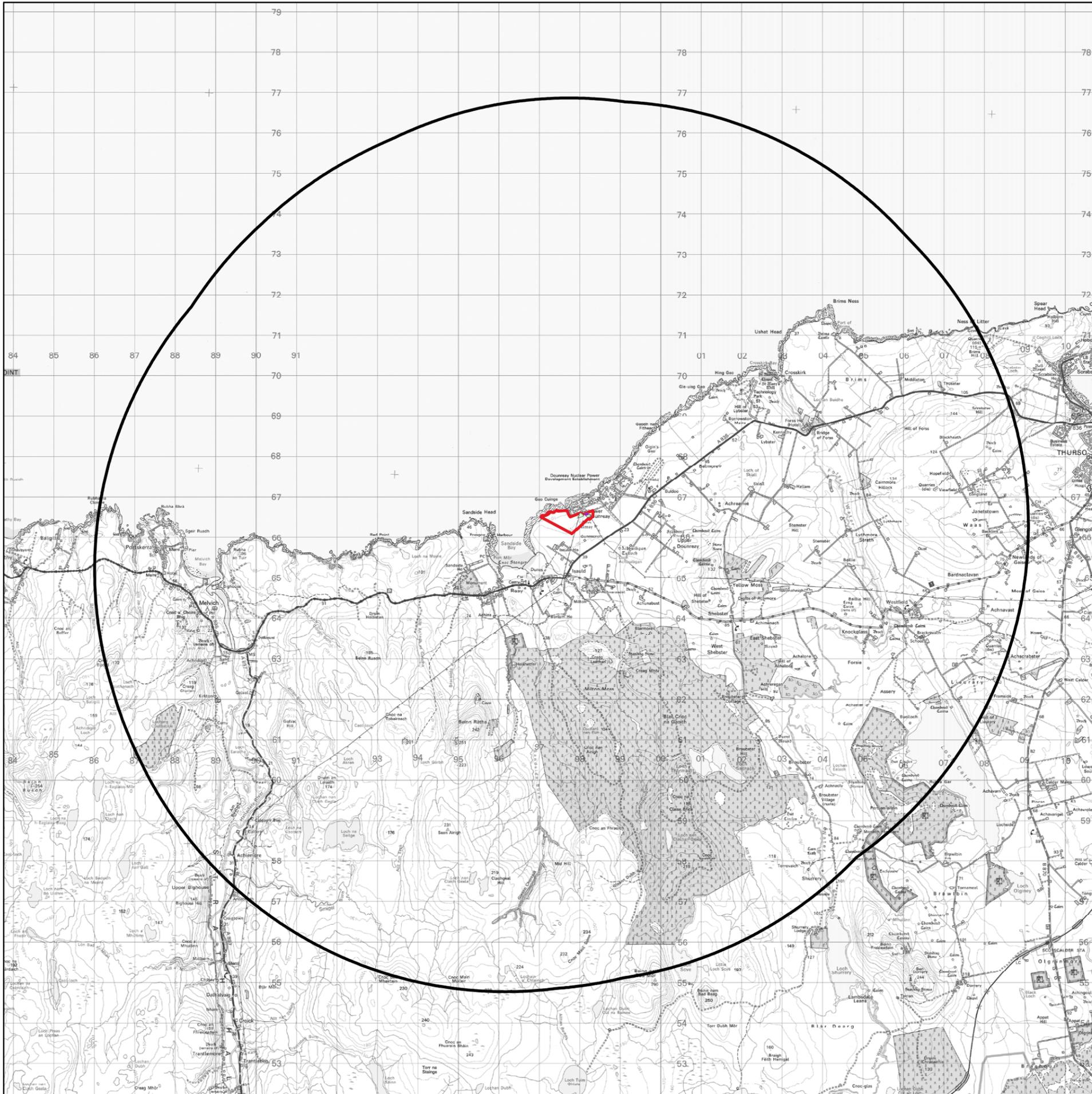


**Appendix 27.4**

**LVIA Visual Material**



**Legend**

-  Cable route study area
-  Existing SSE Dounreay Substation
-  Substation locations
-  Study Area

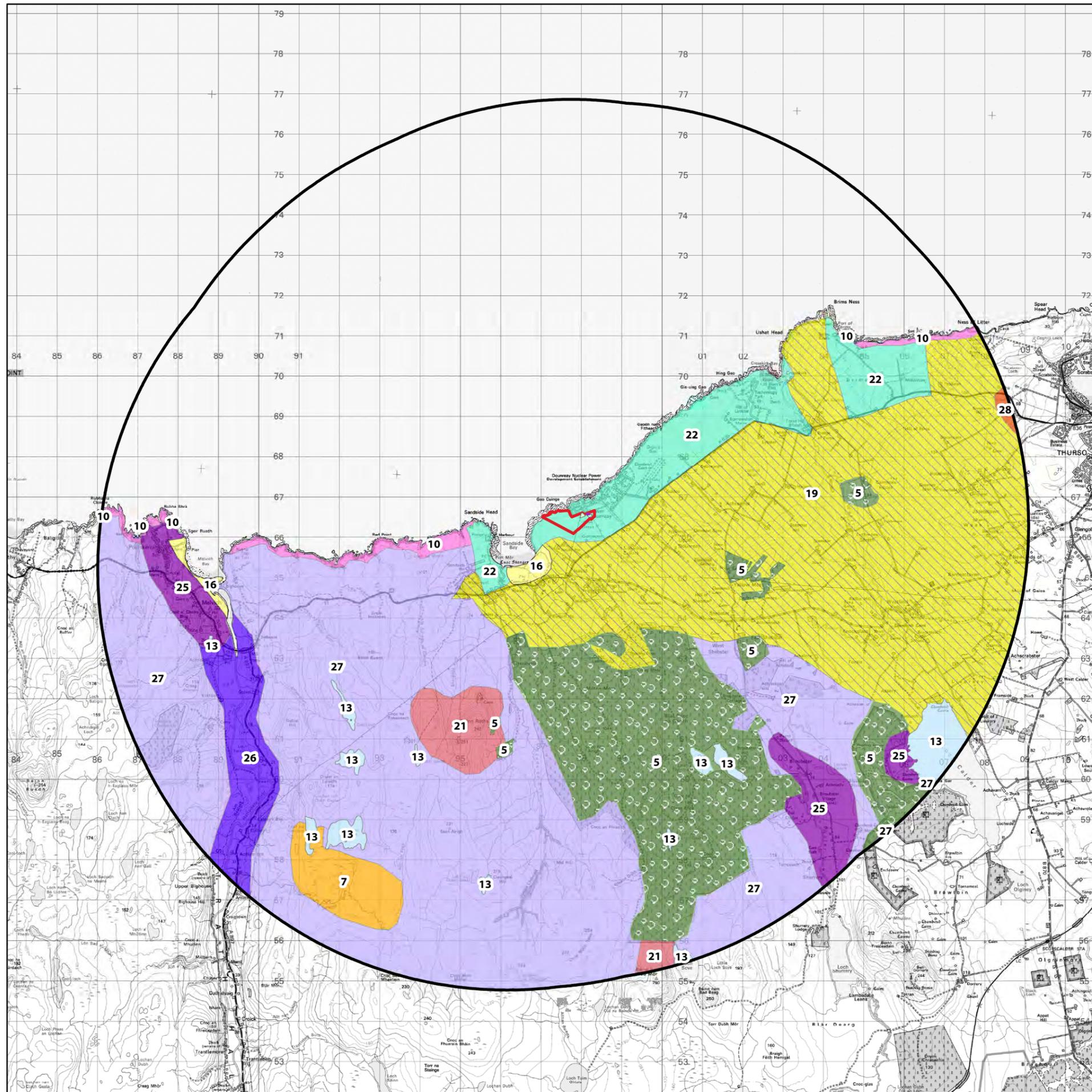


0 0.5 1 2 3 4 5 6 km

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**Hexicon Dounreay Demonstration Site - Onshore  
Landscape and Visual Impact Assessment**

