology (50k)

#### Records within 500m 40

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:50,000 scale - Superficial map on page 57 >

ID	Location	LEX Code	Description	Rock description
1	On site	PEAT-P	PEAT	PEAT
2	On site	PEAT-P	PEAT	PEAT
3	On site	PEAT-P	PEAT	PEAT
4	On site	PEAT-P	PEAT	PEAT





**Grid ref**: 230710 824321

ID	Location	LEX Code	Description	Rock description
5	On site	PEAT-P	PEAT	PEAT
6	On site	PEAT-P	PEAT	PEAT
7	On site	PEAT-P	PEAT	PEAT
8	On site	TILLD- DMTN	TILL, DEVENSIAN	DIAMICTON
9	On site	PEAT-P	PEAT	PEAT
10	On site	PEAT-P	PEAT	PEAT
11	On site	PEAT-P	PEAT	PEAT
12	On site	TILLD- DMTN	TILL, DEVENSIAN	DIAMICTON
13	On site	PEAT-P	PEAT	PEAT
14	On site	TILLD- DMTN	TILL, DEVENSIAN	DIAMICTON
15	On site	TILLD- DMTN	TILL, DEVENSIAN	DIAMICTON
16	31m NW	PEAT-P	PEAT	PEAT
17	32m S	PEAT-P	PEAT	PEAT
18	45m NW	PEAT-P	PEAT	PEAT
19	45m NW	HMGDD- XDSV	HUMMOCKY (MOUNDY) GLACIAL DEPOSITS, DEVENSIAN	DIAMICTON, SAND AND GRAVEL
20	56m NE	PEAT-P	PEAT	PEAT
21	67m SW	PEAT-P	PEAT	PEAT
22	130m W	PEAT-P	PEAT	PEAT
23	136m N	PEAT-P	PEAT	PEAT
24	137m NE	PEAT-P	PEAT	PEAT
25	182m N	PEAT-P	PEAT	PEAT
26	225m SW	PEAT-P	PEAT	PEAT
27	231m E	PEAT-P	PEAT	PEAT
28	250m E	PEAT-P	PEAT	PEAT
29	266m N	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
30	268m NE	PEAT-P	PEAT	PEAT





**Grid ref**: 230710 824321

ID	Location	LEX Code	Description	Rock description
31	286m NE	PEAT-P	PEAT	PEAT
32	308m N	PEAT-P	PEAT	PEAT
33	335m N	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
34	349m NE	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
35	381m NE	PEAT-P	PEAT	PEAT
36	398m N	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
37	423m N PEAT-P PEAT	PEAT	PEAT	
38	432m SE	TILLD-DMTN	LD-DMTN TILL, DEVENSIAN DIAMICTO	DIAMICTON
39	464m NE	E PEAT-P PEAT PEAT	PEAT	
40	496m NE	PEAT-P	PEAT	PEAT

This data is sourced from the British Geological Survey.

### 15.5 Superficial permeability (50k)

Records within 50m 22

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any superficial deposits (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Mixed	Low	Very Low
On site	Mixed	Low	Very Low
On site	Mixed	Low	Very Low
On site	Mixed	Low	Very Low
On site	Mixed	Low	Very Low
On site	Mixed	Low	Very Low
On site	Mixed	Low	Very Low
On site	Mixed	Low	Very Low
On site	Mixed	Low	Very Low
On site	Mixed	Low	Very Low
On site	Mixed	Low	Very Low





**Grid ref**: 230710 824321

Location	Flow type	Maximum permeability	Minimum permeability
On site	Mixed	High	Low
On site	Mixed	High	Low
On site	Mixed	High	Low
On site	Mixed	High	Low
On site	Mixed	High	Low
31m NW	Mixed	Low	Very Low
32m S	Mixed	Low	Very Low
41m N	Mixed	Low	Very Low
45m NW	Mixed	Low	Very Low
45m NW	Mixed	High	Low
46m SW	Mixed	High	Low

This data is sourced from the British Geological Survey.

### 15.6 Landslip (50k)

Records within 500m 0

Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

## 15.7 Landslip permeability (50k)

Records within 50m 0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any landslip deposits (the zone between the land surface and the water table).

