Scottish and Southern Electricity Networks (SSEN)

KINTORE TO TEALING 400KV OHL – SECTION D

Geo-environmental Preliminary Risk Assessment

UK0040111.5101 /003
JULY 2025

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UK0040111.5101

PROJECT NO. UK0040111.5101

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EXECUTIVE SUMMARY

WSP UK Ltd (WSP) was commissioned by SSEN (the 'Client') to undertake a Phase 1 Geo-environmental Preliminary Risk Assessment (PRA) for Section D of the proposed Kintore to Tealing 400 kV Overhead Line (OHL) located between Haughhead and Fetteresso (the 'Study Area').

The principal aim of this assessment has been to identify potential risks from soil and groundwater contamination that may affect the proposed development.

The report highlights environmental considerations, predominantly with respect to ground conditions, and was requested to support construction of Over Head Line (OHL) at site.

Study Findings

The majority of the Study Area is presently occupied by grass filled vacant land, major (A90) and minor roads have crossed the Study Area in several places.

Historical maps indicate that the majority of the Study Area has been undeveloped since the first available map edition (1865-1904), with some localised historical industrial land uses on and near the Study Area.

The Study Area is underlain by Glaciofluvial superficial deposit overlying bedrock composed of sandstone and mudstone formations. Made Ground is considered to be present underneath major and minor roads which transect the Study Area. The bedrock aquifer is classified as a moderately productive aquifer.

Onsite surface water features include the Carron Water across the northeastern section, Bervie Water - upper catchment flowing through the mid part, and Luther Water (Source to Dowrie Burn Confluence) in the southern part of the Study Area, all of which are classified to have a moderate overall water quality by SEPA in 2023.

The preliminary risk assessment identifies a Low risk to human health, with the risk to the water environment considered Low. The risk to buildings and services is also considered to be Low.

Conclusions

The proposed presence of hardstanding reduces the probability of user exposure at a material frequency should contamination (e.g. heavy metals, TPH, PAH and asbestos) exist in these areas.

Based on the information contained within this report, it is the opinion of WSP that the Study Area represents a **LOW risk** with respect to contaminated land.

1 INTRODUCTION

1.1 AUTHORISATION

WSP UK Ltd (WSP) was commissioned by SSEN (the 'Client') to undertake a Phase 1 Geo-environmental Preliminary Risk Assessment (PRA) for Section D of the proposed Kintore to Tealing 400 kV Overhead Line (OHL) located between Haughehead and Fetteresso (the 'Study Area').

The Study Area follows a linear corridor, extending from Haulkerton in the southwest to an area near Elf Hillock in the northeast, crossing various geographical features, including woodlands, hills, burns (streams), and settlements.

1.2 PROJECT BACKGROUND & CONTEXT

WSP understands that the Study Area is a portion of the new Kintore-Tealing 400kV Overhead Line (OHL) connection (the 'proposed development'). The principal aim of this assessment is to assess potential geo-environmental risks associated with the proposed development and provide preliminary commentary on the ground related development constraints for the Study Area in the context of the proposed development.

The Study Area location and proposed development route are presented in Figure 1 and 2 within **Appendix A**.

1.3 SOURCES OF INFORMATION

This report has been prepared using the information sources as listed below:

- BGS geology viewer accessed on 19 February 2025, available online http://mapapps2.bgs.ac.uk/geoindex/home.html;
- Groundsure report reference GS-41X-DS2-MJ6-QFMand GS-4SP-1F2-ZM1-VQF(historical maps) dated 19 February 2025 (presented as **Appendix B.1**);
- Mining Remediation Authority Map viewer accessed on 19 February 2025 through https://datamine-cauk.hub.arcgis.com/
- UK Radon interactive map viewer accessed on 19 February 2025 http://www.ukradon.org/information/ukmaps;
- Online environmental data available on the Scotland Environment website access 19 February 2025 Map | Scotland's environment web ;
- Scottish Environment Protection Agency (SEPA) Water Environment Hub accessed on 19 February 2025 through Water Classification Hub (sepa.org.uk);
- Zetica UXO Assessment Risk Maps accessed on 19 February 2025 https://zeticauxo.com/downloads-and-resources/risk-maps/ (**Appendix B.2**);
- Legislative Background (**Appendix C**); and
- Contaminated Land Risk Assessment CIRIA 552 (Tables included in **Appendix D**).

1.4 LEGISLATIVE CONTEXT AND GUIDANCE

The assessment was undertaken in the legislative context of:

- Part 2A of The Environmental Protection Act (1990).
- Scottish Government Planning Advice Note 33 (PAN 33).

The following good practice and statutory guidance was considered, and the assessment was undertaken in general accordance with:

- Environment Agency 'Land Contamination Risk Management (LCRM)', 2023.
- CIRIA 'Assessing Risks Posed by Hazardous Ground Gases to Buildings', C665 (2007).
- British Standard 'Investigation of Potentially Contaminated Sites – Code of Practice', BS EN 10175:2011 + A2: 2017.
- Defra 'Environmental Protection Act 1990: Part 2A Contaminated Land Statutory Guidance', PB13735 (2012).

1.5 LIMITATIONS

The report is addressed to and may be relied upon by SSEN, as "the Client" within the meaning given to that phrase within the agreement and subject to the terms and conditions contained therein.

This report has been completed with regard to generally accepted consulting practices and may not be relied upon by any other party without the explicit written agreement of WSP. No other third-party warranty, expressed or implied, is made as to the professional advice included in this report. This report must be used in its entirety.

Unless WSP has actual knowledge to the contrary, WSP has assumed the correctness and completeness of third-party information supplied and shall have no liability in respect of any inaccuracy, defect or omission in any information or materials provided, anecdotally or otherwise, by the Client or any other third party to WSP. WSP does not assume any liability for misrepresentation of information or for items not visible, accessible, present or supplied at the time of the study.

The general limitations to the nature of the assessment are outlined in **Appendix E**.

2 ENVIRONMENTAL SETTING

2.1 STUDY AREA DETAILS

Pertinent Study Area details are summarised in Table 2-1. Study Area location and proposed development plans are presented in Figures 1 and 2, included in **Appendix A**.

Table 2-1 – Study Area Details

Aspect	Details
Study Area address	Study Area centered at Monboddo, Auchenblae, Aberdeenshire, Scotland, AB30 1TB
National Grid Reference	Easting:374954, Northing: 779542 (approximate Study Area centre)
Study Area Setting and Surrounding Area	The Study Area is set within a predominantly rural / agricultural setting.
Study Area Size (approximate)	424 Hectares

2.2 STUDY AREA DESCRIPTION

The Study Area boundary follows a linear corridor from Haulkerton in the southwest to Elf Hillock in the northeast, crossing various geographical features, including woodlands, hills, burns (streams), and settlements such as Fordoun and Drumlithie. Key water bodies across the route include Bervie Water, Carron Water, and several smaller burns. The area features multiple hills, including Cairn Hill, Redstone Hill, and Hill of Gothie, as well as forests like Glenbervie Wood and Burnesshank Wood. The boundary intersects major roads such as the A90 and passes through rural farmland and historical landmarks.

2.2.1 OFF-SITE

The Study Area is bound by agricultural fields to the north, south, east and west. A radium sensitive zone, *Fordoun Airfield* has been identified 250m east of the southern part of the Study Area. See section 4.4 for further information.

2.2.2 PUBLISHED GEOLOGY

The following geological sequence is anticipated on and in the vicinity of the Study Area based on British Geological Survey (BGS) 1:10,000 scale (Sheets NO78SE, NO78SW, NO67SE, NO78NE, NO77SW, NO77NE Solid and Drift edition) geological maps, 1:50,000 scale (Sheet 66E - Banchory, Solid and Drift Edition, 1:50:000) geological maps and the Groundsure report:

Table 2-2 – Summary of Published Geology

Geological Unit	Estimated Thickness (based on historical boreholes)	Location along the route	Description
Made Ground			
Worked Ground (Undivided)	Unknown	The Study Area is likely underlain by Made Ground where several roads cross the Study Area at various locations.	
Made Ground (Undivided)	Unknown		
Superficials			
Banchory Till Formation	Unknown	Mapping indicates this superficial deposit is present at northern most part of the Study Area (near elf hill) and extended till Nether Quithell.	Gravelly and sandy diamicton composed principally of decomposed Neoproterozoic metamorphic rocks and Caledonian igneous rocks.
Mill of Forest Till Formation	Unknown	Mapping indicates this this superficial deposit is present from Nether Quithell to southern most section of the Study Area.	Sandy diamicton, red-brown with clasts predominantly of Devonian rocks.
Ury Silts Formation	Unknown	Mapping indicates this this superficial deposit is present near Monoboddo and around West Cairnbeg, Fordoun.	Laminated silt and clay, generally red-brown.
Alluvium Deposit	Unknown	Mapping indicates the presence of this superficial deposit where the Study Area boundary intersects with Bun of Anna Muick, Bervie water, Nursery Burn, Luther water, Carron Water and Ducat water.	Soft to firm consolidated, compressible silty clay.
Peat	Unknown	Mapping indicates this this superficial deposit	Partially decomposed mass of semi-carbonized vegetation.

Geological Unit	Estimated Thickness (based on historical boreholes)	Location along the route	Description
		is present near Annamuik.	
Bedrock			
Glen Lethnot Grit Formation	Unknown	The most northwestern, northeastern and northern section of the Study Area (where the burn of Annamuuick is shown on mapping) is underlain by the Glen Lethnot Grit Formation.	Mixed psammite, semipelite and pelite. Psammites typically gritty. Pelites include types rich in staurolite and muscovite, and some are also kyanite-bearing.
Carron Sandstone Formation	Unknown	The Study Area is underlain by Carron Sandstone Formation at northern and southern section part of the Study Area along the northeast stretch of the Study Area (aligning northeast – southwest)	A fine- to coarse-grained locally pebbly lithic sandstone with lenses of conglomerate.
Dunnottar-Crawton Group	Unknown	The Study Area is underlain by Dunnottar-Crawton Group at where the northeastern stretch around Droophill.	The Dunnottar-Crawton Group features clast-supported conglomerates with varying provenance, interbedded with volcaniclastic and non-volcaniclastic deposits. It includes lava flows of trachybasalt, trachyandesite, and andesite, with intermittent volcanic activity at the top, marked by trachybasalt lavas and welded dacitic tuff.
Lintrathen Tuff Member	Unknown	The Study Area is underlain by Lintrathen Tuff Member at north and south of where Study Area boundary intersects with C19k road.	A quartz-feldspar-biotite-bearing, vitric tuff of dacitic composition, locally partially welded.
Cromlix Mudstone Formation	Unknown	The Study Area is underlain by Cromlix Mudstone Formation at southern stretch of it (aligning north - south	Characteristically soft, bright red to dull brownish-red, maroon or purplish brown, with green reduction spots in the north-eastern Midland Valley, generally massive

Geological Unit	Estimated Thickness (based on historical boreholes)	Location along the route	Description
		and northeast-southwest)	but often thinly laminated, poorly sorted, fine-grained silty sandstones, sandy siltstones, siltstones and mudstones, which lithologies may be locally interbedded with thin lenses of medium to coarse-grained pebbly sandstone.

BGS Borehole Logs

Three BGS borehole logs (BGS website: www.bgs.ac.uk/data/boreholescans) are recorded for the site. (BGS website: www.bgs.ac.uk/data/boreholescans).

The geology recorded from the borehole is summarised as below:

Table 3 - Summary of Borehole Geology

NO78SE1 (10m east to the eastern boundary of site located 750m northwest of Knock Hill)	Topsoil	0.6	**Soil:** dark yellowish brown silty, stony and clayey. Becomes increasingly stony with depth
	Fluvioglacial sand and gravel	0.7	**Gravel:** dirty, poorly sorted gravels with clasts up to 0. 3m across Gravel: coarse and fine with some cobble and rare small boulders up to 0. 3m. subangular to well-rounded quartzite, vein- quartz, schist, grits, psammite and volcanic Sand: coarse with medium and some fine, subangular to subrounded quartz, rock fragments and feldspar Fines: disseminated silt and clay, coating grains and clasts
		0.4	**Diamicton:** moderate reddish brown, red sandstone clasts in a clay matrix
		1.8	**Gravel:** massive, very coarse gravels with clasts up to 0.5m across in a coarse sand matrix. Gravel: coarse with cobble and fine. subangular to well-rounded quartzite. vein—quartz schist, grits. psammite and volcanics. Sand: coarse with medium and some fine, subangular to subrounded quartz rock fragments and feldspar. Fines: disseminated silt and clay, coating grains and clasts.
	Topsoil	0.2	Gravelly

NO77NW9 (10m east to the western boundary of Study Area located 500m north of Monoboddo)	Fluvioglacial sand and gravel Peat	3.4	**Sandy gravel:** generally, moderately well stratified, becoming more gravel rich wi\th depth; moderately well sorted. Sand bands with silty tops occur in the upper part of the deposit Gravel: coarse and fine with trace cobble angular to rounded quartzite, vein-quartz, schist and volcanics, chiefly andesite. Volcanic material is quite abundant. Sand: medium and coarse with a little fine angular to subrounded quartz, feldspar and rock fragment. Fines: disseminated silt and clay
		>3.0	**Sand:** variable with cross- stratified coarse sands and more silty fine sands; pebbles present in places, but not abundant. Sand: medium with coarse and some tine, angular to rounded quartz, feldspar, rock fragments mica Fines: gilt and clay in thin laminae in places and disseminated.
NO77NW10 (present on Study Area located 630m northeast of Monoboddo)	Soil	0.3	**Soil:** medium brown silty loam, pebbly
	Flow-till	0.6	**Diamicton:** moderate reddish brown, stiff silty clay with clasts of quartz-schist, schistose grit, vein-quartz and. notably, Lintrathan-type porphyry material
	Glacial sand and gravel	4.0	**Gravel:** poorly sorted with silt and clay which binds the deposit in places; silt and clay give a moderate reddish brown to the deposit. Gravel: fine and coarse with some cobble, angular to subrounded quartzite. vein— quartz. schistose grit, decomposed volcanic and sandstone with some porphyry Sand: coarse with medium and some fine, angular to subrounded quartzite, rock fragments and some mica. Fines: disseminated silt and clay. sufficient to bind the deposit in places
	Flow-till	1.0	**Clayey' gravel:** very hard clay bound deposit. but compositionally as above. Gravel: fine with coarse and cobble. lithologies as above. Sand: coarse with medium and some fine, lithologies as above. Fines: silt and clay binding the deposit.
	Glacial sand and gravel	4.2	**Gravel:** unit becomes less gravel-rich with depth to 10.1m. Gravel: fine with coarse and a little cobble, angular to subrounded quartzite, vein- quartz, schistose grit,

			fresh to decomposed volcanics, decomposed sandstone and some porphyry Sand: medium with fine and some coarse quartz rock fragments and some mica. Fines: clay angular, to subrounded rock fragments and some disseminated silt and clay.
	Glaciolacustrine deposits	1.6	**Silt:** laminated, micaceous, moderate reddish brown. Laminated on the scale of a few millimeters with clayey silt and silty-fine sand laminae. A single c. 70mm layer of clay-bound sand and gravel occurs at about 10.4m.
	Glacial sand and gravel	6.5	**'Clayey' sand:** moderate reddish brown with silty and clayey horizons in places and rare fine gravel sized clasts. Sand: fine with medium and trace coarse, angular to subrounded quartz, rock fragments and mica Fines: silt and clay. concentrated in laminae and disseminated.
			Sandy gravel: coarsening downwards Gravel: fine with coarse and trace cobble, angular to subrounded mudstones, porphyry, non-porphyritic volcanics and quartzite. Sand: medium with coarse and some fine, angular to subrounded quartz and rock fragments. Fines: disseminated silt and clay.

2.3 MINING

Reference to the Mining Remediation Authority (MRA) Interactive Map Viewer online indicated that the Study Area does not lie within a Coal Mining Reporting Area.

2.4 GROUNDWATER QUALITY

In accordance with the Water Framework Directive, the Scottish Environment Protection Agency (SEPA) maintains its quality classification of the water environment following River Basin Management Planning (RBMP). This information is available on SEPA's Water Environment Hub (https://www.sepa.org.uk/data-visualisation/water-classification-hub/). The following groundwater quality information is available for the Study Area:

Table 2-4 – Groundwater Quality Summary

Waterbody Name	Type	Local Authority	Overall Classification	Comments
Stonehaven (ID: 150550)	Bedrock	Aberdeenshire Council	Good	2023 Classification

Drinking Water Protection Zones are not defined in Scotland. Following SEPA's position, all Scotland's groundwater bodies are designated as Drinking Water Protected Areas (DWPAs) and therefore their associated groundwater resource potential must be protected.