**Substation Study Area**



**Legend**

- Existing SSE Dounreay Substation
- Substation locations
- Cable route study area
- Study Area

**Landscape Character Areas**

- 5 - Coniferous Woodland Plantation
- 7 - Flat Peatland
- 10 - High Cliffs and Sheltered Bays
- 13 - Inland Loch
- 16 - Long Beaches Dunes and Links
- 19 - Mixed Agriculture and Settlement
- 21 - Moorland Slopes and Hills
- 22 - Open Intensive Farmland
- 25 - Small Farms and Crofts
- 26 - Strath
- 27 - Sweeping Moorland
- 28 - Town

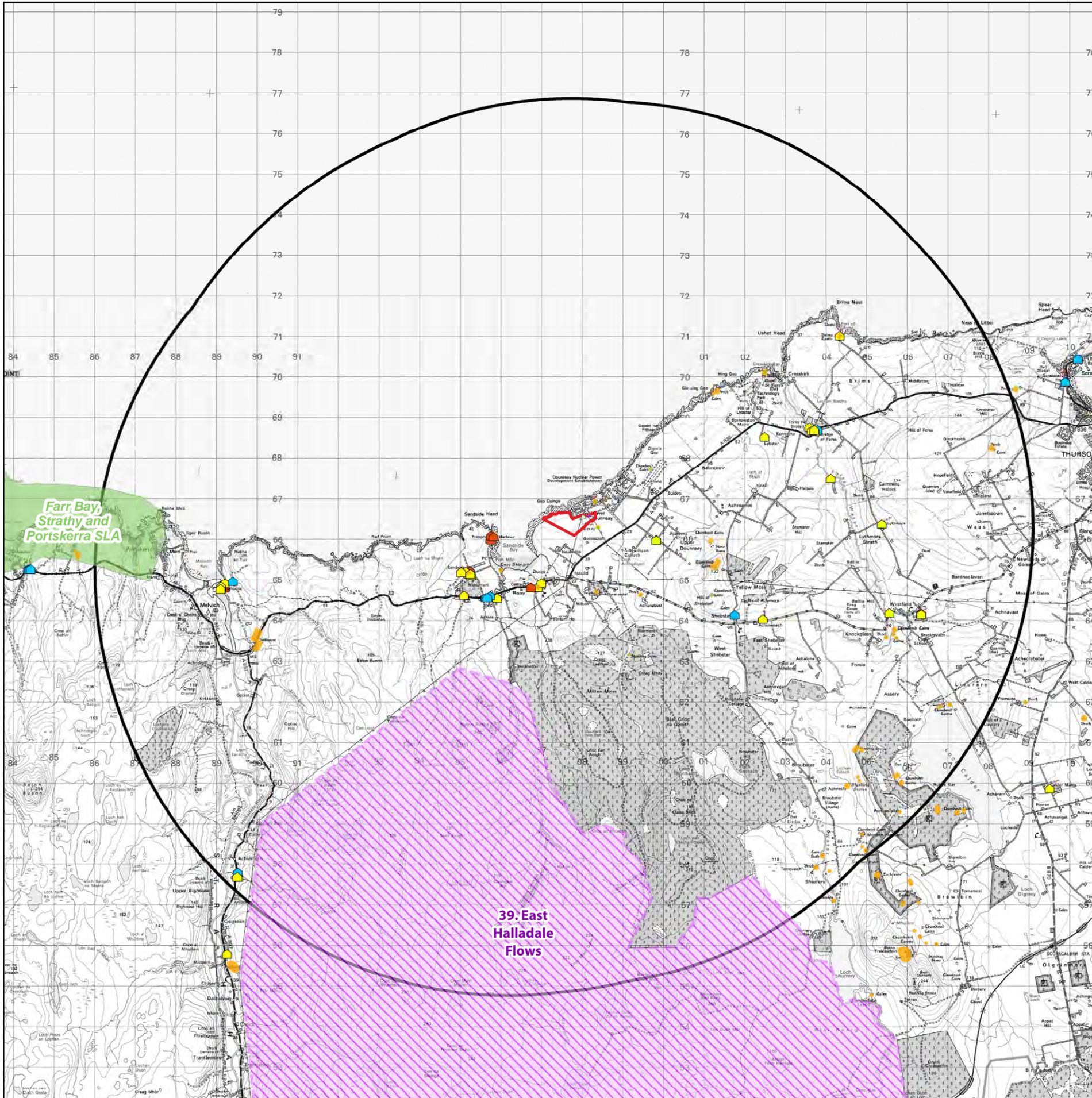


0 0.5 1 2 3 4 5 6 km

Reproduced from the Ordnance Survey Mapping with permission of the controller of Her Majesty's Stationery Office Crown Copyright

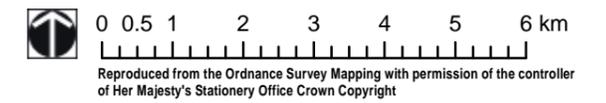
**Hexicon Dounreay Demonstration Site - Onshore  
Landscape and Visual Impact Assessment**