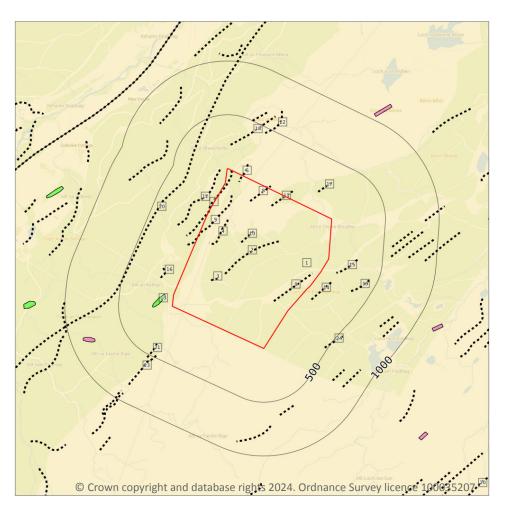
This data is sourced from the British Geological Survey.





**Grid ref**: 230710 824321

# Geology 1:50,000 scale - Bedrock



Search buffers in metres (m)

Bedrock faults and other linear features (50k)

Bedrock geology (50k)

Please see table for more details.

### 15.8 Bedrock geology (50k)

#### Records within 500m 2

Bedrock geology at 1:50,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on page 61 >

ID	Location	LEX Code	Description	Rock age
1	On site	TAPS- PSAMM	TARVIE PSAMMITE FORMATION - PSAMMITE	-
13	76m W	UIPC-AMHS	UNNAMED IGNEOUS INTRUSION, PRE-CALEDONIAN - AMPHIBOLITE AND HORNBLENDE SCHIST	-

This data is sourced from the British Geological Survey.





**Grid ref**: 230710 824321

### 15.9 Bedrock permeability (50k)

Records within 50m

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of bedrock (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Fracture	Low	Low
On site	Fracture	Low	Low
On site	Fracture	Low	Low

This data is sourced from the British Geological Survey.

## 15.10 Bedrock faults and other linear features (50k)

Records within 500m 22

Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on page 61 >

ID	Location	Category	Description
2	On site	LANDFORM	Marked concave break in slope
3	On site	LANDFORM	Marked concave break in slope
4	On site	LANDFORM	Ice-marginal glacial single-sided meltwater channel, right
5	On site	LANDFORM	Ice-marginal glacial single-sided meltwater channel, right
6	On site	LANDFORM	Ice-marginal glacial single-sided meltwater channel, right
7	On site	LANDFORM	Ice-marginal glacial single-sided meltwater channel, right
8	On site	LANDFORM	Axis of large-scale glacial flute
9	On site	LANDFORM	Axis of large-scale glacial flute
10	On site	LANDFORM	Axis of large-scale glacial flute
11	On site	LANDFORM	Axis of large-scale glacial flute
12	67m N	LANDFORM	Ice-marginal glacial single-sided meltwater channel, right
14	96m SE	LANDFORM	Axis of large-scale glacial flute





**Grid ref**: 230710 824321

ID	Location	Category	Description
15	129m E	LANDFORM	Axis of large-scale glacial flute
16	153m W	LANDFORM	Linear feature crestline
17	172m NE	LANDFORM	Axis of large-scale glacial flute
18	222m N	LANDFORM	Axis of large-scale glacial flute
19	333m E	LANDFORM	Axis of large-scale glacial flute
20	341m NW	ALTERATION_AREA	Limit of pegmatitic rock veins
21	367m SW	LANDFORM	Linear feature crestline
22	449m N	LANDFORM	Ice-marginal glacial single-sided meltwater channel, right
23	458m SW	LANDFORM	Linear feature crestline
24	474m SE	LANDFORM	Axis of large-scale glacial flute

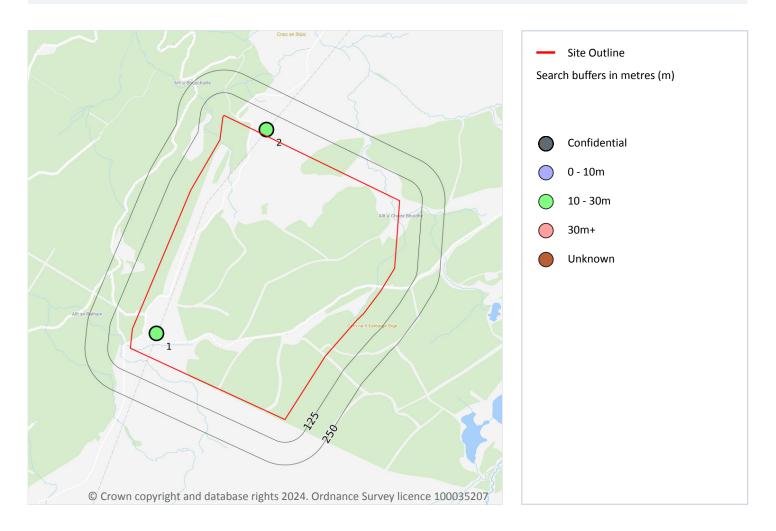
This data is sourced from the British Geological Survey.