2.5 GROUNDWATER VULNERABILITY

The BGS Groundwater Vulnerability Map of Scotland, scale 1:625,000 (1988) reports vulnerability in terms of the thickness of the overlying superficial deposits. Groundsure's digitised mapping of this reference reports the geological classifications of the Study Area as a moderately productive aquifer (Strathmore Group), in which flow is virtually all through fractures and other discontinuities.

Additionally, SEPA's Water Environment Hub (https://map.environment.gov.scot/sewebmap/) also provides the following contemporary 'Aquifer Classification' for the bedrock aquifer.

Table 2-5 – Groundwater Vulnerability Summary

Rock Unit	Character	Flow Mechanism	Summary
Strathmore Group	Moderately productive aquifer	Flow is virtually all through fractures and other discontinuities	Sandstones, in places flaggy, with siltstones, mudstones and conglomerates and interbedded lavas locally yield up to 12 L/s in parts of Strathmore.

2.6 WATER ABSTRACTIONS

WSP contacted the Aberdeenshire Council and SEPA via email on 20th February 2025 regarding water abstraction records held relating to the Study Area. At the time of writing, Aberdeenshire Council has responded on 13th March 2025. The information is summarized as below.

- A total of twenty two private water supplies have been identified within a 500m radius of the Study Area, of which six are located within a 250m buffer.
- According to the council's detailed records, these supplies are primarily associated with domestic properties.
- Two sources, identified as springs, are located within 250m of the Study Area at Mains of Fordoun Cottage, with a further two at Cushnie Bungalow.

2.7 HYDROLOGY

According to the Groundsure report, there are three inland rivers present on site and they are described as following:

- The Carron Water (ID: 23257) across the northeastern section of the Study Area is classified to have an overall water quality of 'Moderate' in the year 2023 according to SEPA's Water Classification Hub.
- Bervie Water - upper catchment (ID 23262) flowing across mid part of the Study Area is classified to have an overall water quality of 'Moderate' in the year 2023 according to SEPA's Water Classification Hub.
- Luther Water (Source to Dowrie Burn Confluence) (ID 5706) flowing across southern part of the Study Area is classified to have an overall water quality of 'Moderate' in the year 2023 according to SEPA's Water Classification Hub.

2.8 FLOODING

According to the Groundsure Report, the majority of the Study Area is at negligible risk from river and surface water flooding. However, the southern part of the Study Area, near Fordoun, Cammakmuir Plantation, and Wood of Redhall, is identified as being at risk of flooding from river and surface water greater than 1.0m in a 1 in 30-year event. The risk from the coastal is considered to be negligible within the Study Area.

According to the Groundsure Report, the majority of the Study Area is at negligible risk from groundwater flooding. The highest risk identified is considered to be moderate and is mapped in the central part of the Study Area, near Monboddo and to the north of where the C19 road crosses the Study Area.

2.9 SENSITIVE SURROUNDING LAND USES

The Groundsure report indicates that no environmentally designated sensitive land uses are recorded on site; however, the following record of an environmental designation is identified within 500m of the Study Area boundary:

Table 2-6 – Sensitive Surrounding Land Uses

Type	Description
Designated ancient woodland	Woods of Redhall, Cammackmuir Plantation, Jacksbank Wood, Den Wood are recorded to be present on site and these are also present within 500m of Study Area.
Listed Buildings	Redhall House located 90m south to the Study Area. Monboddo House located 124m south to the Study Area, Lodge, Redhall House located 140m south to the Study Area, Steading, Mid Blairs Farm located 219m northwest to the Study Area. Horsemill, Mid Blairs Farm located 242m northwest to the Study Area, Bothy, Mid Blairs Farm located 247m northwest to the Study Area.
Scheduled Ancient Monuments	Droop Hill located 137m north to the centre of the Study Area.

WSP contacted the Aberdeenshire Council and SEPA via email on 20th February 2025 regarding environmentally pertinent records held relating to the Study Area. The council has identified an application related to "*Erection of Dwellinghouse and Detached Garage*" within 250 of the Study Area dated 21st August 2015. The decision status has been shown as approved.

2.10 ENVIRONMENTAL SENSITIVITY

Overall, the Study Area setting is considered to be of moderate sensitivity, due to the following:

- Presence of ‘Moderate’ quality surface water feature within 250m;
- Presence of a ‘good’ quality moderately productive bedrock aquifer underlying the Study Area;
- Presence of residential land uses within 250m; and,
- Presence of designated ancient woodland listed buildings on and adjacent to the Study Area.

3 STUDY AREA AND SURROUNDING AREA HISTORY

A review of historical Ordnance Survey (OS) maps has been undertaken to identify potential former sources of contamination and sensitive receptors. The historical OS maps reviewed are provided within the Groundsure report in **Appendix C.1,** and pertinent findings are summarised below.

3.1 ONSITE

3.1.1 ONSITE HISTORICAL MAPPING

The earliest available mapping (1865-1904) shows the Study Area to be undeveloped land. The Study Area remains undeveloped until 1904.

- An unnamed road had been identified running across the Study Area near Seafield House (1904) remains unchanged according to the latest map.
- An unnamed road had been identified running across the Study Area connecting Jacksbank (1904) remains unchanged according to the latest map.
- An unnamed road had been identified running across the Study Area connecting road C19K and Goosecruvice (1974 -1979) remains unchanged according to the latest map.
- A quarry was identified on site (where presently Study Area is intersecting with Glenervie Road) (1904- 2010). It seems infilled currently.
- An unamed road had been identified running across the Study Area connecting road C19K and Goosecruvice (1955) remains unchanged according to the latest map.
- Brown muir and Fordon House had been identified within the Study Area (1901), remains unchanged according to the latest map.
- An unnamed road located near south of the Study Area.

3.1.2 ONSITE REGULATORY INFORMATION

A review of the Groundsure report for the Study Area has reported the following potentially contaminative land uses (some of which are not identified on historical mapping):

- Smithies located on site circa 1865,
- Unspecified Quarry on site circa 1865;
- Unspecified Tank on site including circa 1955
- Unspecified Commercial/Industrial site on site circa 1955,
- Sewage Works on site circa 1970 - 1988

3.2 OFFSITE

3.2.1 ONSITE HISTORICAL MAPPING

Off site features identified are listed below with their distance located from the Study Area:

- Woodland located northwest of northern most part of the Study Area (1865-2025) and this remains undeveloped till date.
- Fordoum railway line located 1.5km in the eastern portion of the Study Area (1865 – 1994). A90 road was constructed in place of it.(2001-2025)

3.2.2 OFFSITE REGULATORY INFORMATION

A review of the Groundsure report for the Study Area has reported the following potentially contaminative offsite land uses (some of which are not identified on historical mapping):

- Multiple Smithies located

- 134m northeast circa 1865 – 1904
- 228m northeast circa 1865; and
- 413m northeast circa 1865.

- Multiple unspecified Pits were recorded across different locations including:

- 24m northeast circa 1979,
- 73m northeast circa 1865,
- 239m northeast circa 1979,
- 250m northeast circa 1865,
- 271m northeast circa 1865,
- 346m northeast circa 1979,
- 367m southwest circa 1864,
- 392m southeast circa 1904,
- 395m southeast circa 1864; and
- 403m southeast circa 1955.

- Multiple Quarries and Gravel Pits were noted including;

- 62m northeast circa 1904,
- 65m northeast circa 1902,
- 348m northeast circa 1904.
- 126m southwest circa 1976,
- 469m southwest circa 1928 – 1955; and
- 2m south circa 1904 - 1955.

- Several Unspecified Tanks were recorded at different locations:

- 11m southwest circa 1955,
- 13m southwest circa 1928,
- 136m southwest circa 1955; and
- 478m southwest circa 1976.

- Mills were commonly found in the area, including:

- 136m southwest circa 1970 - 1988,
- 163m southwest circa 1955,
- 168m southwest circa 1901 – 1928; and
- 418m northeast circa 1865.

- A Corn Mill was recorded 356m northwest circa 1865 - 1904.
- The Disused Airfield appeared on site circa 1955 and was also noted 130m south circa 1955 - 1974.

- There were also several industrial and commercial structures, including a Wireless Station 102m southwest circa 1970 - 1988.
- Several heaps and refuse areas were recorded, including an Unspecified Heap 63m southwest circa 1864, another 428m south circa 1974 - 1992, and a Refuse Heap 469m southwest circa 1978.
- Sawmills were identified 158m south circa 1976 and 174m south circa 1992
- A Sand Pit was found 351m southwest circa 1901.

4 REGULATORY INFORMATION

4.1 GROUNDSURE REGULATORY INFORMATION SUMMARY

Table 4-1 – Regulatory Information Summary

Groundsure Feature	On-site	0-50m	50-250m	250-500m	Details
Historical Industrial Land Uses	12	4	16	19	See Section 3.1
Historical Tanks	1	1	2	3	See Section 3.1
Historical Energy Features	0	0	0	0	N/A
Historical Garages	0	0	0	0	N/A
Active or Recent Landfill	0	0	0	0	N/A
Historical Landfill Sites	0	0	0	0	N/A
Licenced Waste Sites	0	0	0	1	A licensed waste site associated with metal recycling located 325m south to the Study Area (near wood of Redhall).
*Historical Waste Sites	0	0	0	1	A historical waste site associated with waste recycling centre located 274m south of the Study Area.
Recent Industrial Land Uses	3	2	18	-	Unspecified quarries located on site where Carron water is interacting with the Study Area boundary. Unspecified quarries located on site where C19K road is interacting with the Study Area boundary near Boutch Hillock. Wind Turbine located onsite where B966 road is interacting with the Study Area boundary near Boutch Hillock. Several storage tanks are located in the area, including 11m southwest (1km near Cammackmuir Plantation), 146m (near Tannachie Farm) northeast, 168m southwest, and 177m southwest of the Study Area, categorized under industrial features.

Groundsure Feature	On-site	0-50m	50-250m	250-500m	Details
					Energy production activities are present with wind turbines and feed mill turbines at Droop Hill, Drumlihtie, and Fordoun Sawmill, positioned between 89m northeast and 128m south of the Study Area. Additionally, electricity substations are found 135m south (Eastfield wood), 175m northeast, and 215m southwest (near Cammackmuir Plantation at Kincardineshire)., Unspecified quarries located 166m southwest (near little sheep park wood). Agricultural and industrial operations are prominent in the vicinity, with agricultural machinery activities 210m south, packaging facilities 223m south, and agricultural contractors operating 229m south at Fordoun Aerodrome. The area also contains a disused airfield 61m south and a sawmill 191m south, involved in wood product manufacturing.
Current or Recent Petrol Stations	0	0	0	0	N/A
Gas Pipelines	2	0	0	0	Gas pipelines identified on site running northwest southeast from north of C19K road to south of road B966.
Control of Major Accident Hazards (COMAH)	0	0	0	0	N/A
Hazardous Substances Storage/Use	0	0	0	1	Record of Hazard substance storage is identified 327m south of Study Area. (West of Old Aberdeen Road)
Part A(1), IPPC and Historic IPC Authorisations	0	0	0	0	N/A
Pollution Inventory Substances	0	0	0	0	N/A
Pollution Inventory Waste Transfers	0	0	0	0	N/A

Groundsure Feature	On-site	0-50m	50-250m	250-500m	Details
Part B Authorisations	0	0	1	0	Records related to combustion of fuels located 143m south of the Study Area at Fordoun Sawmill

The distance for all the features has been calculated from the approximate centre of the Study Area at co-ordinates (374954, 779542)

4.2 RADON GAS

Based on the Groundsure report and UK Radon interactive map (https://www.ukradon.org/information/ukmaps) the majority of the Study Area lies within a low probability radon area where less than 1% of homes are estimated to be at or above the Action level. The maximum radon potential ranges between 3%- 5% and 1% - 3% are recorded in the central part of the Study Area near Monboddo. Given the proposed land use, no radon protection measures are considered necessary for the Study Area.

4.3 UNEXPLODED ORDNANCE

Zetica Risk Maps indicate that the Study Area is located in an area of low risk in regard to unexploded ordnance (**Appendix B**).

The UXO Risk Map for the Study Area is included in **Appendix B.2.**

4.4 RADIUM

RAF Fordoun is located approximately 250 south east of the Study Area. RAF Fordoun opened in November 1942 as a satellite airfield supporting RAF Peterhead. Initially home to No. 2 Flying Instructors School, the airfield also hosted radar calibration and gunnery units before flying operations ceased in 1944 due to runway damage. Postwar, it was repurposed for ammunition storage until 1950 and subsequently accommodated various civilian activities, including gliding and motorsports.

A site visit by a WSP representative was undertaken in April 2025. During the walkover, the site was noted to comprise of a grassed field with no evidence old military structures or previous operations.

Given the operations documented to have undertaken at site, alongside the findings from the historical review undertaken, the risks associated with Radium are considered low.

5 INITIAL CONCEPTUAL SITE MODEL

5.1 INTRODUCTION

This section of the report presents the characteristics of the Study Area and provides a systematic indication of the risks to enable uncertainties and further assessment needs or other actions to be identified. It draws on the information presented in earlier sections of the report to identify plausible contaminant-pathway-receptor contaminant linkages. Details regarding the legislative framework for this assessment are presented within **Appendix C**.

5.2 POTENTIAL SOURCES

Based on information (as presented in section 3 and section 4.1) reviewed as part of this desk study and findings of the Study Area inspection, the following potential sources of contamination have been identified:

Onsite

- Contamination resulting from historical land use. (Made Ground, electric substation, industrial feature, disused airfield, smithies, sewage works etc)
- Ground gases (Made Ground, superficial deposits, infilled quarry, historical unspecified quarries).

Offsite

- Made Ground associated with development adjacent to the Study Area.
- Stockpiles of topsoil / Made Ground located adjacent to Study Area boundary.
- Contamination associated with offsite historical land uses.

Based on the above potential sources, the following contaminants may be present within the Study Area:

- Heavy metals, polycyclic aromatic hydrocarbons (PAHs), petroleum hydrocarbons (TPH), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), chlorinated solvents, pesticides, nitrates, phosphates, sulphates, sulphides, cyanides, and asbestos
- Ground gases associated with Made Ground, including methane, carbon dioxide, carbon monoxide, hydrogen sulphide, and oxygen-deficient air, as well as potential landfill gases and radon.

5.3 POTENTIAL RECEPTORS

In the context of the proposed redevelopment, the following potential receptors were identified:

Human Health

- Future and current site occupiers/visitors (maintenance workers);
- Adjacent site users;
- Construction workers and below ground maintenance workers.

Water Environment

- Bedrock aquifer (Strathmore Group)
- Surface water (The Carron Water, Bervie Water, Luther Water)

Property

- Foundations and below ground structures.

5.4 POTENTIAL CONTAMINANT PATHWAYS

Relevant potential pathways are considered to include:

- Direct contact, ingestion or inhalation of soil-bound contaminants / dust;
- Direct inhalation of asbestos fibres within soils;
- Inhalation of vapours associated with soil / groundwater contamination;
- Migration of leachable/mobile contamination laterally and vertically through granular soils;
- Ground gas migration, inhalation and accumulation.

5.5 PLAUSIBLE CONTAMINANT LINKAGES

Table 5-1 provides an evaluation of those potential contaminant linkages considered to be plausible given our current Study Area understanding.