**Landscape Character Areas**



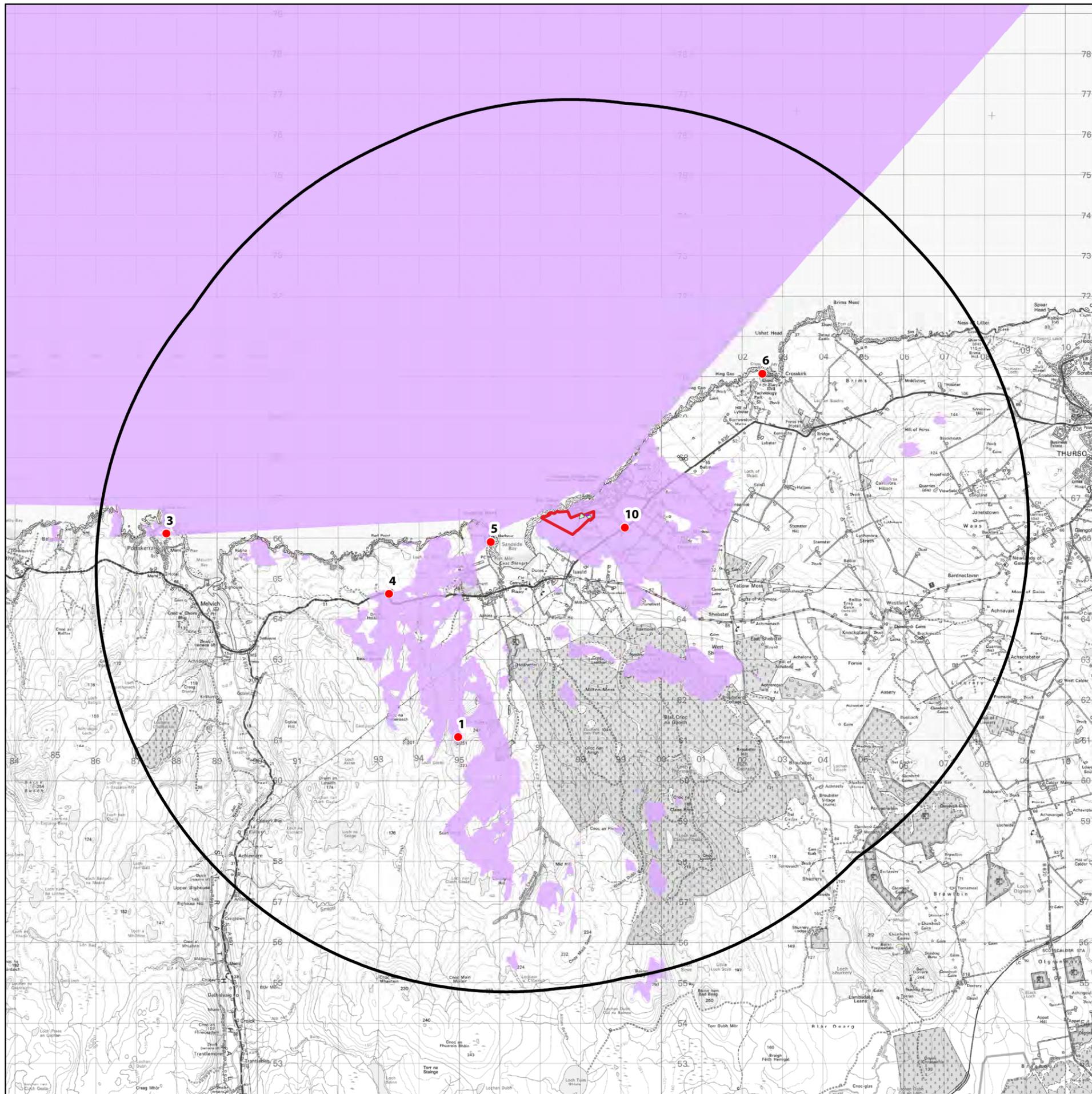
**Legend**

- Existing SSE Dounreay Substation
  - Substation locations
  - Cable route study area
  - Study Area
- Landscape Designations**
- Special Landscape Area (SLA)
  - WILDLAND\_SCOTLAND
  - Scheduled Ancient Monuments (SAMS)
  - Listed Building - Category A
  - Listed Building - Category B
  - Listed Building - Category C



Hexicon Dounreay Demonstration Site - Onshore  
**Landscape and Visual Impact Assessment**

**Landscape Designations**



**Legend**

- Existing SSE Dounreay Substation
- Substation locations
- Cable route study area
- Study Area

**Viewpoints**

- <all other values>
- 1: Beinn Ratha
- 3: Portskerra
- 4: Drum Hollistan Car Park
- 5: Sandside Bay
- 6: St. Marys Chapel, Forss
- 10: Dounreay Road End

**Zone of Theoretical Visibility (ZTV)**

- Area with Theoretical Visibility

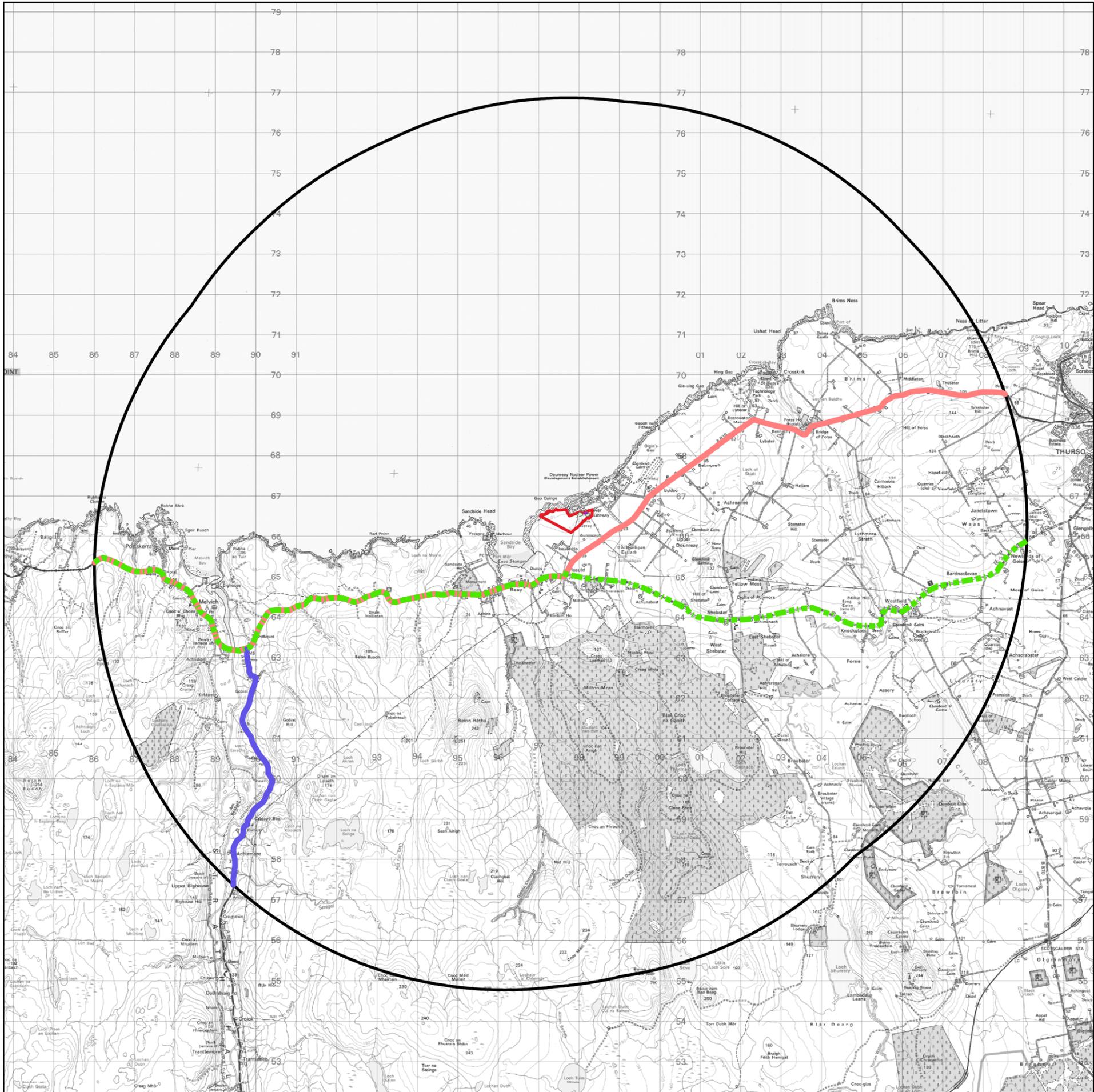


0 0.5 1 2 3 4 5 6 km

Reproduced from the Ordnance Survey Mapping with permission of the controller of Her Majesty's Stationery Office Crown Copyright