Grid ref: 230710 824321

## **16 Boreholes**



#### 16.1 BGS Boreholes

#### Records within 250m 2

The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

Features are displayed on the Boreholes map on page 64 >

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	On site	230037 823930	BEAULY DENNY 400KV OVERHEAD TRANSMISSION LINE BF78-A	14.4	N	18949760 7
2	33m N	230643 825052	BEAULY DENNY 400KV OVERHEAD TRANSMISSION LINE BF75-C	13.3	N	18949759 7







**Grid ref**: 230710 824321

This data is sourced from the British Geological Survey.



Contact us with any questions at: <a href="mailto:info@groundsure.com">info@groundsure.com</a> ✓

01273 257 755



**Grid ref**: 230710 824321

# 17 Natural ground subsidence - Shrink swell clays



## 17.1 Shrink swell clays

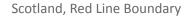
Records within 50m 5

The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and local drainage).

Features are displayed on the Natural ground subsidence - Shrink swell clays map on page 66 >

Location	Hazard rating	Details
On site	Negligible	Ground conditions predominantly non-plastic.
On site	Very low	Ground conditions predominantly low plasticity.







**Grid ref**: 230710 824321

Location	Hazard rating	Details
41m W	Negligible	Ground conditions predominantly non-plastic.
45m NW	Very low	Ground conditions predominantly low plasticity.

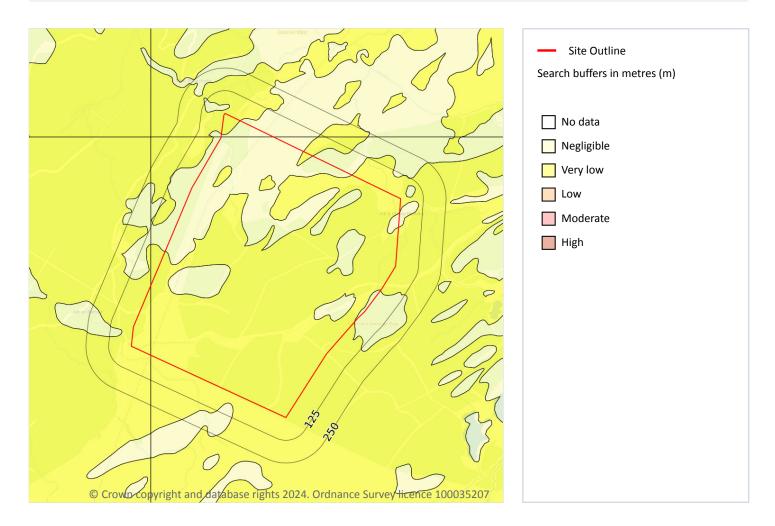
This data is sourced from the British Geological Survey.





Grid ref: 230710 824321

# Natural ground subsidence - Running sands



### 17.2 Running sands

Records within 50m 6

The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on page 68 >

Location	Hazard rating	Details
On site	Negligible	Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions.





**Grid ref**: 230710 824321

Location	Hazard rating	Details
On site	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.
20m N	Negligible	Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions.
31m NW	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.
36m NE	Negligible	Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions.
41m W	Negligible	Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions.