Table 5-1 – Plausible Contaminant Linkages

Potential Source	Exposure Pathway	Receptor	Probability of Exposure	Consequence of Exposure	Risk	Plausibility of Pathway
Contaminants associated with adjacent land uses Contaminants include inorganic and organic contaminants, ground gases, and asbestos.	Inhalation, ingestion and dermal contact	Human health risks, including current and future site users, groundworkers	Unlikely	Medium	**Low**	Site users may be exposed to potential contaminants via direct dermal contact, ingestion and inhalation, or hazardous ground gases. As no enclosed spaces are included in the proposed development, the risk from ground gases is considered low. The principal human health risk is likely to be from contaminants within the soils and groundwater due to potentially contaminated Made Ground. Significant Made Ground is not expected to be encountered on most of the Study Area due to the lack of historical development, although it is noted that some historical industrial development has occurred on certain parts of the Study Area and the surrounding area. In the event of below ground works, site workers may be exposed to subsurface contamination should it exist. Yet it is generally accepted as both reasonable and an expectation that future construction workers would adopt appropriate procedures to manage health and safety risks on the assumption that a risk exists.
	Migration via infiltration into groundwater	Groundwater within superficial and bedrock deposits Surface water	Low likelihood	Mild	**Low**	The presence of hardstanding would be limited to the overhead line (OHL) tower bases which should impede the infiltration of precipitation and reduce the potential for leaching and off-site migration of any contamination. Given the current / historical use of the Study Area, the potential for legacy contaminants to migrates to the underlying bedrock aquifer is considered to be low.

Potential Source	Exposure Pathway	Receptor	Probability of Exposure	Consequence of Exposure	Risk	Plausibility of Pathway
		Site foundations	Unlikely	Medium	**Low**	Aggressive ground conditions may affect any proposed foundations. With any new development, planning would be required, and such would require a site investigation, which would need to assess whether any mitigation was required.

5.6 PRELIMINARY CONTAMINANT LINKAGE ASSESSMENT

Based on consideration of the Study Area conditions, the environmental setting of the Study Area and the level of information currently available for the Study Area, potential plausible contaminant linkages have been identified. These are based on an assumed proposed industrial or commercial end use.

The terms describing Probability and Consequence are referenced from the CIRIA 552 document. Tables 6.3, 6.4 and 6.5 from CIRIA 552 are provided for reference in **Appendix D**.

5.7 PRELIMINARY RISK CLASSIFICATION FOR THE STUDY AREA

Based on the contaminant linkage assessment completed for the Study Area in consideration of its proposed use, the following risk classifications have been determined:

- With respect to human health, the risks have been assessed as **Low**;
- With respect to surface waters, the risks from the Study Area have been assessed as **Low**
- With respect to groundwater, the risks from the Study Area have been assessed as **Low**;
- With respect to buildings and services, the Study Area is classified as **Low**;

6 CONCLUSIONS AND RECOMMENDATIONS

6.1 CONCLUSIONS

The potential for legacy ground contamination in shallow soils is considered possible based on historical onsite and offsite uses.

The principal risks are considered to be to the current and future site users. However, the presence of hardstanding (tower bases) reduces the probability of user exposure at a material frequency should such contamination exist in these areas.

Based on the information contained within this report, it is the opinion of WSP that the Study Area represents a **Low risk** with respect to contaminated land liabilities.

6.2 RECOMMENDATIONS

Based on the above, an intrusive ground investigation is recommended to confirm the anticipated ground conditions and enable further assessment of the above constraints. The Ground investigation should be undertaken in accordance with BS5930 and BS10175 and should be designed and scoped to provide further understanding / confirmation of the following:

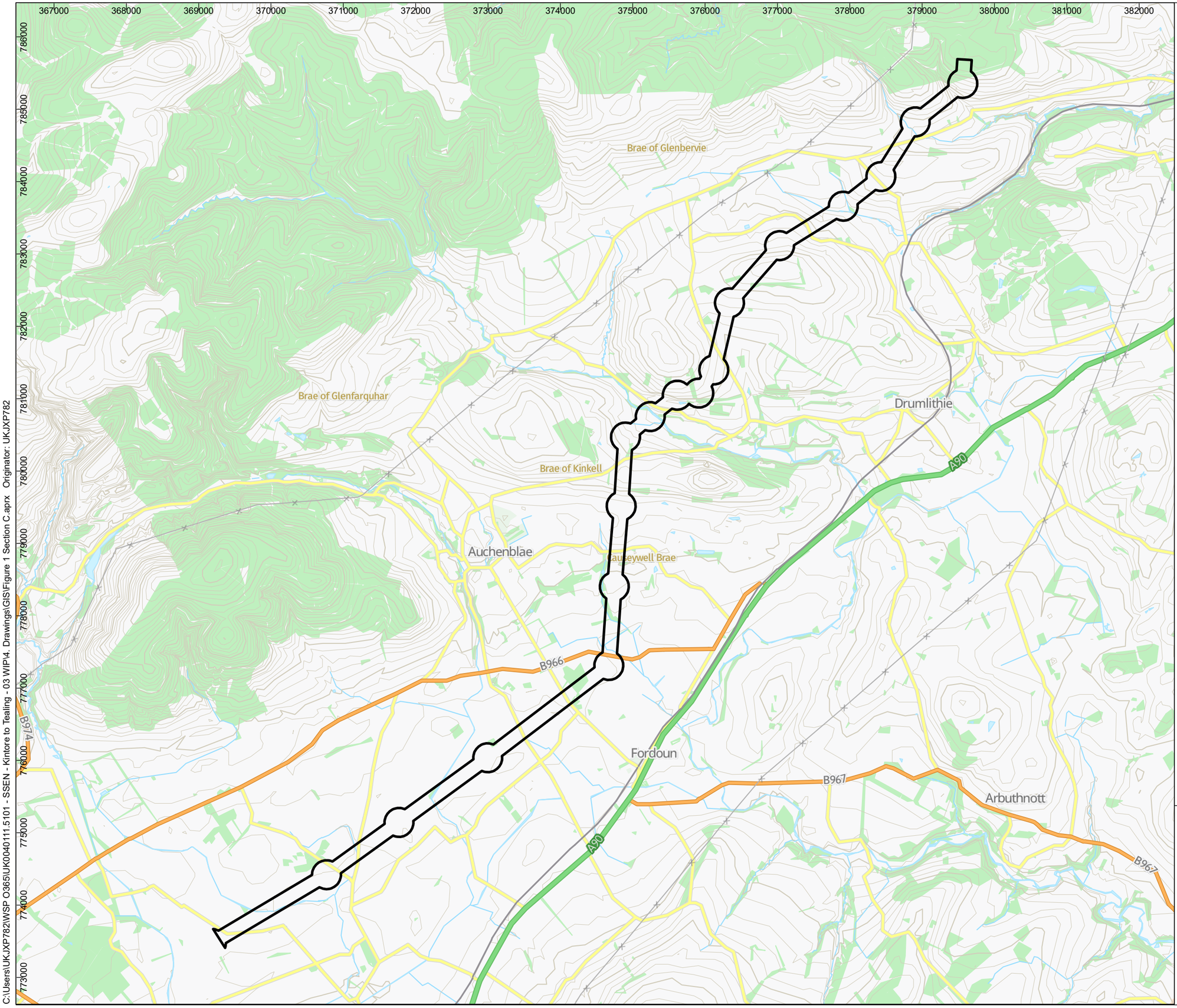
- Extent and characteristics of contamination on soils and groundwater; and
- Risks to future site users and the wider environment in the context of the proposed development.

Should the Study Area use change then the contents of this report should be revisited in ensuring that the land is made suitable for any new use.

Please note: this summary forms part of WSP's Phase I Geoenvironmental Preliminary Risk Assessment (ref.: UK0040111.5101 /003). Under no circumstances is it to be used as an independent document.

Appendix A

FIGURES



Key

Section D

0 500 1,000 1,500 2,000 2,500 3,000m

Scale at A3: 1:50,000

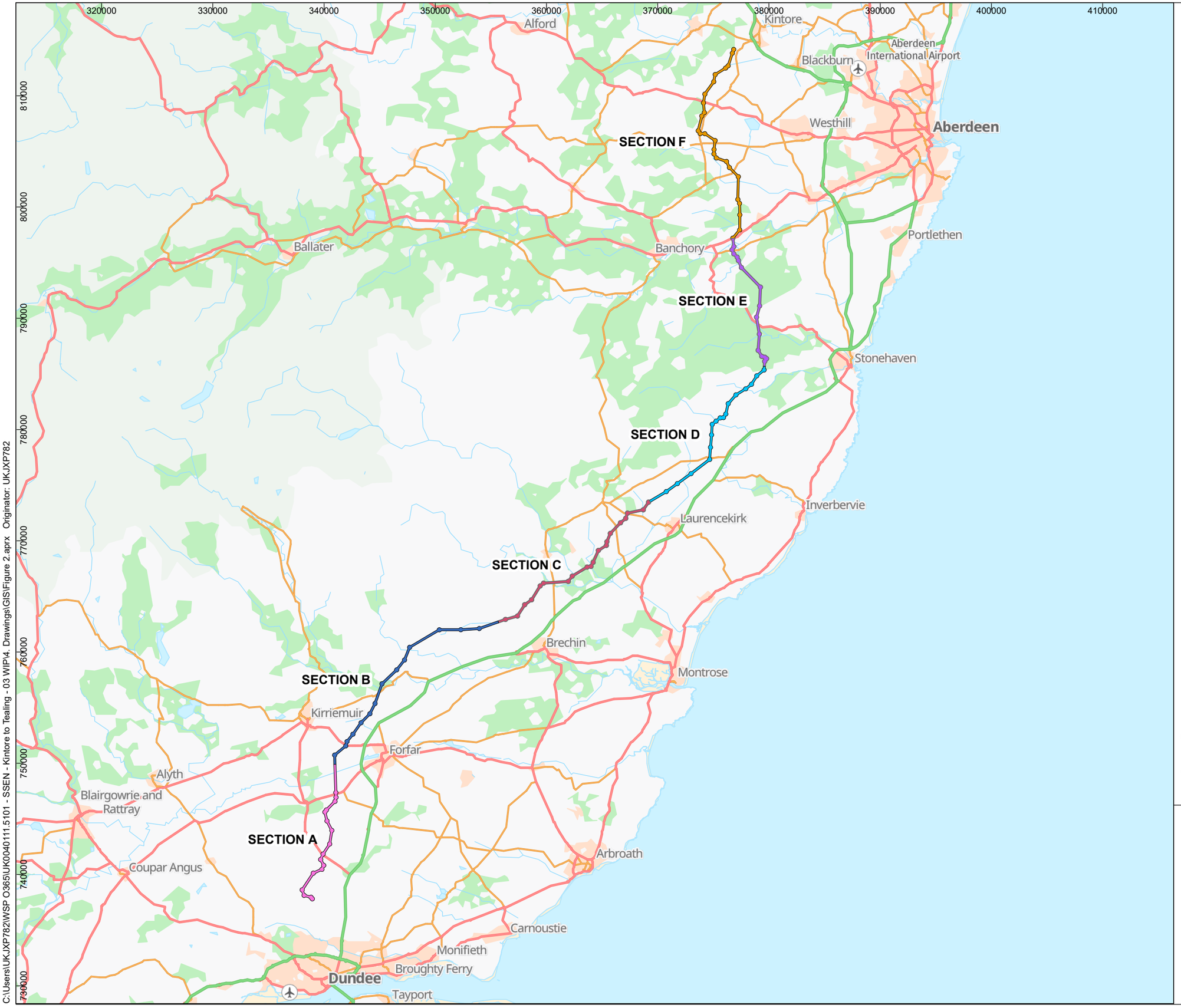
Kintore-Tealing 400kV Overhead Line (OHL) Connection

Figure 1
Site location plan

February 2025

C:\Users\UKJXP782\WSP O365\UK0040111.5101 - SSEN - Kintore to Tealing - 03 WIP\4. Drawings\GIS\Figure 1 Section C.aprx Originator: UKJXP782

Figure 1 Section C.aprx



Key

- Section F
- Section E
- Section D
- Section C
- Section B
- Section A

0 5 10 15 20km

Scale at A3: 1:325,000

Kintore-Tealing 400kV Overhead Line (OHL) Connection

Figure 2
Proposed development plan

February 2025

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Figure 2.aprx

Appendix B

ADDITIONAL INFORMATION

Appendix B.1

GROUNDSURE REPORT

Groundsure LOCATION INTELLIGENCE

Enviro+Geo Insight

Section D

Order Details

Date: 04/09/2025

Your ref: P110439UK001

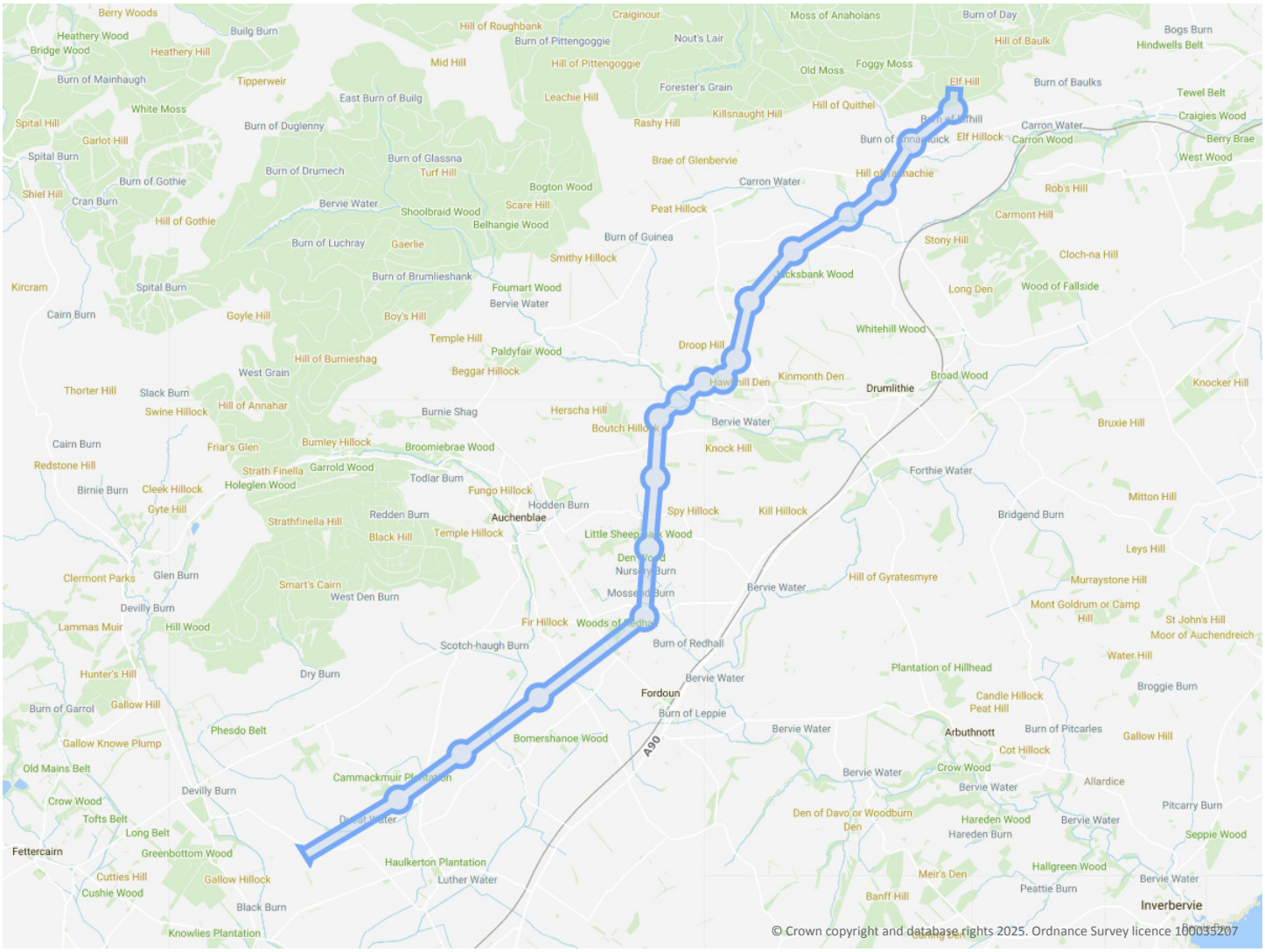
Our Ref: WSP-XQ6-ZFI-GWS-YF1

Site Details

Location: 374954 779542

Area: 424.71 ha

Authority: Aberdeenshire Council ↗



Summary of findings p. 2 >

Aerial image p. 7 >

OS MasterMap site plan N/A: >10ha

Insight User Guide ↗

Contact us with any questions at:
info@groundsure.com ↗
01273 257 755

Certified B Corporation

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
12 >	1.1 >	Historical industrial land uses >	12	4	16	19	-
14 >	1.2 >	Historical tanks >	1	1	2	3	-
15	1.3	Historical energy features	0	0	0	0	-
15	1.4	Historical petrol stations	0	0	0	0	-
16	1.5	Historical garages	0	0	0	0	-
16	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
17 >	2.1 >	Historical industrial land uses >	16	5	21	23	-
20 >	2.2 >	Historical tanks >	1	1	2	3	-
20	2.3	Historical energy features	0	0	0	0	-
21	2.4	Historical petrol stations	0	0	0	0	-
21	2.5	Historical garages	0	0	0	0	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
22	3.1	Active or recent landfill	0	0	0	0	-
22	3.2	Historical landfill (BGS records)	0	0	0	0	-
23	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
23 >	3.4 >	Licensed waste sites >	0	0	0	1	-
23 >	3.5 >	Historical waste sites >	0	0	0	1	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
24 >	4.1 >	Recent industrial land uses >	3	1	15	-	-
26	4.2	National Geographic Database (NGD) - Current or recent tanks	0	0	0	-	-
26	4.3	Current or recent petrol stations	0	0	0	0	-
26	4.4	Electricity cables	0	0	0	0	-
26 >	4.5 >	Gas pipelines >	2	0	0	0	-
27	4.6	Sites determined as Contaminated Land	0	0	0	0	-
27	4.7	Control of Major Accident Hazards (COMAH)	0	0	0	0	-