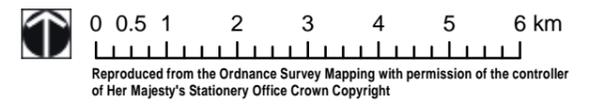
**Hexicon Dounreay Demonstration Site - Onshore  
Landscape and Visual Impact Assessment**

**Substation Combined ZTV**



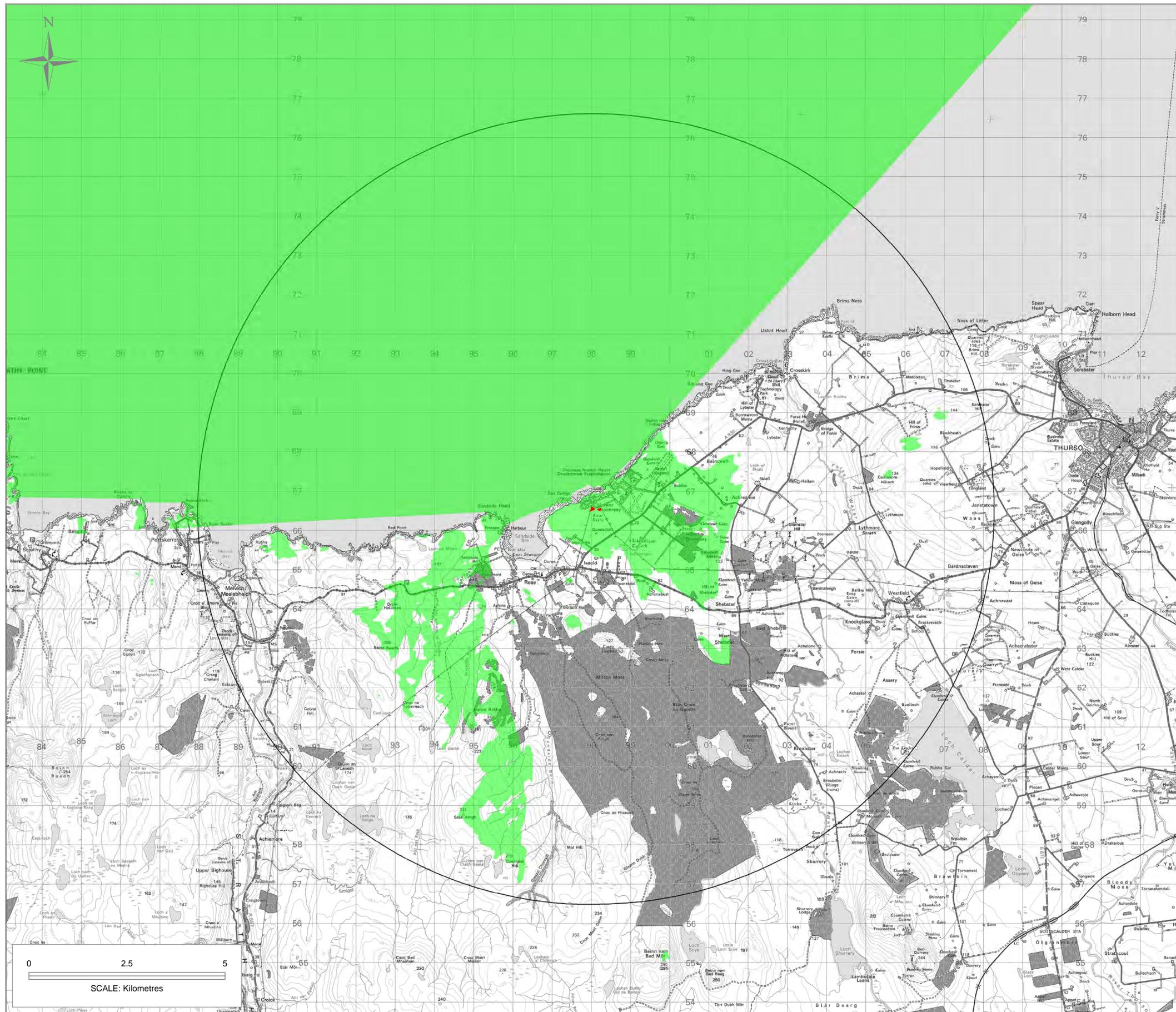
**Legend**

-  Existing SSE Dounreay Substation
-  Substation locations
-  Cable route study area
-  Study Area
- Sequential Routes**
-  A836
-  A897
-  NCR 1



**Hexicon Dounreay Demonstration Site - Onshore  
Landscape and Visual Impact Assessment**

**Sequential Routes**



Legend

- Potential substation location
- Zone of Theoretical Visibility
- 10 km buffer

- ZTV calculation details
- Based on OS Terrain 5, 5 m DTM data
  - Based on a bare-ground survey
  - Forestry mask applied to large woodland area to south
  - Viewer height of 2 m
  - Earth curvature and light refraction have been included
  - Building height of 8 m to top

Service Layer Credits:

Data source and licence information:

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Project: P686 | Date: 12/08/2016 | Author: DC | Checked: DS

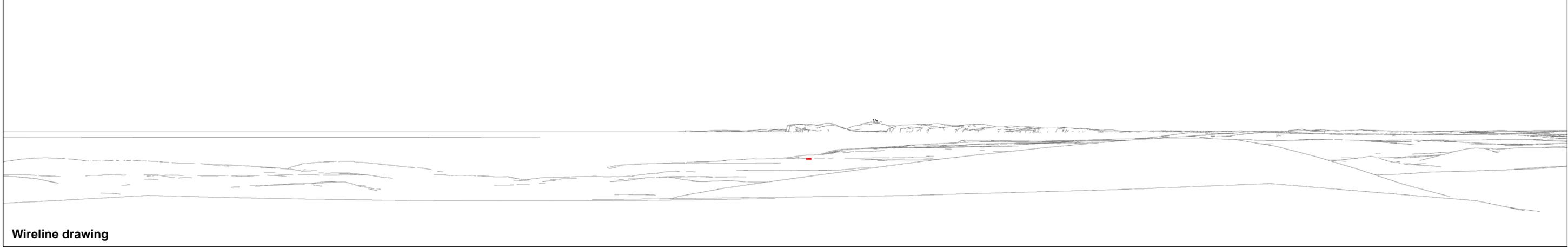
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 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Scale @ A3: 1:50,000