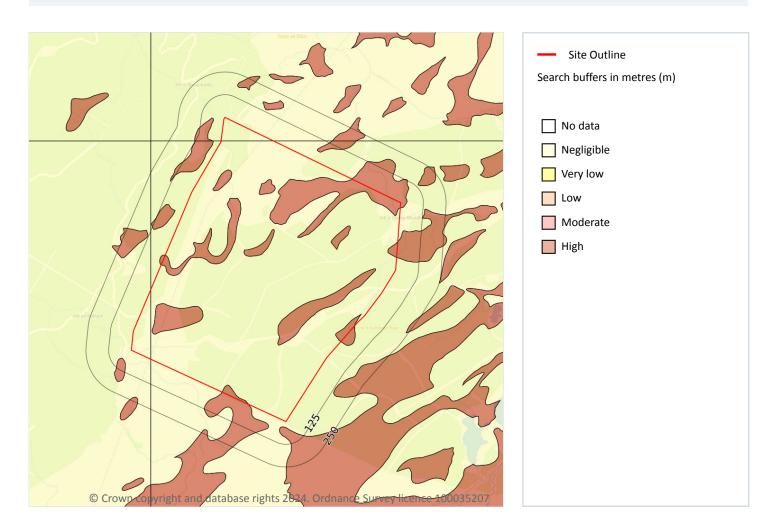
This data is sourced from the British Geological Survey.





Grid ref: 230710 824321

# Natural ground subsidence - Compressible deposits



### 17.3 Compressible deposits

Records within 50m

The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on page 70 >

Location	Hazard rating	Details
On site	Negligible	Compressible strata are not thought to occur.
On site	High	Highly compressible strata present. Significant constraint on land use depending on thickness.





**Grid ref**: 230710 824321

Location	Hazard rating	Details
31m NW	High	Highly compressible strata present. Significant constraint on land use depending on thickness.
32m S	High	Highly compressible strata present. Significant constraint on land use depending on thickness.
41m N	High	Highly compressible strata present. Significant constraint on land use depending on thickness.
45m NW	High	Highly compressible strata present. Significant constraint on land use depending on thickness.

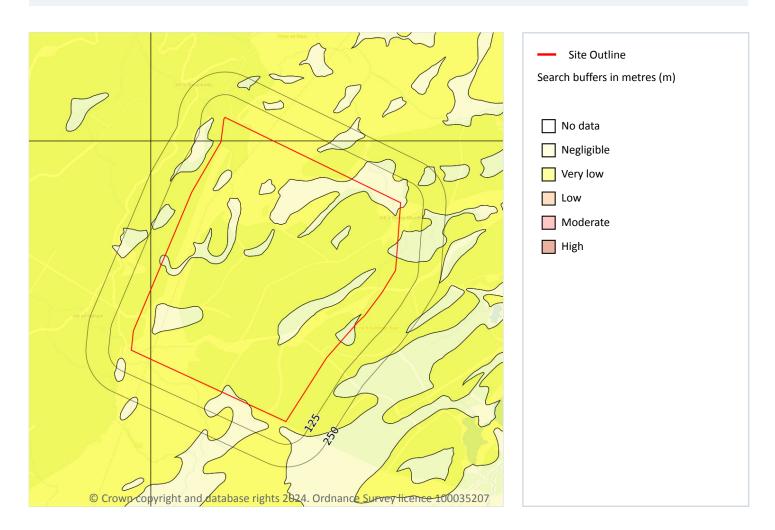
This data is sourced from the British Geological Survey.





Grid ref: 230710 824321

# Natural ground subsidence - Collapsible deposits



### **17.4 Collapsible deposits**

Records within 50m 6

The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on page 72 >

Location	Hazard rating	Details
On site	Negligible	Deposits with potential to collapse when loaded and saturated are believed not to be present.
On site	Very low	Deposits with potential to collapse when loaded and saturated are unlikely to be present.
31m NW	Negligible	Deposits with potential to collapse when loaded and saturated are believed not to be present.





**Grid ref**: 230710 824321

Location	Hazard rating	Details
32m S	Negligible	Deposits with potential to collapse when loaded and saturated are believed not to be present.
41m N	Negligible	Deposits with potential to collapse when loaded and saturated are believed not to be present.
45m NW	Negligible	Deposits with potential to collapse when loaded and saturated are believed not to be present.

This data is sourced from the British Geological Survey.





Grid ref: 230710 824321

# Natural ground subsidence - Landslides



### 17.5 Landslides

Records within 50m 7

The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on page 74 >

Location	Hazard rating	Details
On site	Very low	Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.





**Grid ref**: 230710 824321

Location	Hazard rating	Details
On site	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.
On site	Moderate	Slope instability problems are probably present or have occurred in the past. Land use should consider specifically the stability of the site.
20m E	Moderate	Slope instability problems are probably present or have occurred in the past. Land use should consider specifically the stability of the site.
25m S	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.
31m NW	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.
45m NW	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.