27	4.8	Regulated explosive sites	0	0	0	0	-
27 >	4.9 >	Hazardous substance storage/usage >	0	0	0	1	-
28	4.10	Part A(1), IPPC and Historic IPC Authorisations	0	0	0	0	-
28 >	4.11 >	Part B Authorisations >	0	0	1	0	-
28	4.12	Pollution inventory substances	0	0	0	0	-
29	4.13	Pollution inventory waste transfers	0	0	0	0	-
29	4.14	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology >	On site	0-50m	50-250m	250-500m	500-2000m
30 >	5.1 >	Superficial aquifer >	Identified (within 500m)				
32 >	5.2 >	Bedrock aquifer >	Identified (within 500m)				
Page	Section	Hydrology >	On site	0-50m	50-250m	250-500m	500-2000m
34 >	6.1 >	Water Network (OS MasterMap) >	94	23	164	-	-
56 >	6.2 >	Surface water features >	1	13	74	-	-
Page	Section	River flooding >					
57 >	7.1 >	River flooding >	1 in 30 year, Greater than 1.0m (within 50m)				
Page	Section	Coastal flooding					
59	8.1	Coastal flooding	Negligible (within 50m)				
Page	Section	Surface water flooding >					
60 >	9.1 >	Surface water flooding >	1 in 30 year, Greater than 1.0m (within 50m)				
Page	Section	Groundwater flooding >					
62 >	10.1 >	Groundwater flooding >	Moderate (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
63	11.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
64	11.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
64	11.3	Special Areas of Conservation (SAC)	0	0	0	0	0
64	11.4	Special Protection Areas (SPA)	0	0	0	0	0
64	11.5	National Nature Reserves (NNR)	0	0	0	0	0
65	11.6	Local Nature Reserves (LNR)	0	0	0	0	0
65 >	11.7 >	Designated Ancient Woodland >	9	0	3	4	35

67	11.8	Biosphere Reserves	0	0	0	0	0
67	11.9	Forest Parks	0	0	0	0	0
67	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
68	12.1	World Heritage Sites	0	0	0	-	-
69	12.2	Area of Outstanding Natural Beauty	0	0	0	-	-
69	12.3	National Parks	0	0	0	-	-
69 >	**12.4 >**	**Listed Buildings >**	0	0	6	-	-
70	12.5	Conservation Areas	0	0	0	-	-
70 >	**12.6 >**	**Scheduled Ancient Monuments >**	0	0	1	-	-
70	12.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	**Agricultural designations >**	On site	0-50m	50-250m	250-500m	500-2000m
71 >	**13.1 >**	**Agricultural Land Classification >**	Grade 3.1 (within 250m)				
Page	Section	**Geology 1:10,000 scale >**	On site	0-50m	50-250m	250-500m	500-2000m
74 >	**14.1 >**	**10k Availability >**	Identified (within 500m)				
76 >	**14.2 >**	**Artificial and made ground (10k) >**	5	1	4	7	-
78 >	**14.3 >**	**Superficial geology (10k) >**	50	9	37	26	-
84	14.4	Landslip (10k)	0	0	0	0	-
85 >	**14.5 >**	**Bedrock geology (10k) >**	28	9	19	26	-
89 >	**14.6 >**	**Bedrock faults and other linear features (10k) >**	44	8	51	49	-
Page	Section	**Geology 1:50,000 scale >**	On site	0-50m	50-250m	250-500m	500-2000m
96 >	**15.1 >**	**50k Availability >**	Identified (within 500m)				
97 >	**15.2 >**	**Artificial and made ground (50k) >**	0	0	1	2	-
98	15.3	Artificial ground permeability (50k)	0	0	-	-	-
99 >	**15.4 >**	**Superficial geology (50k) >**	29	6	16	10	-
102 >	**15.5 >**	**Superficial permeability (50k) >**	Identified (within 50m)				
103	15.6	Landslip (50k)	0	0	0	0	-
103	15.7	Landslip permeability (50k)	None (within 50m)				
105 >	**15.8 >**	**Bedrock geology (50k) >**	23	2	8	15	-

108 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
108 >	15.10 >	Bedrock faults and other linear features (50k) >	18	5	17	18	-
Page	Section	**Boreholes** >	On site	0-50m	50-250m	250-500m	500-2000m
112 >	16.1 >	BGS Boreholes >	1	0	2	-	-
Page	Section	**Natural ground subsidence** >					
114 >	17.1 >	Shrink swell clays >	Low (within 50m)				
116 >	17.2 >	Running sands >	Low (within 50m)				
118 >	17.3 >	Compressible deposits >	High (within 50m)				
120 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
122 >	17.5 >	Landslides >	Moderate (within 50m)				
124 >	17.6 >	Ground dissolution of soluble rocks >	Negligible (within 50m)				
Page	Section	**Mining and ground workings** >	On site	0-50m	50-250m	250-500m	500-2000m
126 >	18.1 >	BritPits >	3	1	3	5	-
130 >	18.2 >	Surface ground workings >	17	3	28	-	-
132	18.3	Underground workings	0	0	0	0	0
132	18.4	Underground mining extents	0	0	0	0	-
132	18.5	Historical Mineral Planning Areas	0	0	0	0	-
132 >	18.6 >	Non-coal mining >	8	0	2	3	9
135	18.7	JPB mining areas	None (within 0m)				
135	18.8	The Coal Authority non-coal mining	0	0	0	0	-
136	18.9	Researched mining	0	0	0	0	-
136	18.10	Mining record office plans	0	0	0	0	-
136	18.11	BGS mine plans	0	0	0	0	-
136	18.12	Coal mining	None (within 0m)				
136	18.13	Brine areas	None (within 0m)				
137	18.14	Gypsum areas	None (within 0m)				
137	18.15	Tin mining	None (within 0m)				
137	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m

138	19.1	Natural cavities	0	0	0	0	-
138	19.2	Mining cavities	0	0	0	0	0
138	19.3	Reported recent incidents	0	0	0	0	-
138	19.4	Historical incidents	0	0	0	0	-
Page	Section	**Radon** >					
140 >	**20.1** >	**Radon** >	Between 5% and 10% (within 0m)				
Page	Section	**Soil chemistry** >	On site	0-50m	50-250m	250-500m	500-2000m
142 >	**21.1** >	**BGS Estimated Background Soil Chemistry** >	231	43	-	-	-
157	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
158	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
159	22.1	Underground railways (London)	0	0	0	-	-
159	22.2	Underground railways (Non-London)	0	0	0	-	-
159	22.3	Railway tunnels	0	0	0	-	-
159	22.4	Historical railway and tunnel features	0	0	0	-	-
159	22.5	Royal Mail tunnels	0	0	0	-	-
160	22.6	Historical railways	0	0	0	-	-
160	22.7	Railways	0	0	0	-	-
160	22.8	Crossrail 2	0	0	0	0	-
160	22.9	HS2	0	0	0	0	-

Recent aerial photograph

Capture Date: 10/08/2022

Site Area: 424.71ha

Recent site history - 2020 aerial photograph

Capture Date: 21/04/2020

Site Area: 424.71ha

Recent site history - 2015 aerial photograph

Capture Date: 17/08/2015

Site Area: 424.71ha

Recent site history - 2010 aerial photograph

Capture Date: 25/10/2010

Site Area: 424.71ha

Recent site history - 2001 aerial photograph

Capture Date: 10/05/2001

Site Area: 424.71ha

1 Past land use

Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

1.1 Historical industrial land uses

Records within 500m	51

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 Quarry**	**1904**	**472744**

ID	Location	Land use	Dates present	Group ID
2	**On site**	**Smithy**	**1865**	**480706**
3	**On site**	**Disused Airfield**	**1955**	**493391**
A	**On site**	**Unspecified Commercial/Industrial**	**1955**	**472801**
A	**On site**	**Unspecified Tank**	**1955**	**485456**
A	**On site**	**Sewage Works**	**1970 - 1988**	**493483**
A	**On site**	**Unspecified Tank**	**1970 - 1988**	**502211**
B	**On site**	**Unspecified Disused Quarry**	**1979**	**474940**
B	**On site**	**Unspecified Quarry**	**1865 - 1904**	**486893**
C	**On site**	**Unspecified Disused Quarry**	**1981**	**474992**
C	**On site**	**Unspecified Quarry**	**1864 - 1904**	**500323**
D	**On site**	**Unspecified Pit**	**1864**	**480580**
D	2m W	Old Gravel Pit	1904 - 1955	486574
E	11m SE	Unspecified Tank	1955	476923
E	13m SE	Unspecified Tank	1928	476927
4	24m N	Unspecified Pit	1979	480467
F	62m NW	Unspecified Old Quarry	1904	476619
5	63m W	Unspecified Heap	1864	478465
F	73m NW	Unspecified Pit	1865	480469
6	102m NW	Wireless Station	1970 - 1988	496181
7	126m W	Gravel Pit	1976	484171
8	130m E	Disused Airfield	1955 - 1974	497103
9	134m NW	Smithy	1865 - 1904	489924
G	136m SE	Unspecified Mill	1970 - 1988	493208
10	136m SE	Unspecified Tank	1955	477966
H	158m E	Sawmill	1976	500196
G	163m SE	Unspecified Mill	1955	488815
G	168m SE	Unspecified Mill	1901 - 1928	496276
11	174m E	Sawmill	1992	498570

ID	Location	Land use	Dates present	Group ID
12	228m NW	Smithy	1865	480947
13	239m SE	Unspecified Pit	1979	480466
14	250m E	Unspecified Pit	1865	480577
I	265m SE	Unspecified Old Quarry	1902	476589
I	271m SE	Unspecified Pit	1865	480420
J	346m NW	Unspecified Pit	1979	480465
J	348m NW	Unspecified Old Quarry	1904	476618
15	351m SE	Sand Pit	1901	479080
16	352m W	Unspecified Disused Quarry	1981	474991
17	356m E	Corn Mill	1865 - 1904	488531
18	367m W	Unspecified Pit	1864	480579
K	392m E	Unspecified Pit	1904	502072
K	395m E	Unspecified Pit	1864	497452
K	403m E	Unspecified Pit	1955	502495
20	413m SE	Smithy	1865	480990
L	418m SE	Unspecified Mill	1865	496756
21	428m E	Unspecified Heap	1974 - 1992	488033
L	455m SE	Unspecified Mill	1904 - 1979	501883
M	469m SW	Refuse Heap	1978	475289
M	469m SW	Gravel Pit	1928 - 1955	491476
N	478m SE	Unspecified Tanks	1976	476172
23	495m SE	Unspecified Quarry	1904	472637

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	**7**

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 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
A	**On site**	**Unspecified Tank**	**1969**	**65118**
E	14m SE	Unspecified Tank	1969	65114
G	178m S	Unspecified Tank	1969	65097
H	212m E	Unspecified Tank	1987	63631
19	405m SE	Unspecified Tank	1972	63662
22	438m NW	Unspecified Tank	1972	63655
N	479m SE	Tanks	1970	62939

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 un-grouped 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 un-grouped 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 un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

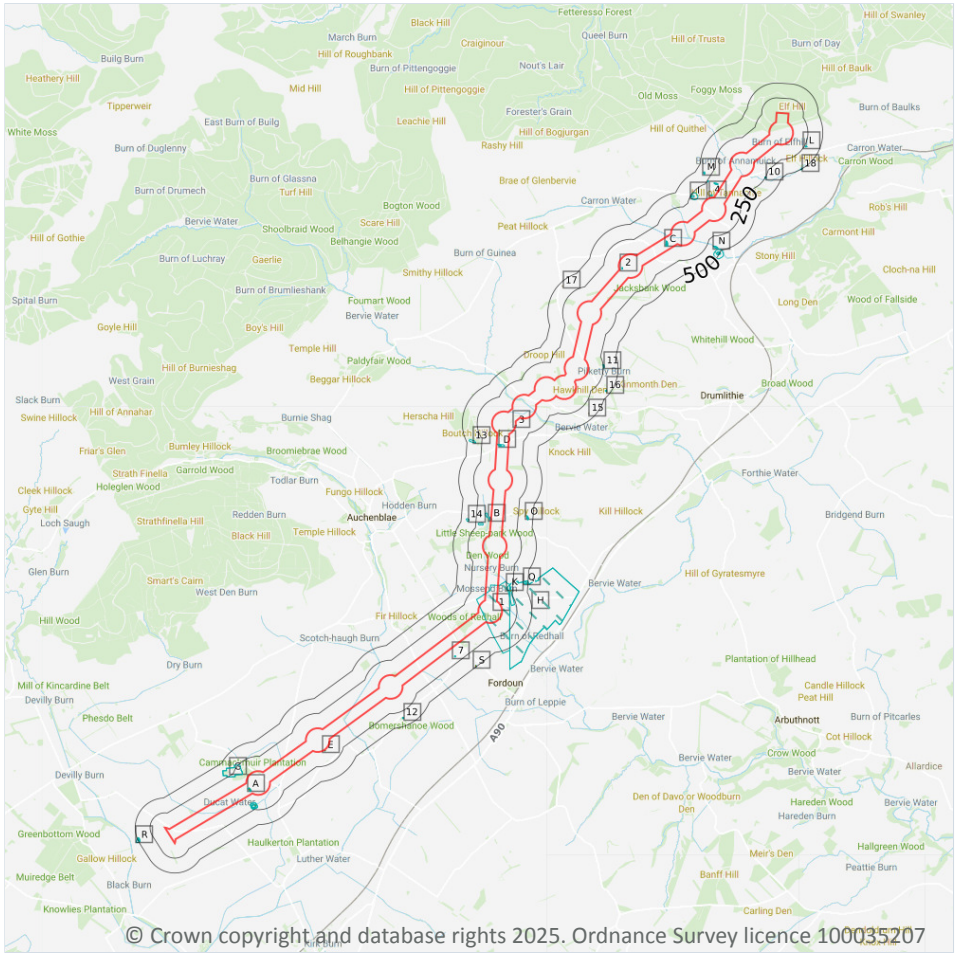
1.6 Historical military land

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.