Baseline photograph

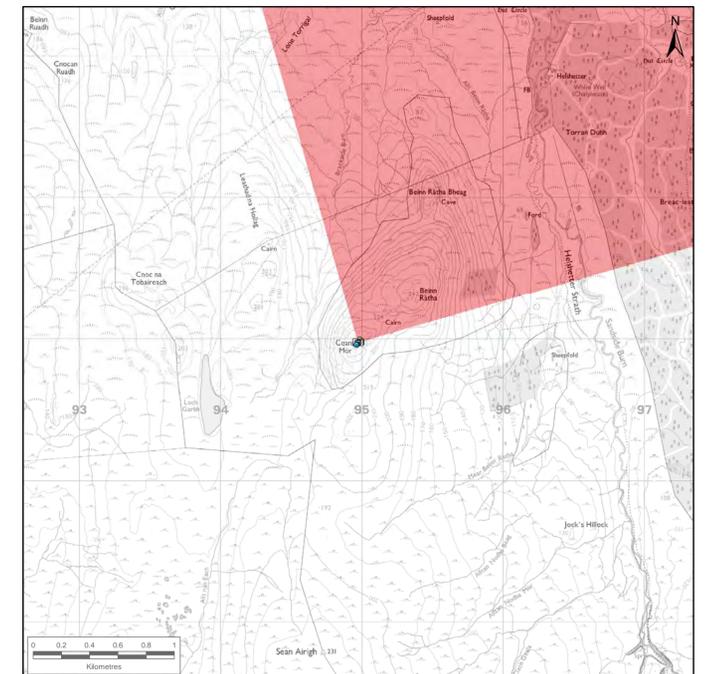
This image provides landscape and visual context only



Wireline drawing

**Viewpoint 1: Ben Ratha**

Grid Reference	294975, 960675	Horizontal Field of View	90° cylindrical projection	Camera	Nikon D7100
Viewpoint Height	247 m AOD	Principal Distance	522 mm	Lens	Nikon 50 mm
Direction of View	28.98°	Camera Height	1.5 m AGL	Date and Time	19/12/2015 11:51
Distance to Turbine	6,327 m				



Produced by:



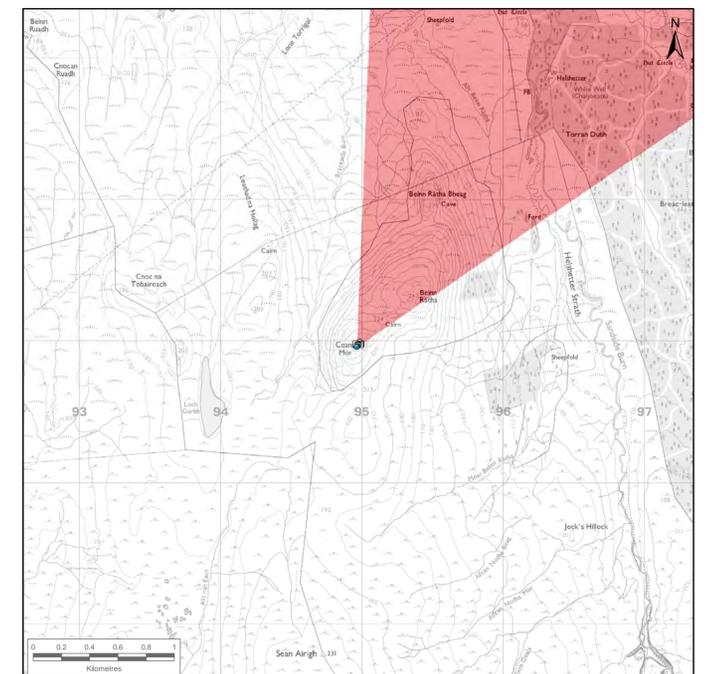


Photomontage

View flat at a comfortable arm's length

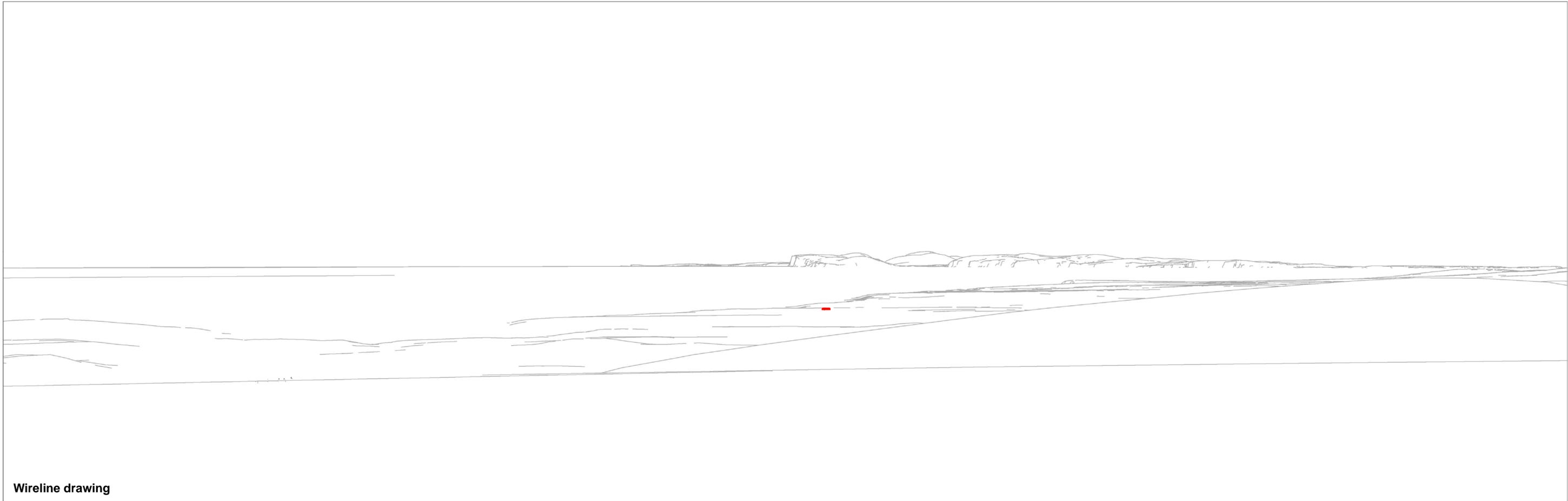
Viewpoint 1: Ben Ratha

Grid Reference	294975, 960675	Horizontal Field of View	53.5° planar projection	Camera	Nikon D7100
Viewpoint Height	247 m AOD	Principal Distance	813 mm	Lens	Nikon 50 mm
Direction of View	28.98°			Camera Height	1.5 m AGL
Distance to Turbine	6.327 m			Date and Time	19/12/2015 11:51



Produced by:

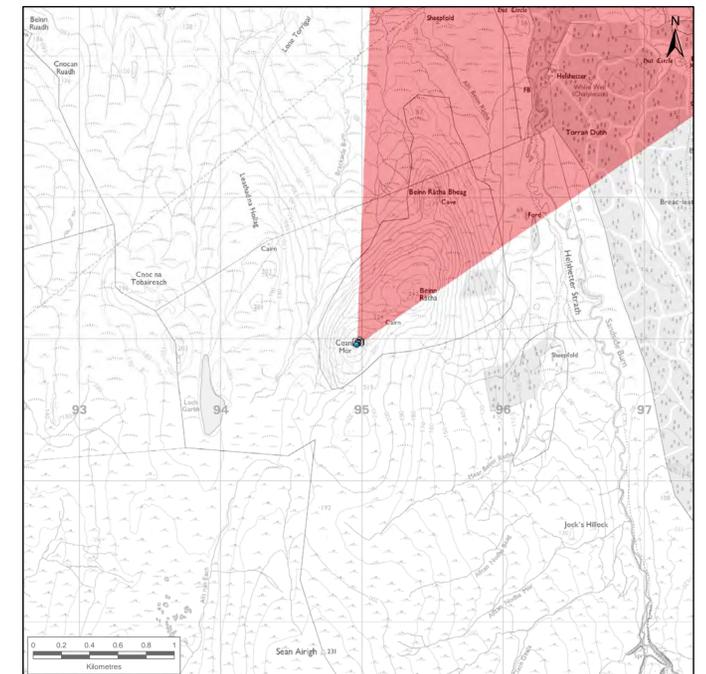




Wireline drawing

Viewpoint 1: Ben Ratha

Grid Reference	294975, 960675	Horizontal Field of View	53.5° planar projection	Camera	Nikon D7100
Viewpoint Height	247 m AOD	Principal Distance	813 mm	Lens	Nikon 50 mm
Direction of View	28.98°			Camera Height	1.5 m AGL
Distance to Turbine	6.327 m			Date and Time	19/12/2015 11:51



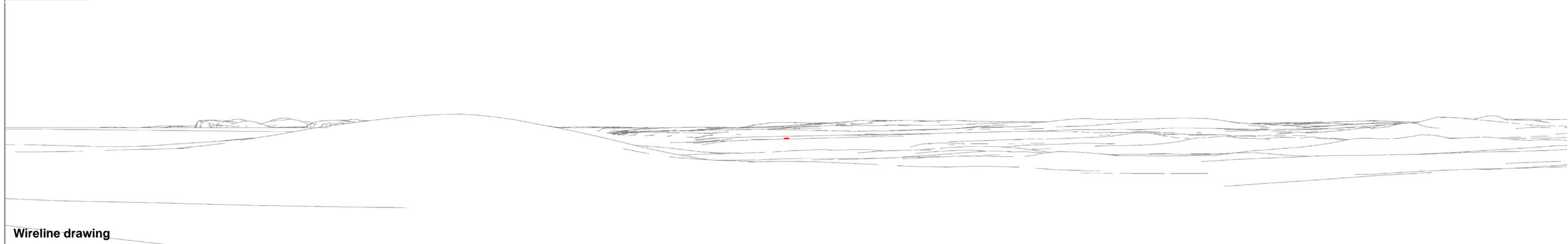
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Baseline photograph

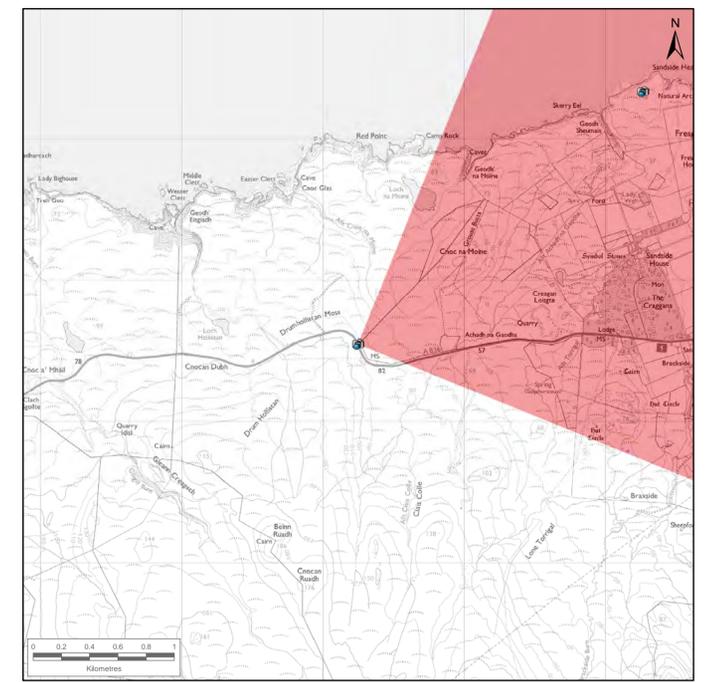
This image provides landscape and visual context only



Wireline drawing

**Viewpoint 4: Drum Holliston Car Park**

Grid Reference	293257, 964500	Horizontal Field of View	90° cylindrical projection	Camera	Canon EOS 5D Mark III
Viewpoint Height	91 m AOD	Principal Distance	522 mm	Lens	Canon EF 50 mm 1:1.4
Direction of View	66.97°			Camera Height	1.5 m AGL
Distance to Turbine	5,190 m			Date and Time	20/01/2016 13:59





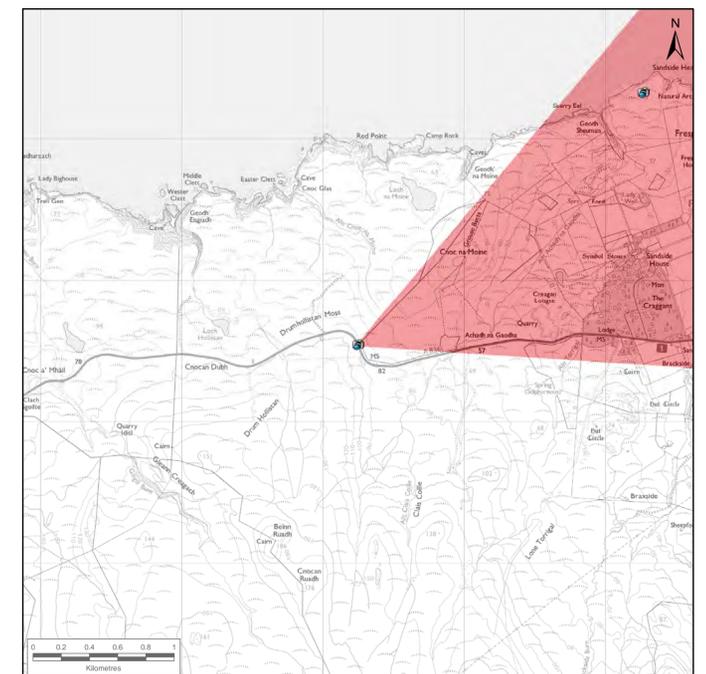
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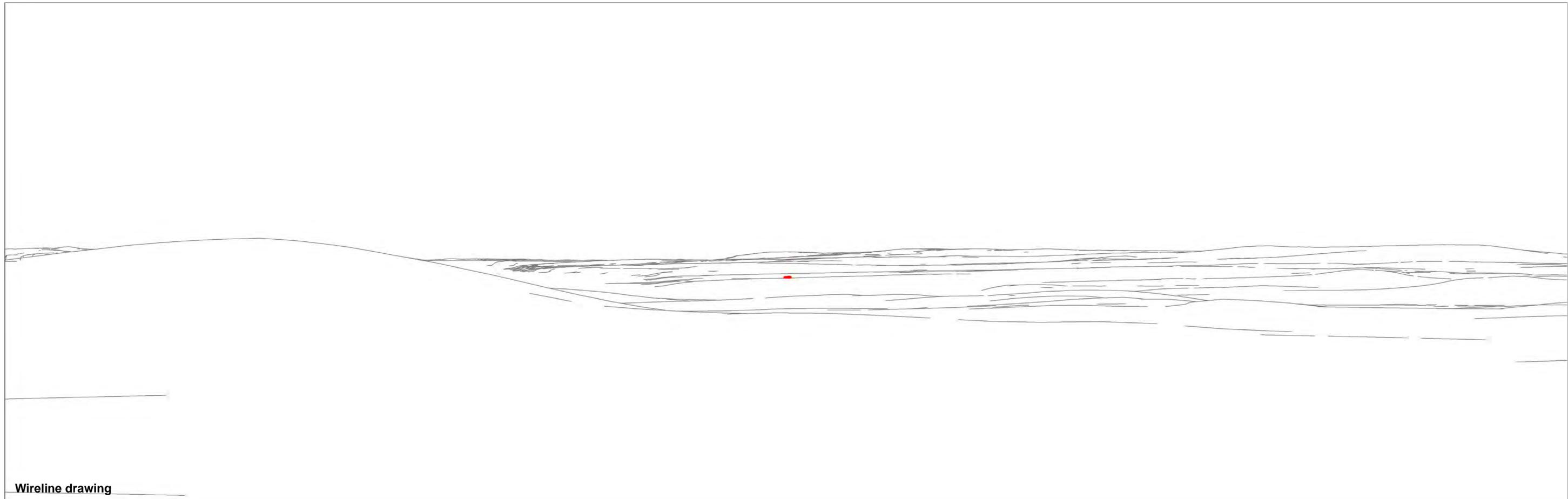
View flat at a comfortable arm's length