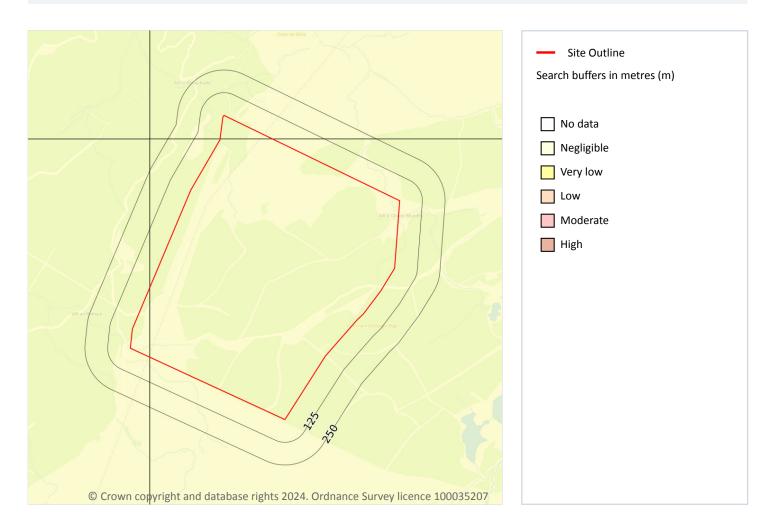
This data is sourced from the British Geological Survey.





Grid ref: 230710 824321

# Natural ground subsidence - Ground dissolution of soluble rocks



## 17.6 Ground dissolution of soluble rocks

Records within 50m 1

The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on <a href="mailto:page-76">page 76</a>

Location	Hazard rating	Details
On site	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.







**Grid ref**: 230710 824321

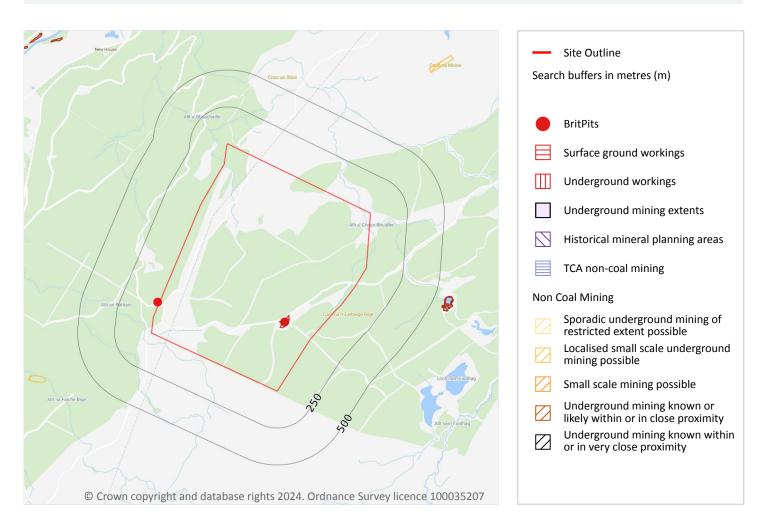
This data is sourced from the British Geological Survey.





**Grid ref**: 230710 824321

# 18 Mining and ground workings



#### 18.1 BritPits

#### Records within 500m 2

BritPits (an abbreviation of British Pits) is a database maintained by the British Geological Survey of currently active and closed surface and underground mineral workings. Details of major mineral handling sites, such as wharfs and rail depots are also held in the database.

Features are displayed on the Mining and ground workings map on page 78 >





**Grid ref**: 230710 824321

ID	Location	Details	Description		
Α	On site	Name: Guisachan Forest Pit Address: Tomich, Cannich, BEAULY, Ross-shire Commodity: Sand & Gravel Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority		
1	10m W	Name: Guisachan Forest Pit Address: Tomich, Cannich, BEAULY, Ross-shire Commodity: Igneous & Metamorphic Rock Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority		

This data is sourced from the British Geological Survey.

# 18.2 Surface ground workings

Records within 250m 1

Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

Features are displayed on the Mining and ground workings map on page 78 >

ID	Location	Land Use	Year of mapping	Mapping scale
Α	On site	Unspecified Disused Quarry	1991	1:10000

This is data is sourced from Ordnance Survey/Groundsure.