2 Past land use - un-grouped



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

2.1 Historical industrial land uses

Records within 500m	65

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 un-grouped 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 17 >**

ID	Location	Land Use	Date	Group ID
1	On site	Disused Airfield	1955	493391
2	On site	Smithy	1865	480706
3	On site	Unspecified Quarry	1904	472744

ID	Location	Land Use	Date	Group ID
A	**On site**	**Sewage Works**	**1988**	**493483**
A	**On site**	**Unspecified Tank**	**1988**	**502211**
A	**On site**	**Unspecified Tank**	**1955**	**485456**
A	**On site**	**Unspecified Commercial/Industrial**	**1955**	**472801**
A	**On site**	**Sewage Works**	**1970**	**493483**
A	**On site**	**Unspecified Tank**	**1970**	**502211**
B	**On site**	**Unspecified Pit**	**1864**	**480580**
C	**On site**	**Unspecified Quarry**	**1865**	**486893**
C	**On site**	**Unspecified Quarry**	**1904**	**486893**
C	**On site**	**Unspecified Disused Quarry**	**1979**	**474940**
D	**On site**	**Unspecified Quarry**	**1904**	**500323**
D	**On site**	**Unspecified Quarry**	**1864**	**500323**
D	**On site**	**Unspecified Disused Quarry**	**1981**	**474992**
B	2m W	Old Gravel Pit	1904	486574
B	2m W	Old Gravel Pit	1955	486574
E	11m SE	Unspecified Tank	1955	476923
E	13m SE	Unspecified Tank	1928	476927
4	24m N	Unspecified Pit	1979	480467
F	62m NW	Unspecified Old Quarry	1904	476619
5	63m W	Unspecified Heap	1864	478465
F	73m NW	Unspecified Pit	1865	480469
G	102m NW	Wireless Station	1988	496181
G	102m NW	Wireless Station	1970	496181
6	126m W	Gravel Pit	1976	484171
H	130m E	Disused Airfield	1974	497103
H	130m E	Disused Airfield	1955	497103
I	134m NW	Smithy	1865	489924
J	136m SE	Unspecified Mill	1988	493208

ID	Location	Land Use	Date	Group ID
J	136m SE	Unspecified Mill	1970	493208
7	136m SE	Unspecified Tank	1955	477966
K	158m E	Sawmill	1976	500196
J	163m SE	Unspecified Mill	1955	488815
J	168m SE	Unspecified Mill	1928	496276
J	168m SE	Unspecified Mill	1901	496276
8	174m E	Sawmill	1992	498570
I	192m NW	Smithy	1904	489924
9	228m NW	Smithy	1865	480947
10	239m SE	Unspecified Pit	1979	480466
11	250m E	Unspecified Pit	1865	480577
L	265m SE	Unspecified Old Quarry	1902	476589
L	271m SE	Unspecified Pit	1865	480420
M	346m NW	Unspecified Pit	1979	480465
M	348m NW	Unspecified Old Quarry	1904	476618
12	351m SE	Sand Pit	1901	479080
13	352m W	Unspecified Disused Quarry	1981	474991
N	356m E	Corn Mill	1904	488531
14	367m W	Unspecified Pit	1864	480579
N	374m SE	Corn Mill	1865	488531
O	392m E	Unspecified Pit	1904	502072
O	395m E	Unspecified Pit	1864	497452
O	403m E	Unspecified Pit	1955	502495
16	413m SE	Smithy	1865	480990
P	418m SE	Unspecified Mill	1865	496756
Q	428m E	Unspecified Heap	1992	488033
Q	428m E	Unspecified Heap	1974	488033
P	455m SE	Unspecified Mill	1979	501883

ID	Location	Land Use	Date	Group ID
P	465m SE	Unspecified Mill	1904	501883
R	469m SW	Refuse Heap	1978	475289
R	469m SW	Gravel Pit	1928	491476
R	471m SW	Gravel Pit	1955	491476
S	478m SE	Unspecified Tanks	1976	476172
18	495m SE	Unspecified Quarry	1904	472637

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m **7**

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'.

Features are displayed on the Past land use - un-grouped map on **page 17 >**

ID	Location	Land Use	Date	Group ID
A	**On site**	**Unspecified Tank**	**1969**	**65118**
E	14m SE	Unspecified Tank	1969	65114
J	178m S	Unspecified Tank	1969	65097
K	212m E	Unspecified Tank	1987	63631
15	405m SE	Unspecified Tank	1972	63662
17	438m NW	Unspecified Tank	1972	63655
S	479m SE	Tanks	1970	62939

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.

3 Waste and landfill

Site Outline

Search buffers in metres (m)

Licensed waste sites point

Historical waste sites

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	1

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

Features are displayed on the Waste and landfill map on **page 22 >**

ID	Location	Licence number	Name	Waste type	Facility type
2	325m SE	WML/N/20141	Reusables And Metals, Fordoun Aerodrome, Laurencekirk	Unspecified	Metal Recycling

This data is sourced from the Scottish Environment Protection Agency.

3.5 Historical waste sites

Records within 500m	1

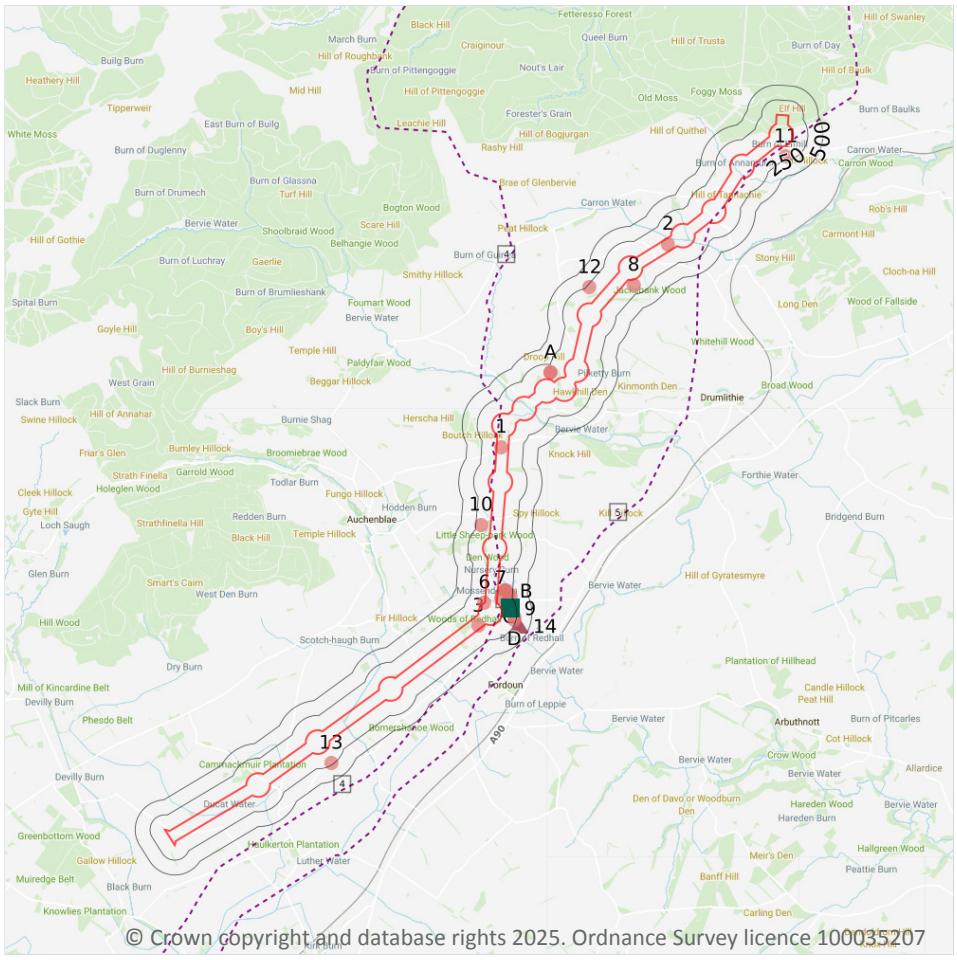
Waste site records derived from Local Authority planning records and high detail historical mapping.

Features are displayed on the Waste and landfill map on **page 22 >**

ID	Location	Address	Further Details	Date
1	274m SE	Site Address: Fordoun Aerodrome, Fordoun, STONEHAVEN, Grampian, AB30 1NN	Type of Site: Storage & Waste Centre (Conversion) Planning application reference: S/98/266 Description: Change of use of storage area to storage and waste recycling centre. Includes landscape works and siting of a temporary building. An application (ref: S/98/266) for Detailed Planning permission was submitted to Aberdeenshire R.C. on 30th March 1998. Data source: Historic Planning Application Data Type: Point	-

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

4 Current industrial land use



Site Outline

Search buffers in metres (m)

Recent industrial land uses

Gas pipelines

Hazardous substance storage/usage

Part B Authorisations

4.1 Recent industrial land uses

Records within 250m	19

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 24 >**

ID	Location	Company	Address	Activity	Category
1	**On site**	**Quarry (Disused)**	**Kincardineshire, AB30**	**Unspecified Quarries Or Mines**	**Extractive Industries**
2	**On site**	**Blererno Quarry (Disused)**	**Kincardineshire, AB39**	**Unspecified Quarries Or Mines**	**Extractive Industries**

ID	Location	Company	Address	Activity	Category
3	**On site**	**Wind Turbine**	**Kincardineshire, AB30**	**Energy Production**	**Industrial Features**
6	3m NW	Grampian Trailer Centre	The Old Fire Station, Fordoun Airfiled, Fordoun, Laurencekirk, Kincardineshire, AB30 1JR	Vehicle Hire and Rental	Hire Services
7	61m E	Airfield (Dis)	Kincardineshire, AB30	Airports and Landing Strips	Air
8	89m S	Drumlithie Feed Mill Turbine	Kincardineshire, AB39	Energy Production	Industrial Features
A	116m N	Droop Hill (Resubmission) Turbine	Kincardineshire, AB30	Energy Production	Industrial Features
A	116m N	Wind Turbine	Kincardineshire, AB30	Energy Production	Industrial Features
B	128m E	Fordoun Sawmill Turbine	Kincardineshire, AB30	Energy Production	Industrial Features
B	128m E	Fordoun Sawmill	Pallet Logistics Site (Former Airfield), Kincardineshire, AB30 1JR	Energy Production	Industrial Features
B	135m E	Electricity Sub Station	Kincardineshire, AB30	Electrical Features	Infrastructure and Facilities
10	166m W	Workings (Dis)	Kincardineshire, AB30	Unspecified Quarries Or Mines	Extractive Industries
11	175m S	Electricity Sub Station	Kincardineshire, AB39	Electrical Features	Infrastructure and Facilities
C	191m E	Saw Mill	Kincardineshire, AB30	Wood Products Including Charcoal, Paper, Card and Board	Industrial Products
12	205m NW	Gordon L Sellar	Cotbank, Drumlithie, Stonehaven, Kincardineshire, AB39 3YN	Livestock Farming	Farming
D	210m E	D & K Singer	Fordoun Aerodrome, Fordoun, Laurencekirk, Kincardineshire, AB30 1JR	Agricultural Machinery and Goods	Industrial Products
13	215m SE	Electricity Sub Station	Kincardineshire, AB30	Electrical Features	Infrastructure and Facilities
C	223m E	Equine Express	Fordoun Sawmill, Fordoun, Laurencekirk, Kincardineshire, AB30 1JR	Packaging	Industrial Products

ID	Location	Company	Address	Activity	Category
D	229m E	Sandy Adams Engineering	Fordoun Aerodrome, Fordoun, Laurencekirk, Kincardineshire, AB30 1JX	Agricultural Contractors	Contract Services

This data is sourced from Ordnance Survey.

4.2 National Geographic Database (NGD) - Current or recent tanks

Records within 250m	0

Current or recent tanks identified from the Ordnance Survey NGD.

This data is sourced from Ordnance Survey.

4.3 Current or recent petrol stations

Records within 500m	0

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.4 Electricity cables

Records within 500m	0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.5 Gas pipelines

Records within 500m	2

High pressure underground gas transmission pipelines.

Features are displayed on the Current industrial land use map on **page 24 >**

ID	Location	Pipe Name	Details	
4	**On site**	**ABERDEEN TO KIRRIEMUIR**	**Pipe Number: -** **Pipeline Safety Regulations Number: -** **Ownership: National Grid** **Maximum Operating Pressure (Bar): -**	**Pipeline Diameter (mm): 900** **Wall Thickness (mm): -** **Year of commission: Not specified** **Abandonment Status: Not abandoned**

ID	Location	Pipe Name	Details	
5	**On site**	**ABERDEEN TO KIRRIEMUIR**	**Pipe Number: -** **Pipeline Safety Regulations Number: -** **Ownership: National Grid** **Maximum Operating Pressure (Bar): -**	**Pipeline Diameter (mm): 900** **Wall Thickness (mm): -** **Year of commission: Not specified** **Abandonment Status: Not abandoned**

This data is sourced from National Grid.

4.6 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.

4.7 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.

4.8 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.

4.9 Hazardous substance storage/usage

Records within 500m	**1**

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.

Features are displayed on the Current industrial land use map on **page 24 >**

ID	Location	Details	
14	327m SE	Application reference number: No Details Application status: Approved Application date: No Details Address: CNG Services Ltd, Land to the South of B966, West of Old Aberdeen Road, Aberdeen, Aberdeenshire Council, Scotland, AB30 1JR	Details: No Details Enforcement: No Details Date of enforcement: No Details Comment: No Details

This data is sourced from Local Authority records.

4.10 Part A(1), IPPC and Historic IPC Authorisations

Records within 500m	**0**

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

This data is sourced from the Scottish Environment Protection Agency.

4.11 Part B Authorisations

Records within 500m	**1**

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

Features are displayed on the Current industrial land use map on **page 24 >**

ID	Location	Address	Operator	Processes undertaken	License reference
9	143m E	Fordoun Sawmill, Fordoun, Laurencekirk, AB30 1JR	Scott Timber Limited	PPC(B) - Combustion of Fuels	PPC/B/5002940

This data is sourced from the Scottish Environment Protection Agency.

4.12 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.

4.13 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.

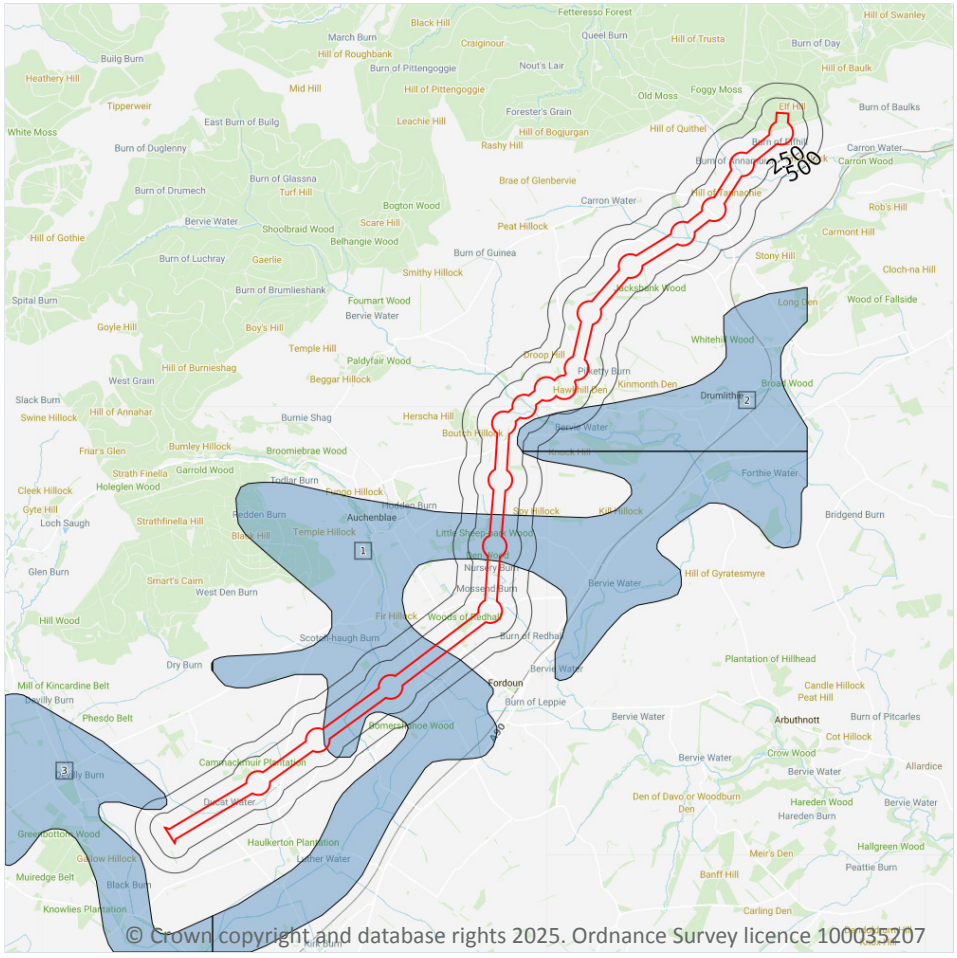
4.14 Pollution inventory radioactive waste

Records within 500m	0

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.

5 Hydrogeology - Superficial aquifer



Site Outline

Search buffers in metres (m)

Limited or local potential

Locally important - intergranular

5.1 Superficial aquifer

Records within 500m	3

Records of groundwater classification within superficial geology.