**Viewpoint 4: Drum Holliston Car Park**

Grid Reference	293250, 964545	Horizontal Field of View	53.5° planar projection	Camera	Canon EOS 5D Mark III
Viewpoint Height	91 m AOD	Principal Distance	813 mm	Lens	Canon EF 50 mm 1:1.4
Direction of View	66.97°			Camera Height	1.5 m AGL
Distance to Turbine	5,190 m			Date and Time	20/01/2016 13:59

Produced by:

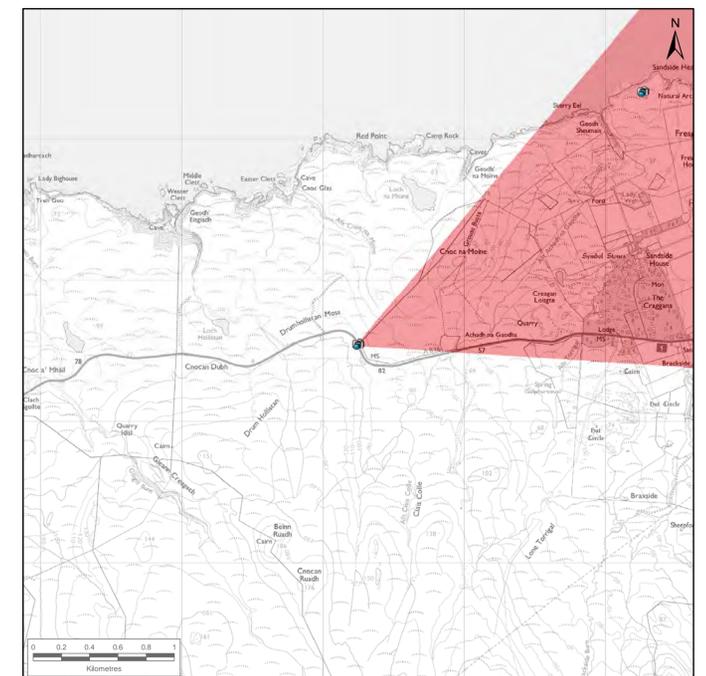




Wireline drawing

Viewpoint 4: Drum Holliston Car Park

Grid Reference	293257, 964500	Horizontal Field of View	53.5° planar projection	Camera	Canon EOS SD Mark III
Viewpoint Height	91 m AOD	Principal Distance	813 mm	Lens	Canon EF 50 mm 1:1.4
Direction of View	66.97°			Camera Height	1.5 m AGL
Distance to Turbine	5,190 m			Date and Time	20/01/2016 13:59



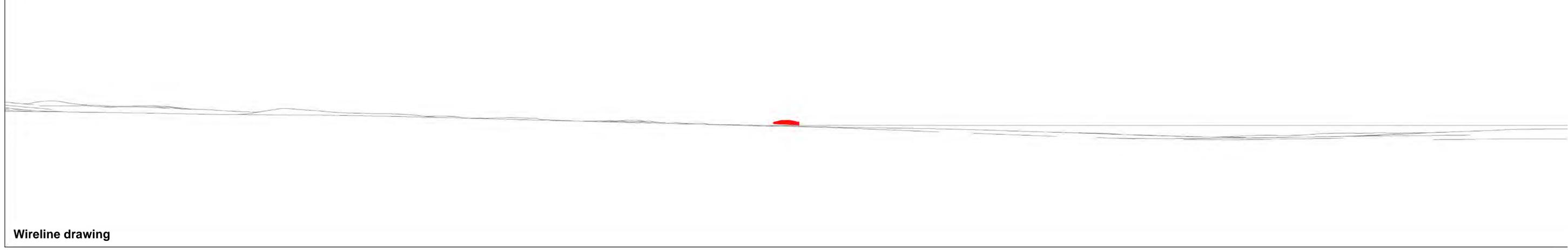
Produced by:





Baseline photograph

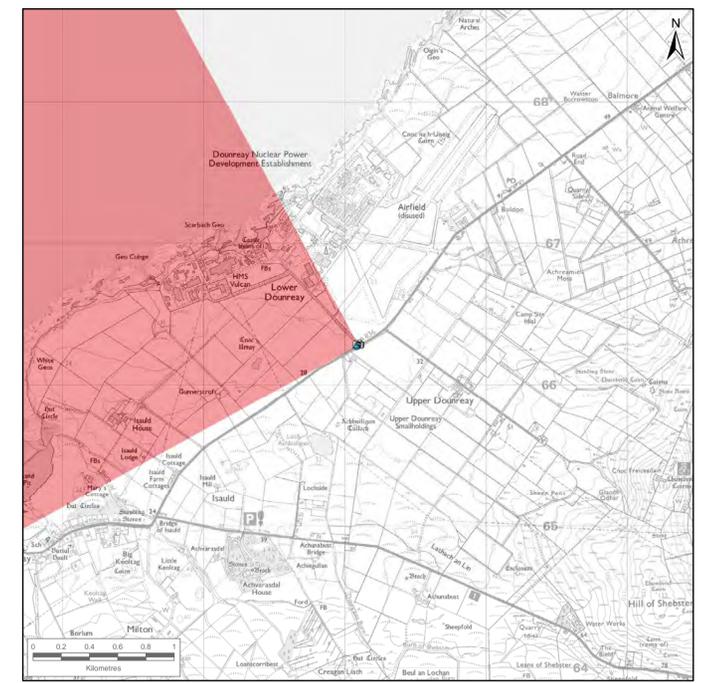
This image provides landscape and visual context only