# 18.3 Underground workings

Records within 1000m 0

Historical land uses identified from Ordnance Survey mapping that indicate the presence of underground workings e.g. mine shafts.

This is data is sourced from Ordnance Survey/Groundsure.





0

**Grid ref**: 230710 824321

# 18.4 Underground mining extents

Records within 500m

This data identifies underground mine workings that could present a potential risk, including adits and seam workings. These features have been identified from BGS Geological mapping and mine plans sourced from the BGS and various collections and sources.

This data is sourced from Groundsure.

# 18.5 Historical Mineral Planning Areas

Records within 500m 0

Boundaries of mineral planning permissions for England and Wales. This data was collated between the 1940s (and retrospectively to the 1930s) and the mid 1980s. The data includes permitted, withdrawn and refused permissions.

This data is sourced from the British Geological Survey.

# 18.6 Non-coal mining

Records within 1000m 1

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

Features are displayed on the Mining and ground workings map on page 78 >

ID	Locatio	n	Name	Commodity	Class	Likelihood
2	783m S	V	Not available	Vein Mineral	В	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.

This data is sourced from the British Geological Survey.

# 18.7 JPB mining areas

Records on site 0

Areas which could be affected by former coal and other mining. This data includes some mine plans unavailable to the Coal Authority.

This data is sourced from Johnson Poole and Bloomer.





**Grid ref**: 230710 824321

# 18.8 The Coal Authority non-coal mining

Records within 500m 0

This data provides an indication of the potential zone of influence of recorded underground non-coal mining workings. Any and all analysis and interpretation of Coal Authority Data in this report is made by Groundsure, and is in no way supported, endorsed or authorised by the Coal Authority. The use of the data is restricted to the terms and provisions contained in this report. Data reproduced in this report may be the copyright of the Coal Authority and permission should be sought from Groundsure prior to any re-use.

This data is sourced from The Coal Authority.

# 18.9 Researched mining

Records within 500m 0

This data indicates areas of potential mining identified from alternative or archival sources, including; BGS Geological paper maps, Lidar data, aerial photographs (from World War II onwards), archaeological data services, websites, Tithe maps, and various text/plans from collected books and reports. Some of this data is approximate and Groundsure have interpreted the resultant risk area and, where possible, specific areas of risk have been captured.

This data is sourced from Groundsure.

### 18.10 Mining record office plans

Records within 500m 0

This dataset is representative of Mining Record Office and/or plan extents held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

### 18.11 BGS mine plans

Records within 500m 0

This dataset is representative of BGS mine plans held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.





**Grid ref**: 230710 824321

# 18.12 Coal mining

Records on site 0

Areas which could be affected by past, current or future coal mining.

This data is sourced from the Coal Authority.

#### 18.13 Brine areas

Records on site 0

The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

This data is sourced from the Cheshire Brine Subsidence Compensation Board.

# 18.14 Gypsum areas

Records on site 0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

#### 18.15 Tin mining

Records on site 0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

### 18.16 Clay mining

Records on site 0

Generalised areas that may be affected by kaolin and ball clay extraction.

This data is sourced from the Kaolin and Ball Clay Association (UK).





**Grid ref**: 230710 824321

# 19 Ground cavities and sinkholes

### 19.1 Natural cavities

Records within 500m 0

Industry recognised national database of natural cavities. Sinkholes and caves are formed by the dissolution of soluble rock, such as chalk and limestone, gulls and fissures by cambering. Ground instability can result from movement of loose material contained within these cavities, often triggered by water.

This data is sourced from Stantec UK Ltd.

## 19.2 Mining cavities

Records within 1000m

Industry recognised national database of mining cavities. Degraded mines may result in hazardous subsidence (crown holes). Climatic conditions and water escape can also trigger subsidence over mine entrances and workings.

This data is sourced from Stantec UK Ltd.

### 19.3 Reported recent incidents

Records within 500m

This data identifies sinkhole information gathered from media reports and Groundsure's own records. This data goes back to 2014 and includes relative accuracy ratings for each event and links to the original data sources. The data is updated on a regular basis and should not be considered a comprehensive catalogue of all sinkhole events. The absence of data in this database does not mean a sinkhole definitely has not occurred during this time.

This data is sourced from Groundsure.