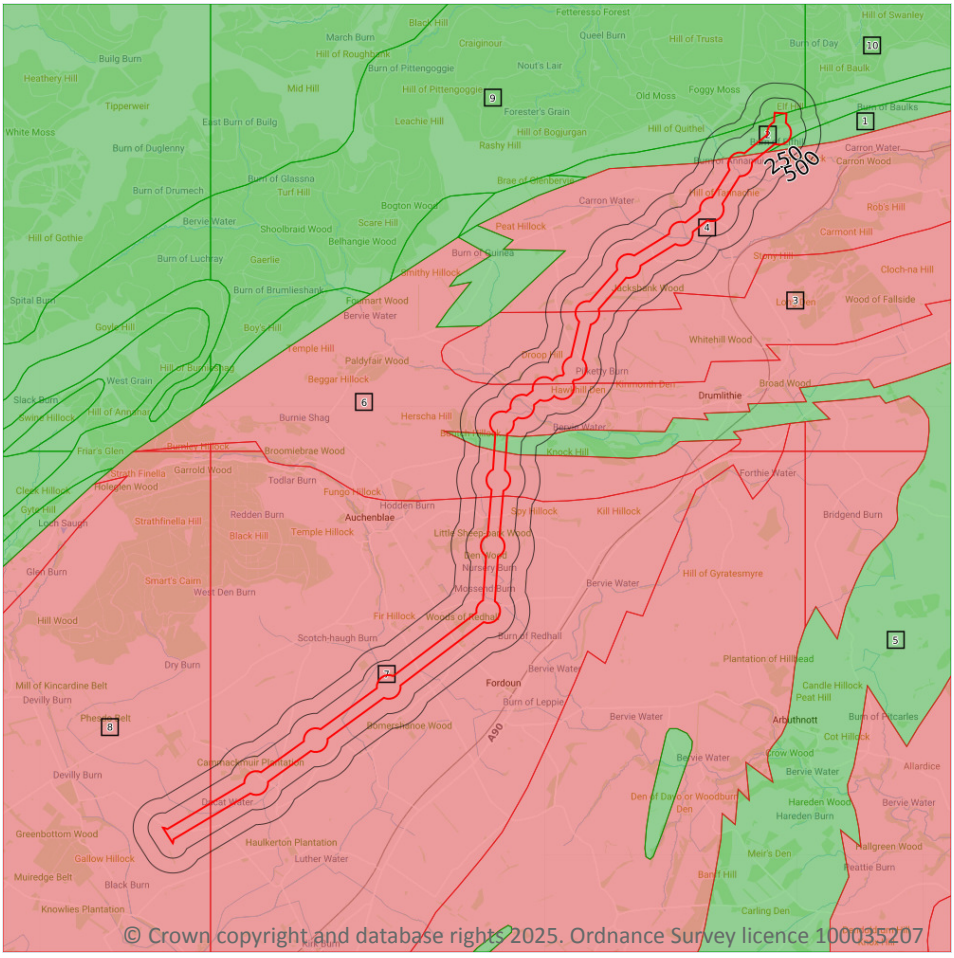
Features are displayed on the Hydrogeology map on **page 30 >**

ID	Location	Description	Type	Rock description
1	**On site**	**Concealed aquifers, aquifers of limited potential, regions without significant groundwater**	**Concealed aquifers; aquifers with limited or local potential**	**Quaternary Coastal and Fluviatile Alluvium**
2	69m SE	Concealed aquifers, aquifers of limited potential, regions without significant groundwater	Concealed aquifers; aquifers with limited or local potential	Quaternary Coastal and Fluviatile Alluvium

ID	Location	Description	Type	Rock description
3	315m N	Concealed aquifers, aquifers of limited potential, regions without significant groundwater	Concealed aquifers; aquifers with limited or local potential	Quaternary Coastal and Fluviatile Alluvium

This data is sourced from the British Geological Survey.

Bedrock aquifer



Site Outline

Search buffers in metres (m)

- Highly productive - fissures/discontinuities
- Highly productive - intergranular
- Moderately productive - fissures/discontinuities
- Moderately productive - intergranular
- Low productive - fissures/discontinuities
- Low productive - intergranular
- No significant groundwater

5.2 Bedrock aquifer

Records within 500m	10

Records of groundwater classification within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 32 >**

ID	Location	Description	Flow	Summary	Rock description
1	**On site**	**Low productivity aquifer**	**Flow is virtually all through fractures and other discontinuities**	**Several fault-bounded, lenticular outcrops of serpentine, metabasalt, matalimestone and psammite strung out between Garron Point, Stonehaven, in the northeast, and Glen Sannox, Arran, in the southwest yielding smal amounts of groundwater.**	**HIGHLAND BORDER COMPLEX**

ID	Location	Description	Flow	Summary	Rock description
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.**	**SOUTHERN HIGHLAND GROUP**
3	**On site**	**Moderately productive aquifer**	**Flow is virtually all through fractures and other discontinuities**	**Conglomerate, with angular to well-rounded boulders, cobbles and pebbles, with interbedded lavas. Locally yield moderate amounts of groundwater.**	**DUNNOTTAR-CRAWTON GROUP**
4	**On site**	**Moderately productive aquifer**	**Flow is virtually all through fractures and other discontinuities**	**Fine- to medium-grained lithic sandstone interbedded with minor amounts of conglomerate and siltstone locally yield moderate amounts of groundwater.**	**STONEHAVEN GROUP**
5	**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, rare springs yielding up to 2 L/s.**	**UNNAMED EXTRUSIVE ROCKS, SILURIAN TO DEVONIAN**
6	**On site**	**Moderately productive aquifer**	**Flow is virtually all through fractures and other discontinuities**	**Sandstones, in places flaggy, with siltstones, mudstones and conglomerates and interbedded lavas, locally yield moderate amounts of groundwater.**	**ARBUTHNOTT-GARVOCK GROUP**
7	**On site**	**Moderately productive aquifer**	**Flow is virtually all through fractures and other discontinuities**	**Sandstones, in places flaggy, with siltstones, mudstones and conglomerates and interbedded lavas locally yield up to 12 L/s in parts of Strathmore.**	**STRATHMORE GROUP**
8	**On site**	**Moderately productive aquifer**	**Flow is virtually all through fractures and other discontinuities**	**Sandstones, in places flaggy, with siltstones, mudstones and conglomerates and interbedded lavas locally yield up to 12 L/s in parts of Strathmore.**	**STRATHMORE GROUP**
9	**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.**	**SOUTHERN HIGHLAND GROUP**
10	329m E	Low productivity aquifer	Flow is virtually all through fractures and other discontinuities	Small amounts of groundwater in near surface weathered zone and secondary fractures.	SOUTHERN HIGHLAND GROUP

This data is sourced from the British Geological Survey.

6 Hydrology

6.1 Water Network (OS MasterMap)

Records within 250m	281

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 34 >**

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

ID	Location	Type of water feature	Ground level	Permanence	Name
2	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Mossend Burn
3	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
4	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Luther Water
5	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
6	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Mossend Burn
7	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Nursery Burn
8	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Nursery Burn
9	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
10	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Nursery Burn
11	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Bervie Water
12	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
13	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Killer Burn
14	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
15	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Burn of Elfhill
16	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Carron Water
17	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Killer Burn
18	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
19	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Bervie Water
20	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Carron Water
21	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Carron Water
22	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
23	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
24	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
25	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Carron Water
A	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
C	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	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Mossend Burn
H	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
I	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Nursery Burn
I	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
J	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
K	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Nursery Burn
K	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
L	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
M	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
N	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
O	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
P	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
Q	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
R	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
S	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
T	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
U	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
V	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
W	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Mossend Burn
X	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Nursery Burn
Y	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Nursery Burn
Z	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
Z	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AA	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
AA	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
AB	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
AB	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BA	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AC	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AC	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
BB	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Burn of Annamuick
AD	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Nursery Burn
BC	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
BC	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AE	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Nursery Burn

ID	Location	Type of water feature	Ground level	Permanence	Name
BD	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BD	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
AF	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BE	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AG	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BF	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AH	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AI	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AJ	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AK	On site	Lake, loch or reservoir.	Not provided	Watercourse contains water year round (in normal circumstances)	-
AL	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AM	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AN	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
AO	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AP	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AQ	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Burn of Annamuick
AR	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AS	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Bervie Water
AS	On site	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
AT	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AU	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Pilketty Burn
AV	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AW	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AX	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AY	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
AZ	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
AZ	**On site**	**Inland river not influenced by normal tidal action.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**-**
AZ	**On site**	**Inland river not influenced by normal tidal action.**	**Underground**	**Watercourse contains water year round (in normal circumstances)**	**-**
BG	4m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
33	10m S	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
BH	14m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BI	16m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
N	19m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BJ	19m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BK	23m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BM	28m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BL	29m NW	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	Hungeral Burn
34	31m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Burn of Annamuick
BN	36m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Hungeral Burn

ID	Location	Type of water feature	Ground level	Permanence	Name
35	39m SW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
BD	40m W	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Pilketty Burn
36	43m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Ducat Water
BO	43m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Burn of Annamuick
BP	44m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BD	44m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Pilketty Burn
37	45m W	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Hungeral Burn
BQ	46m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BR	46m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Pilketty Burn
38	46m NW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
BS	46m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BT	47m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Hungeral Burn
BU	51m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
J	57m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BV	57m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
39	57m NW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
40	58m W	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Hungeral Burn
41	58m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BW	62m S	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
J	62m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
J	62m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
BX	63m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BW	65m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BY	67m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
42	73m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Burn of Elfhill
43	74m SE	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
BZ	74m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
44	80m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
CA	85m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
CB	86m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
45	89m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Ducat Water
CD	90m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
BT	97m W	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Hungeral Burn
47	98m W	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
CE	98m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
CF	100m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Hungeral Burn
48	100m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
CG	101m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
49	104m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Ducat Water

ID	Location	Type of water feature	Ground level	Permanence	Name
CH	110m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
51	127m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
CA	128m E	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
52	129m E	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
CI	130m E	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
CI	133m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
CI	133m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
CA	134m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
CJ	134m SW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
CK	134m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
CL	137m W	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
53	137m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
CJ	139m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Hungeral Burn

ID	Location	Type of water feature	Ground level	Permanence	Name
54	140m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Hungeral Burn
CM	140m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
CM	140m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
CL	141m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
CN	141m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
CO	143m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
CP	144m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
CN	144m S	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
CM	145m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
55	146m NW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
CM	147m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
CM	147m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
CQ	147m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
CN	148m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Ducat Water
CM	148m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
CR	149m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
CL	150m W	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
CS	151m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
CT	151m S	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
56	154m NW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
CL	155m W	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
CU	155m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
CM	155m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Ducat Water
CM	157m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Ducat Water
CV	157m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
CW	158m SE	Lake, loch or reservoir.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
CW	158m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
57	159m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Bervie Water
58	159m NW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
CU	159m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
CX	160m W	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Pilketty Burn
CM	161m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
CM	161m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Ducat Water
CM	161m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Ducat Water
59	162m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
CY	162m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
CX	163m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Pilketty Burn
CZ	163m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
CJ	165m W	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
DA	165m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
DB	169m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
DC	169m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Killer Burn
CJ	169m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
CW	170m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
DE	172m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
DF	172m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
DG	172m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
CJ	173m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Hungeral Burn
DH	173m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
61	173m W	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Mossend Burn
DJ	175m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
DI	175m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
DF	176m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
CU	176m E	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
DK	177m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
DK	177m W	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
DL	178m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
62	178m W	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
DM	178m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
DN	179m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Mossend Burn
63	179m W	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
DO	179m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
DD	181m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
DP	181m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
DQ	182m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
DR	182m W	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
DS	182m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
DS	184m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
DT	185m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
DR	185m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
DU	186m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Burn of Annamuick
DQ	187m S	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
64	188m S	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
DV	189m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
DU	189m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Burn of Annamuick
DW	189m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
DW	189m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Luther Water
DX	190m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Whiting Burn

ID	Location	Type of water feature	Ground level	Permanence	Name
DY	190m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
DZ	192m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
65	192m S	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Burn of Elfhill
66	193m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Luther Water
DK	194m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
DW	195m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
67	195m NW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
DO	196m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
DO	196m W	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
EA	196m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
EA	196m NW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
EB	198m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
DK	198m W	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
68	198m E	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
EC	198m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
ED	199m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
DU	201m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
69	202m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Burn of Elfhill
CT	204m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
EE	205m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
EF	207m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
EG	214m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
EH	217m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
EI	218m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
EJ	221m S	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
DK	222m W	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
DK	224m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
71	226m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
DU	227m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Burn of Annamuick
EK	227m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
DY	227m NW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
EL	231m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
72	232m NW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
EM	232m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Burn of Annamuick
EN	233m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
EO	234m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
EP	235m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
EQ	235m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
74	236m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Pilketty Burn

ID	Location	Type of water feature	Ground level	Permanence	Name
ER	240m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
ES	241m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
EJ	242m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
ET	248m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
ET	249m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
DK	249m W	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
DK	250m W	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.

6.2 Surface water features

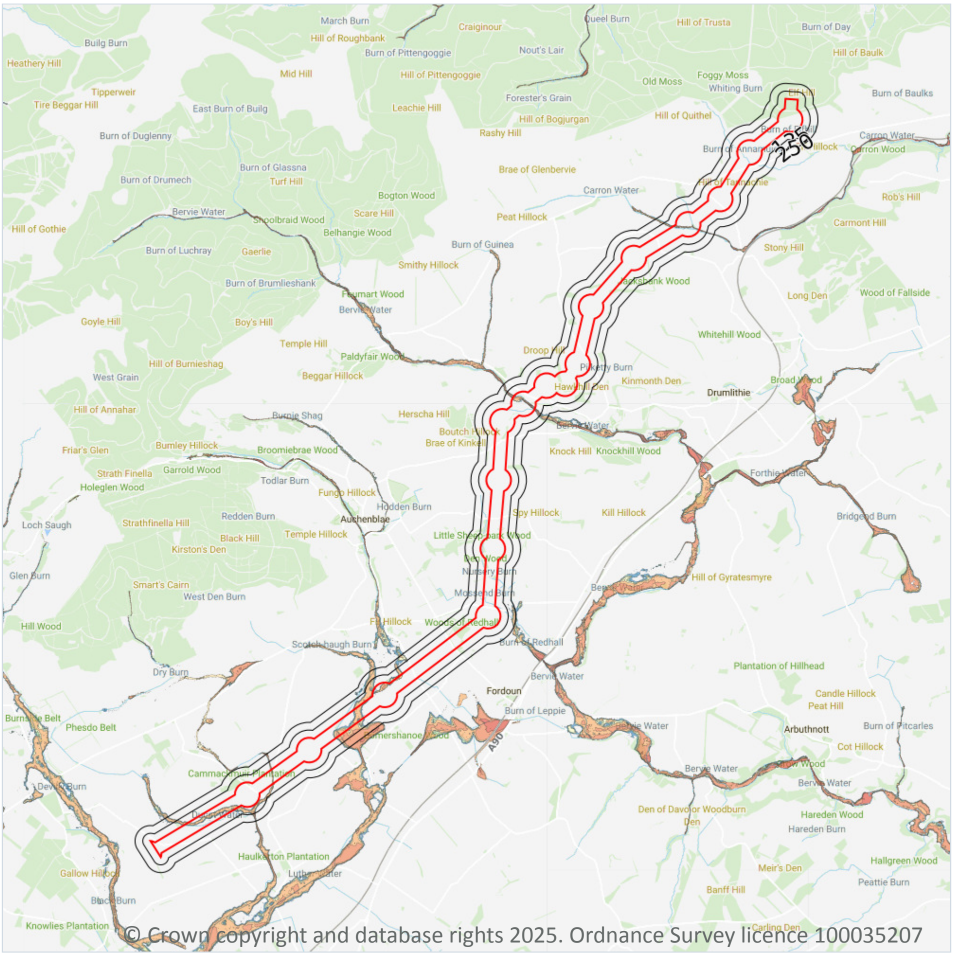
Records within 250m	**88**

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 34 >**

This data is sourced from the Ordnance Survey.

7 River flooding



Site Outline
Search buffers in metres (m)

1 in 1000 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 250 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 100 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 30 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

7.1 River 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**

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%)
- 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 57 >**

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.

8 Coastal flooding - Coastal flooding

8.1 Coastal flooding

Highest risk on site	**Negligible**
Highest risk within 50m	**Negligible**

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:

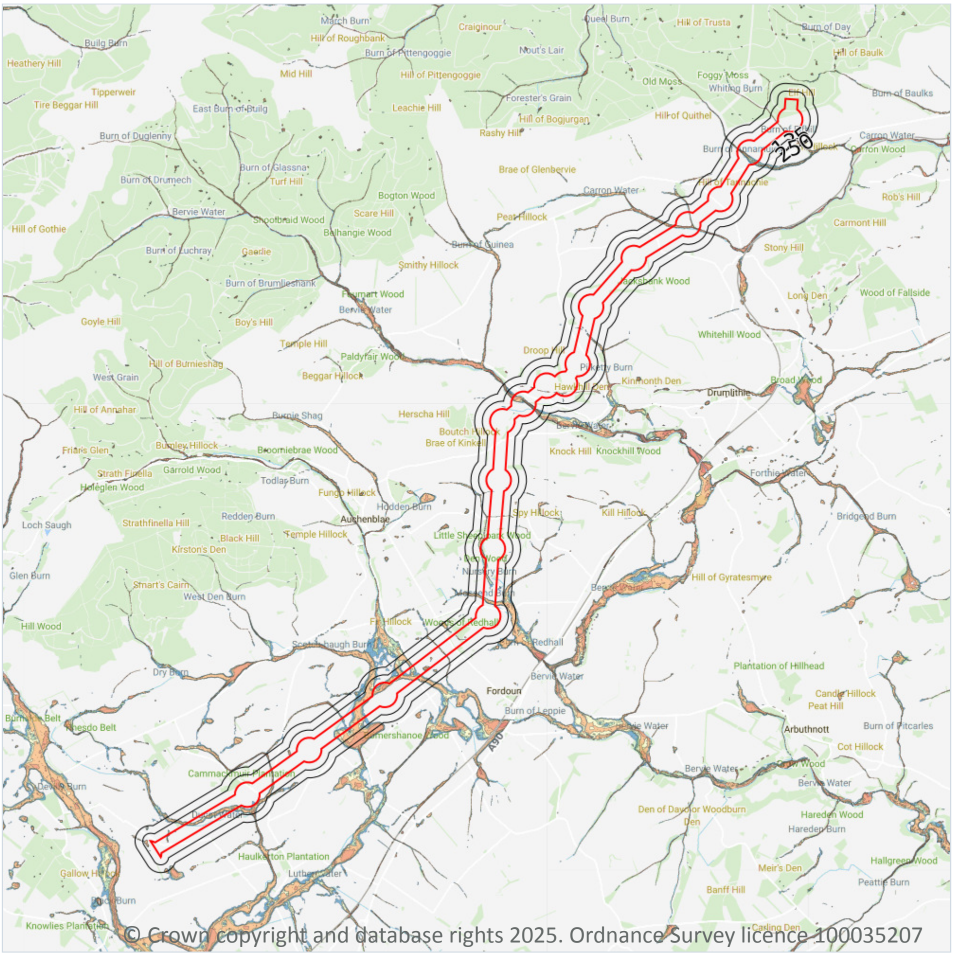
- 1 in 30 year (3.33%)
- 1 in 100 year (1%)
- 1 in 250 year (0.4%)
- and 1 in 1,000 year (0.1%)

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.

9 Surface water flooding



Site Outline

Search buffers in metres (m)

1 in 1000 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 250 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 100 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 30 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

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**

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 60 >

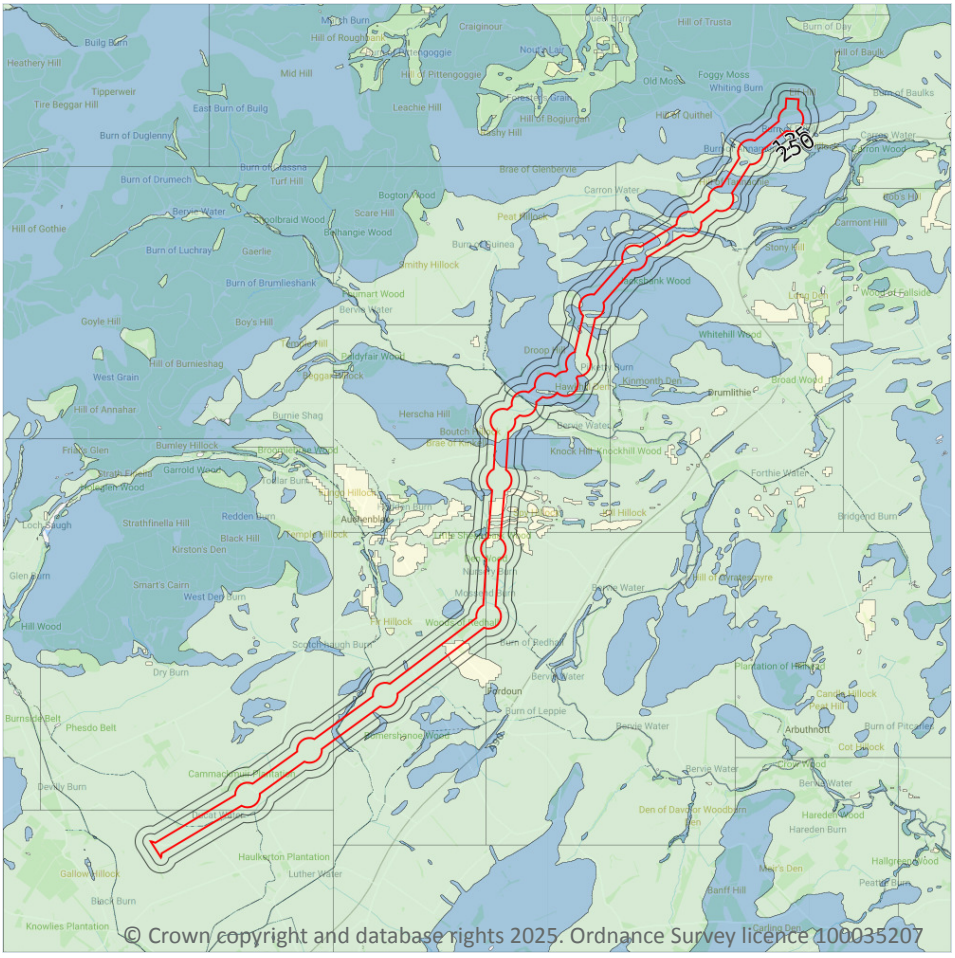
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on

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

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.

10 Groundwater flooding



Site Outline

Search buffers in metres (m)

- High
- Moderate - High
- Moderate
- Low
- Negligible

10.1 Groundwater flooding

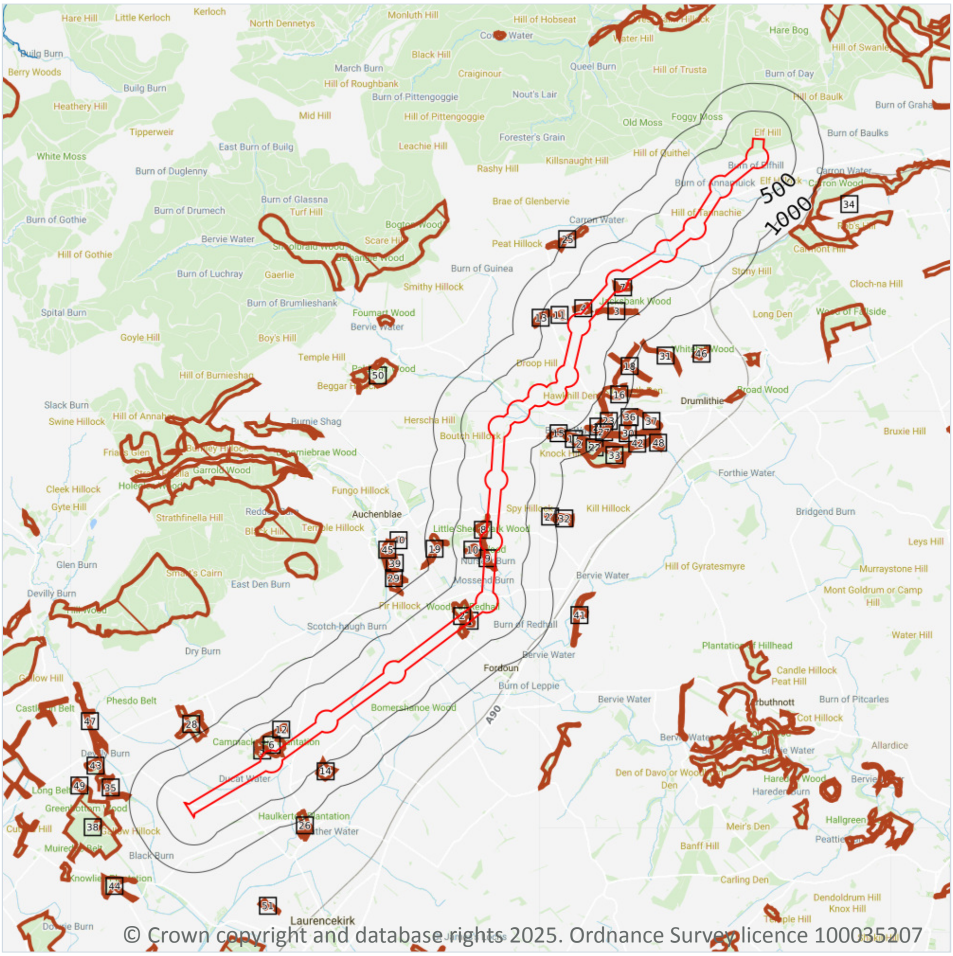
Highest risk on site	**Moderate**
Highest risk within 50m	**Moderate**

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 62 >**

This data is sourced from Ambiental Risk Analytics.

11 Environmental designations



Site Outline

Search buffers in metres (m)

Sites of Special Scientific Interest (SSSI)

Special Areas of Conservation (SAC)

Designated Ancient Woodland

11.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m	0

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 re-notified 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.

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	0

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.

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

11.4 Special Protection Areas (SPA)

Records within 2000m	0

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.

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

11.5 National Nature Reserves (NNR)

Records within 2000m	0

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.

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

11.6 Local Nature Reserves (LNR)

Records within 2000m	0

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.

11.7 Designated Ancient Woodland

Records within 2000m	51

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 63 >**

ID	Location	Name	Woodland Type
1	**On site**	**Woods Of Redhall**	**Long-Established (of plantation origin)**
2	**On site**	**Woods Of Redhall**	**Long-Established (of plantation origin)**
3	**On site**	**Unknown**	**Long-Established (of plantation origin)**
4	**On site**	**Unknown**	**Long-Established (of plantation origin)**
5	**On site**	**Cammackmuir Plantation**	**Long-Established (of plantation origin)**
6	**On site**	**Cammackmuir Plantation**	**Long-Established (of plantation origin)**
7	**On site**	**Jacksbank Wood**	**Long-Established (of plantation origin)**
8	**On site**	**Den Wood**	**Long-Established (of plantation origin)**
9	**On site**	**Den Wood**	**Long-Established (of plantation origin)**
10	85m W	Unknown	Long-Established (of plantation origin)
11	110m W	Unknown	Long-Established (of plantation origin)
12	179m NW	Cammackmuir Plantation	Long-Established (of plantation origin)
13	345m W	Unknown	Long-Established (of plantation origin)
14	421m SE	Drumforber Plantation	Long-Established (of plantation origin)
15	451m S	Unknown	Long-Established (of plantation origin)

ID	Location	Name	Woodland Type
16	472m SE	Unknown	Long-Established (of plantation origin)
17	552m S	Unknown	Long-Established (of plantation origin)
18	574m E	Unknown	Long-Established (of plantation origin)
19	586m W	Crossden Plantation	Long-Established (of plantation origin)
20	620m SE	Unknown	Other (on Roy map)
21	701m SE	Unknown	Long-Established (of plantation origin)
22	772m SE	Knockhill Wood	Long-Established (of plantation origin)
23	799m SE	Unknown	Ancient (of semi-natural origin)
24	848m E	Unknown	Long-Established (of plantation origin)
25	854m NW	Wood Of Germany	Long-Established (of plantation origin)
26	862m SE	Haulkerton Plantation	Long-Established (of plantation origin)
27	867m SE	Unknown	Ancient (of semi-natural origin)
28	909m NW	Unknown	Long-Established (of plantation origin)
29	942m NW	Drumsleed Wood	Long-Established (of plantation origin)
30	968m SE	Unknown	Long-Established (of plantation origin)
31	972m SE	Unknown	Long-Established (of plantation origin)
32	980m E	Unknown	Long-Established (of plantation origin)
33	984m SE	Knockhill Wood	Long-Established (of plantation origin)
34	989m SE	Carron/carmont Wood	Long-Established (of plantation origin)
35	1011m W	Unknown	Long-Established (of plantation origin)
36	1056m SE	Unknown	Long-Established (of plantation origin)
37	1248m SE	Unknown	Other (on Roy map)
38	1252m W	Greenbottom Wood	Long-Established (of plantation origin)
39	1333m NW	Drumsleed Wood	Long-Established (of plantation origin)
40	1384m W	Drumsleed Wood	Long-Established (of plantation origin)
41	1408m E	Unknown	Long-Established (of plantation origin)
42	1410m SE	Knockhill Wood	Long-Established (of plantation origin)
43	1544m W	Unknown	Long-Established (of plantation origin)

ID	Location	Name	Woodland Type
44	1557m SW	Unknown	Long-Established (of plantation origin)
45	1566m W	Drumsleed Wood	Long-Established (of plantation origin)
46	1701m SE	Unknown	Long-Established (of plantation origin)
47	1711m NW	Unknown	Long-Established (of plantation origin)
48	1751m SE	Unknown	Long-Established (of plantation origin)
49	1794m W	Unknown	Long-Established (of plantation origin)
50	1926m NW	Paldyfair Wood	Long-Established (of plantation origin)
51	1961m SE	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.

11.9 Forest Parks

Records within 2000m	0

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.

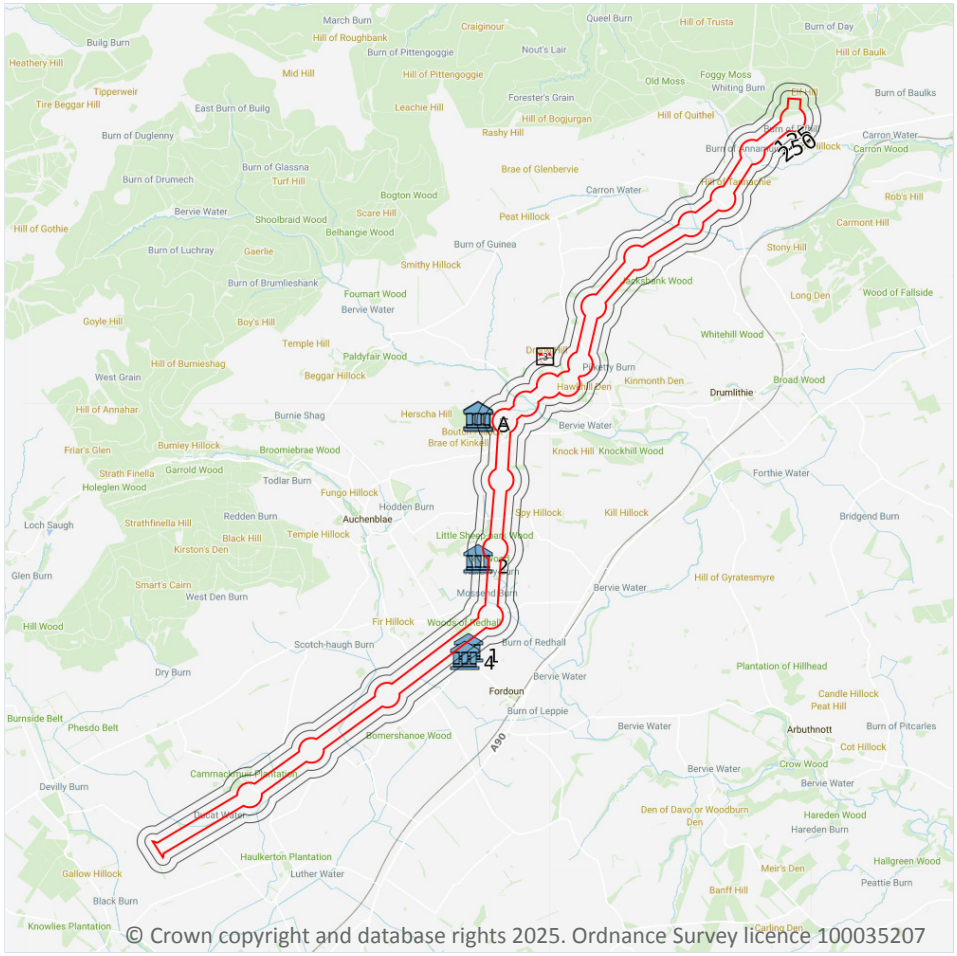
11.10 Marine Conservation Zones

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.