#### 19.4 Historical incidents

Records within 500m 0

This dataset comprises an extract of 1:10,560, 1:10,000, 1:2,500 and 1:1,250 scale historical Ordnance Survey maps held by Groundsure, dating back to the 1840s. It shows shakeholes, deneholes and other 'holes' as noted on these maps. Dene holes are medieval chalk extraction pits, usually comprising a narrow shaft with a number of chambers at the base of the shaft. Shakeholes are an alternative name for suffusion sinkholes, most commonly found in the limestone landscapes of North Yorkshire but also extensively noted around the Brecon Beacons National Park.

Not all 'holes' noted on Ordnance Survey mapping will necessarily be present within this dataset.



Contact us with any questions at: Date: 1 May 2024



**Grid ref**: 230710 824321

This data is sourced from Groundsure.

### 19.5 National karst database

Records within 500m 0

This is a comprehensive database of national karst information gathered from a wide range of sources. BGS have collected data on five main types of karst feature: Sinkholes, stream links, caves, springs, and incidences of associated damage to buildings, roads, bridges and other engineered works.

Since the database was set up in 2002 data covering most of the evaporite karst areas of the UK have now been added, along with data covering about 60% of the Chalk, and 35% of the Carboniferous Limestone outcrops. Many of the classic upland karst areas have yet to be included. Recorded so far are: Over 800 caves, 1300 stream sinks, 5600 springs, 10,000 sinkholes.

The database is not yet complete, and not all records have been verified. The absence of data does not mean that karst features are not present at a site. A reliability rating is included with each record.

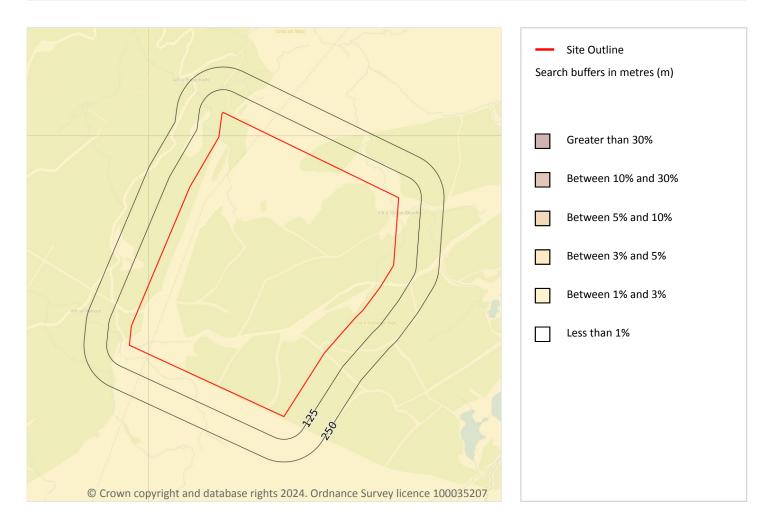
This data is sourced from the British Geological Survey.





Grid ref: 230710 824321

# 20 Radon



#### 20.1 Radon

#### Records on site 1

The Radon Potential data classifies areas based on their likelihood of a property having a radon level at or above the Action Level in Great Britain. The dataset is intended for use at 1:50,000 scale and was derived from both geological assessments and indoor radon measurements (more than 560,000 records). A minimum 50m buffer should be considered when searching the maps, as the smallest detectable feature at this scale is 50m. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain (1:100,000 scale).

Features are displayed on the Radon map on page 85 >

Location	Estimated properties affected	Radon Protection Measures required
On site	Between 1% and 3%	Basic







**Grid ref**: 230710 824321

This data is sourced from the British Geological Survey and UK Health Security Agency.





**Grid ref**: 230710 824321

# 21 Soil chemistry

# 21.1 BGS Estimated Background Soil Chemistry

Records within 50m 28

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km². In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km²; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