12 Visual and cultural designations



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Site Outline

Search buffers in metres (m)

- Listed buildings
- Conservation areas
- Conservation areas - no data
- National Parks
- Areas of Outstanding Natural Beauty
- Registered parks and gardens
- Scheduled Monuments
- World Heritage Sites

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	6

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.

Features are displayed on the Visual and cultural designations map on **page 68 >**

ID	Location	Name	Grade	Reference Number	Listed date
1	90m SE	Redhall House, Aberdeenshire	B	341943	18/08/1972
2	124m SW	Monboddo House, Aberdeenshire	B	341934	18/08/1972
4	140m SE	Lodge, Redhall House, Aberdeenshire	C	341944	25/11/1980
5	219m W	Steading, Mid Blairs Farm, Auchenblae, Aberdeenshire	C	397819	05/11/2004
A	242m W	Horsemill, Mid Blairs Farm, Auchenblae, Aberdeenshire	C	397818	05/11/2004
A	247m W	Bothy, Mid Blairs Farm, Auchenblae, Aberdeenshire	C	397820	05/11/2004

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	1

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.

Features are displayed on the Visual and cultural designations map on **page 68 >**

ID	Location	Ancient monument name	Reference number
3	137m N	Droop Hill,cairns 1250m SW of Inches	-

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

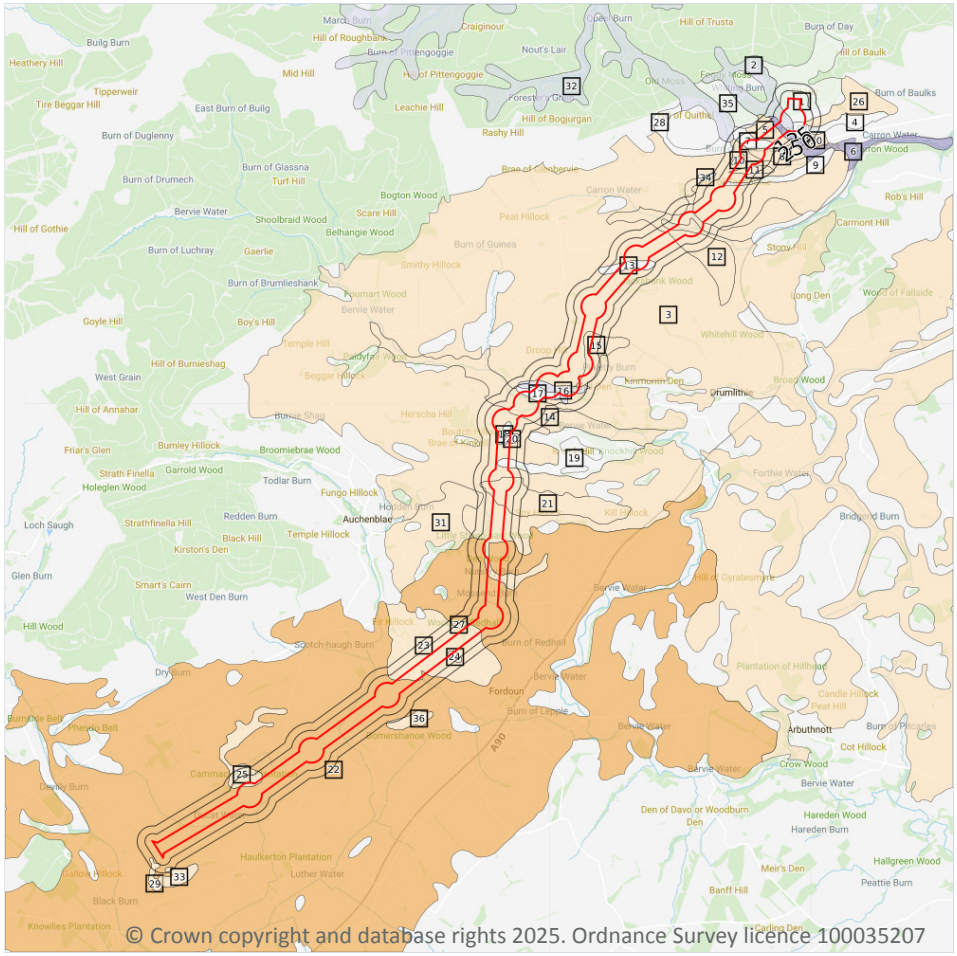
12.7 Registered Parks and Gardens

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.

13 Agricultural designations



13.1 Agricultural Land Classification

Records within 250m	36

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 71 >**

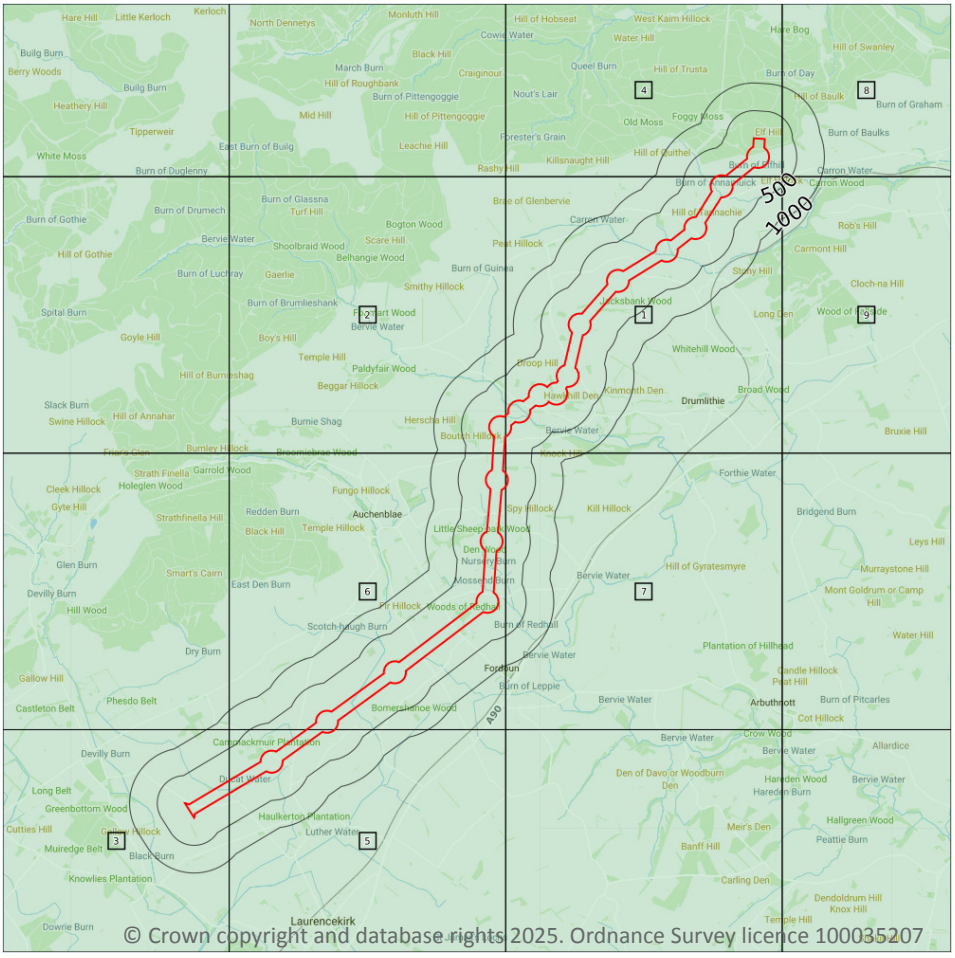
ID	Location	Classification	Description
1	On site	Grade 4.1	Land Suited to Arable Cropping
2	On site	Grade 5.3	Land Suited only to Improved Grassland and Rough Grazings
3	On site	Grade 3.2	Land Suited to Arable Cropping

ID	Location	Classification	Description
4	**On site**	**Grade 4.2**	**Land Suited to Arable Cropping**
5	**On site**	**Grade 3.2**	**Land Suited to Arable Cropping**
6	**On site**	**Grade 6.1**	**Land Suited only to Improved Grassland and Rough Grazings**
7	**On site**	**Grade 4.2**	**Land Suited to Arable Cropping**
8	**On site**	**Grade 3.1**	**Land Suited to Arable Cropping**
9	**On site**	**Grade 4.2**	**Land Suited to Arable Cropping**
10	**On site**	**Grade 3.1**	**Land Suited to Arable Cropping**
11	**On site**	**Grade 3.1**	**Land Suited to Arable Cropping**
12	**On site**	**Grade 3.1**	**Land Suited to Arable Cropping**
13	**On site**	**Grade 4.2**	**Land Suited to Arable Cropping**
14	**On site**	**Grade 3.1**	**Land Suited to Arable Cropping**
15	**On site**	**Grade 3.1**	**Land Suited to Arable Cropping**
16	**On site**	**Grade 5.3**	**Land Suited only to Improved Grassland and Rough Grazings**
17	**On site**	**Grade 4.2**	**Land Suited to Arable Cropping**
18	**On site**	**Grade 4.2**	**Land Suited to Arable Cropping**
19	**On site**	**Grade 4.2**	**Land Suited to Arable Cropping**
20	**On site**	**Grade 4.1**	**Land Suited to Arable Cropping**
21	**On site**	**Grade 3.1**	**Land Suited to Arable Cropping**
22	**On site**	**Grade 2**	**Land Suited to Arable Cropping**
23	**On site**	**Grade 3.1**	**Land Suited to Arable Cropping**
24	**On site**	**Grade 3.2**	**Land Suited to Arable Cropping**
25	**On site**	**Grade 3.1**	**Land Suited to Arable Cropping**
26	5m E	Grade 3.2	Land Suited to Arable Cropping
27	14m NW	Grade 3.2	Land Suited to Arable Cropping
28	105m W	Grade 4.2	Land Suited to Arable Cropping
29	115m SW	Grade 3.1	Land Suited to Arable Cropping
30	158m SE	Grade 3.1	Land Suited to Arable Cropping
31	169m W	Grade 3.1	Land Suited to Arable Cropping

ID	Location	Classification	Description
32	174m NW	Grade 5.3	Land Suited only to Improved Grassland and Rough Grazings
33	178m S	Grade 3.2	Land Suited to Arable Cropping
34	187m NW	Grade 4.2	Land Suited to Arable Cropping
35	199m N	Grade 4.1	Land Suited to Arable Cropping
36	222m S	Grade 3.1	Land Suited to Arable Cropping

This data is sourced from the James Hutton Institute.

14 Geology 1:10,000 scale - Availability



Site Outline

Search buffers in metres (m)

Full coverage

Partial coverage

No coverage

14.1 10k Availability

Records within 500m	9

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.

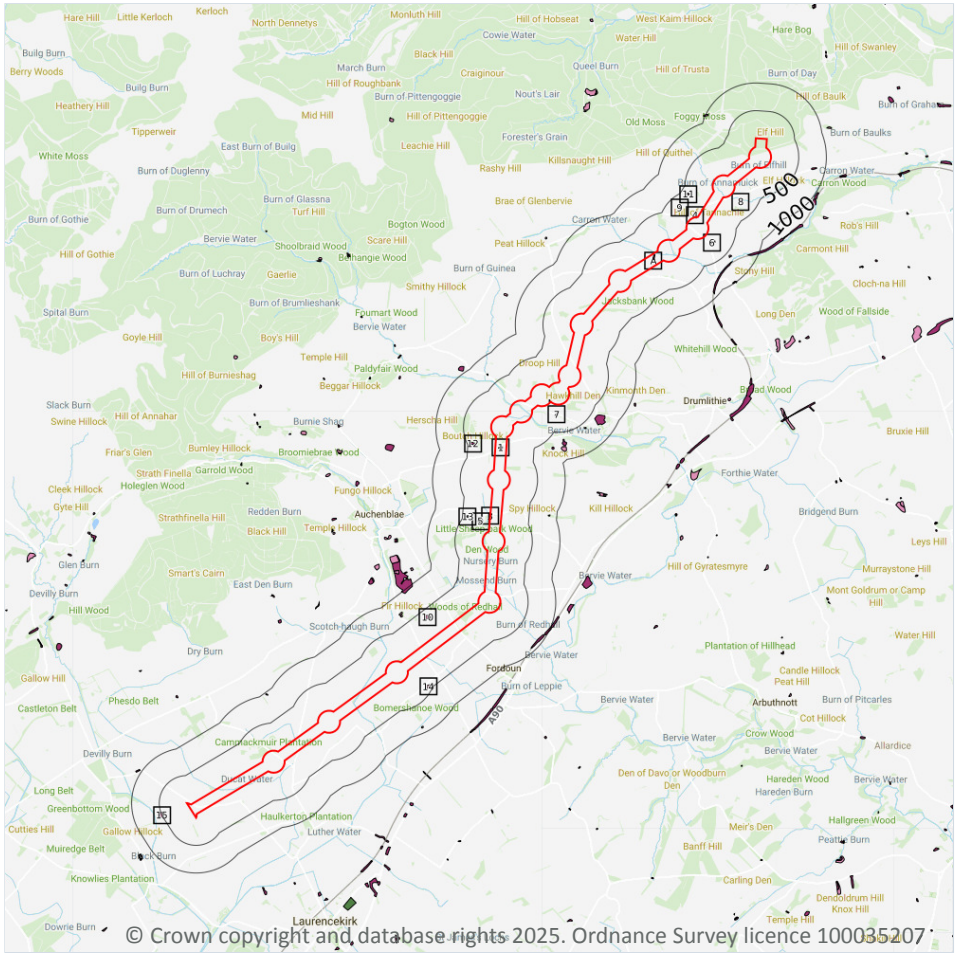
Features are displayed on the Geology 1:10,000 scale - Availability map on **page 74 >**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	NO78SE
2	On site	Full	Full	Full	Full	NO78SW
3	On site	Full	Full	Full	No coverage	NO67SE
4	On site	Full	Full	Full	No coverage	NO78NE

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
5	**On site**	**Full**	**Full**	**Full**	**No coverage**	**NO77SW**
6	**On site**	**Full**	**Full**	**Full**	**No coverage**	**NO77NW**
7	**On site**	**Full**	**Full**	**Full**	**No coverage**	**NO77NE**
8	238m E	Full	Full	Full	Full	NO88NW
9	365m SE	Full	Full	Full	No coverage	NO88SW

This data is sourced from the British Geological Survey.

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



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Site Outline

Search buffers in metres (m)

- Reclaimed ground
- Made ground
- Worked ground
- Infilled ground
- Disturbed ground
- Landscaped ground

14.2 Artificial and made ground (10k)

Records within 500m	17

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.

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on **page 76 >**

ID	Location	LEX Code	Description	Rock description
1	On site	WGR-VOID	Worked Ground (Undivided)	Void
2	On site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
3	On site	WMGR-ARTDP	Infilled Ground	Artificial Deposit
A	On site	WGR-VOID	Worked Ground (Undivided)	Void

ID	Location	LEX Code	Description	Rock description
A	**On site**	**MGR-ARTDP**	**Made Ground (Undivided)**	**Artificial Deposit**
4	27m N	WGR-VOID	Worked Ground (Undivided)	Void
5	131m W	WGR-VOID	Worked Ground (Undivided)	Void
6	151m SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
7	168m S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
8	202m SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
9	258m NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
10	308m NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
11	353m NW	WGR-VOID	Worked Ground (Undivided)	Void
12	361m W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
13	387m W	WMGR-ARTDP	Infilled Ground	Artificial Deposit
14	389m SE	WGR-VOID	Worked Ground (Undivided)	Void
15	469m SW	WGR-VOID	Worked Ground (Undivided)	Void

This data is sourced from the British Geological Survey.