On site 15 mg/kg - 100 mg/kg 60 mg/kg No data 40 - 60 mg/kg 15 -	30 mg/kg 30 mg/kg
On site 15 mg/kg - 100 mg/kg 60 mg/kg No data 40 - 60 mg/kg 15 -	20 /1-
	30 mg/kg
On site 15 mg/kg - 100 mg/kg 60 mg/kg No data 40 - 60 mg/kg 15 -	30 mg/kg
On site 15 mg/kg - 100 mg/kg 60 mg/kg No data 40 - 60 mg/kg 15 -	30 mg/kg
On site 15 mg/kg - 100 mg/kg 60 mg/kg No data 40 - 60 mg/kg 15 -	30 mg/kg
On site 15 mg/kg - 100 mg/kg 60 mg/kg No data 40 - 60 mg/kg 15 -	30 mg/kg
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On site 15 mg/kg - 100 mg/kg 60 mg/kg No data 40 - 60 mg/kg 15 -	30 mg/kg
On site 15 mg/kg - 100 mg/kg 60 mg/kg No data 40 - 60 mg/kg 15 -	30 mg/kg
On site 15 mg/kg - 100 mg/kg 60 mg/kg No data 40 - 60 mg/kg 15 -	30 mg/kg
On site 15 mg/kg - 100 mg/kg 60 mg/kg No data 40 - 60 mg/kg 15 -	30 mg/kg





**Grid ref**: 230710 824321

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmiu m	Chromium	Nickel
On site	15 mg/kg	-	100 mg/kg	60 mg/kg	No data	40 - 60 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	-	100 mg/kg	60 mg/kg	No data	40 - 60 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	-	100 mg/kg	60 mg/kg	No data	40 - 60 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	-	100 mg/kg	60 mg/kg	No data	40 - 60 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	-	100 mg/kg	60 mg/kg	No data	40 - 60 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	-	100 mg/kg	60 mg/kg	No data	40 - 60 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	-	100 mg/kg	60 mg/kg	No data	40 - 60 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	-	100 mg/kg	60 mg/kg	No data	40 - 60 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	-	100 mg/kg	60 mg/kg	No data	40 - 60 mg/kg	15 - 30 mg/kg
19m S	15 mg/kg	-	100 mg/kg	60 mg/kg	No data	40 - 60 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

# 21.2 BGS Estimated Urban Soil Chemistry

Records within 50m 0

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km²).

This data is sourced from the British Geological Survey.

# 21.3 BGS Measured Urban Soil Chemistry

Records within 50m 0

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km<sup>2</sup>.

This data is sourced from the British Geological Survey.





**Grid ref**: 230710 824321

# 22 Railway infrastructure and projects

# 22.1 Underground railways (London)

Records within 250m 0

Details of all active London Underground lines, including approximate tunnel roof depth and operational hours.

This data is sourced from publicly available information by Groundsure.

## 22.2 Underground railways (Non-London)

Records within 250m 0

Details of the Merseyrail system, the Tyne and Wear Metro and the Glasgow Subway. Not all parts of all systems are located underground. The data contains location information only and does not include a depth assessment.

This data is sourced from publicly available information by Groundsure.

# 22.3 Railway tunnels

Records within 250m

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

#### 22.4 Historical railway and tunnel features

Records within 250m 0

Railways and tunnels digitised from historical Ordnance Survey mapping as scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560.

This data is sourced from Ordnance Survey/Groundsure.

### 22.5 Royal Mail tunnels

Records within 250m 0

The Post Office Railway, otherwise known as the Mail Rail, is an underground railway running through Central London from Paddington Head District Sorting Office to Whitechapel Eastern Head Sorting Office. The line is 10.5km long. The data includes details of the full extent of the tunnels, the depth of the tunnel, and the depth to track level.





**Grid ref**: 230710 824321

This data is sourced from Groundsure/the Postal Museum.

## 22.6 Historical railways

Records within 250m 0

Former railway lines, including dismantled lines, abandoned lines, disused lines, historic railways and razed lines.

This data is sourced from OpenStreetMap.

### 22.7 Railways

Records within 250m 0

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways.

This data is sourced from Ordnance Survey and OpenStreetMap.

### 22.8 Crossrail 1

Records within 500m 0

The Crossrail railway project links 41 stations over 100 kilometres from Reading and Heathrow in the west, through underground sections in central London, to Shenfield and Abbey Wood in the east.

This data is sourced from publicly available information by Groundsure.

#### 22.9 Crossrail 2

Records within 500m 0

Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an underground tunnel through London.

This data is sourced from publicly available information by Groundsure.

#### 22.10 HS2

Records within 500m 0

HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

This data is sourced from HS2 ltd.





**Grid ref**: 230710 824321

# **Data providers**

Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see <a href="https://www.groundsure.com/sources-reference">https://www.groundsure.com/sources-reference</a>.

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