Wireline drawing

**Viewpoint 10: Dounreay Road End**

Grid Reference	299096, 966282	Horizontal Field of View	90° cylindrical projection	Camera	Canon EOS 5D Mark III
Viewpoint Height	22 m AOD	Principal Distance	522 mm	Lens	Canon EF 50 mm 1:1.4
Direction of View	286.35°			Camera Height	1.5 m AGL
Distance to Substation	867 m			Date and Time	20/01/2016 13:01





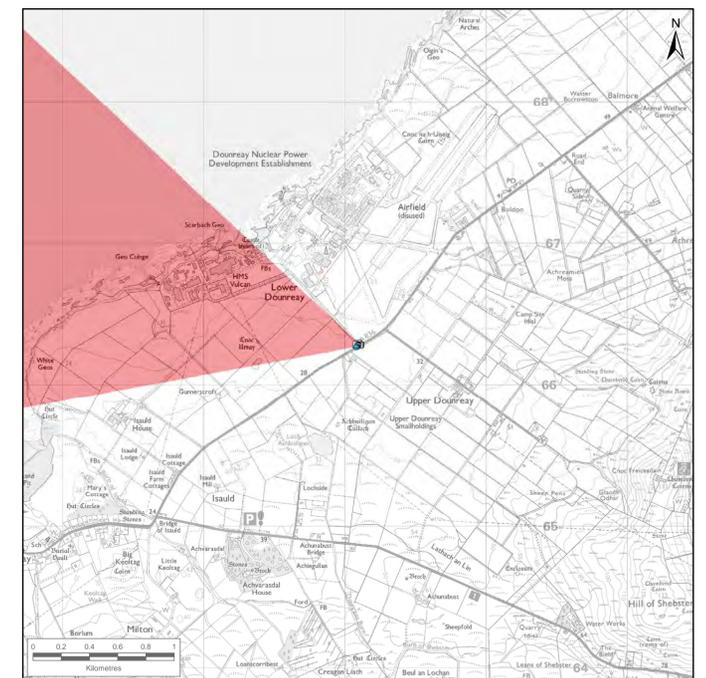
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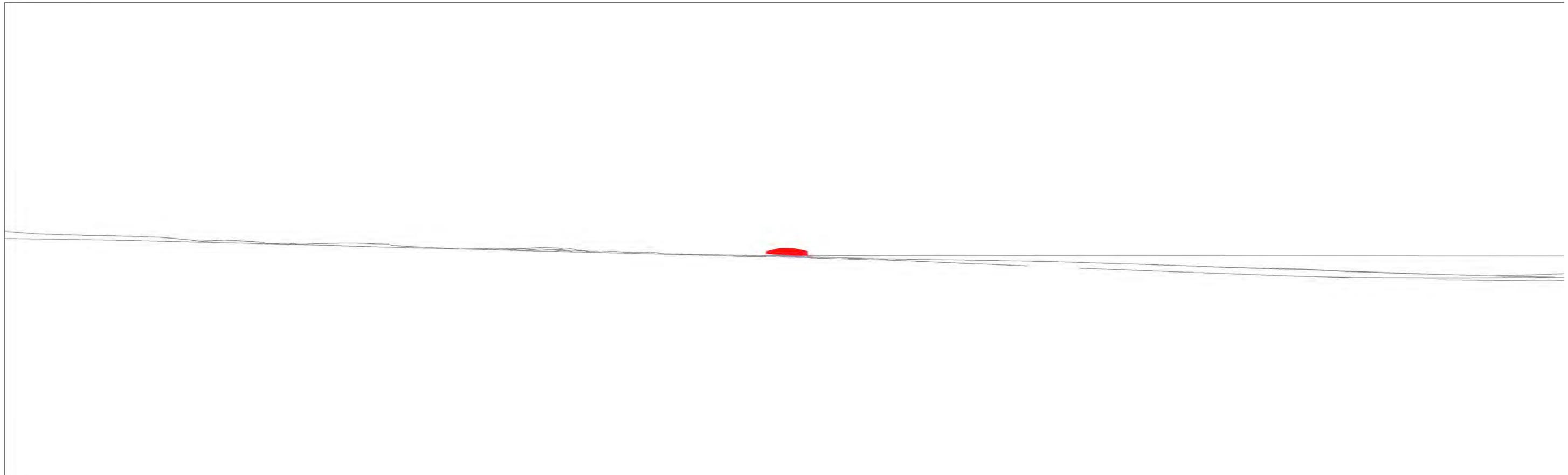
View flat at a comfortable arm's length

**Viewpoint 10: Dounreay Road End**

Grid Reference	299096, 966282	Horizontal Field of View	53.5° planar projection	Camera	Canon EOS 5D Mark III
Viewpoint Height	22 m AOD	Principal Distance	813 mm	Lens	Canon EF 50 mm 1:1.4
Direction of View	286.35°			Camera Height	1.5 m AGL
Distance to Substation	867 m			Date and Time	20/01/2016 13:01

Produced by:

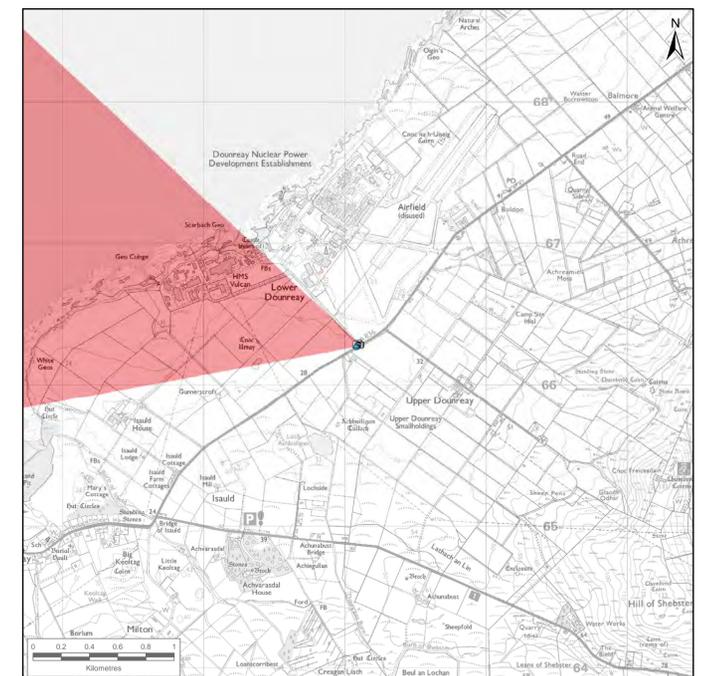




Wireline drawing

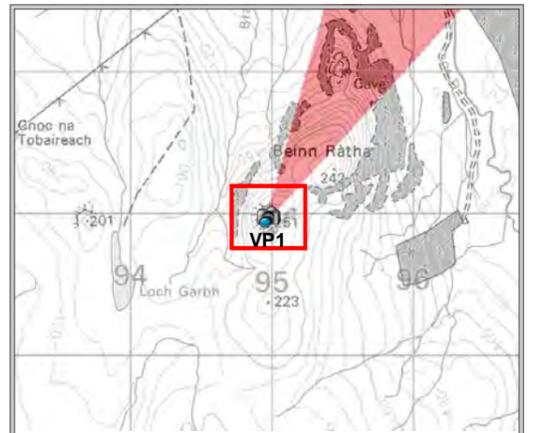
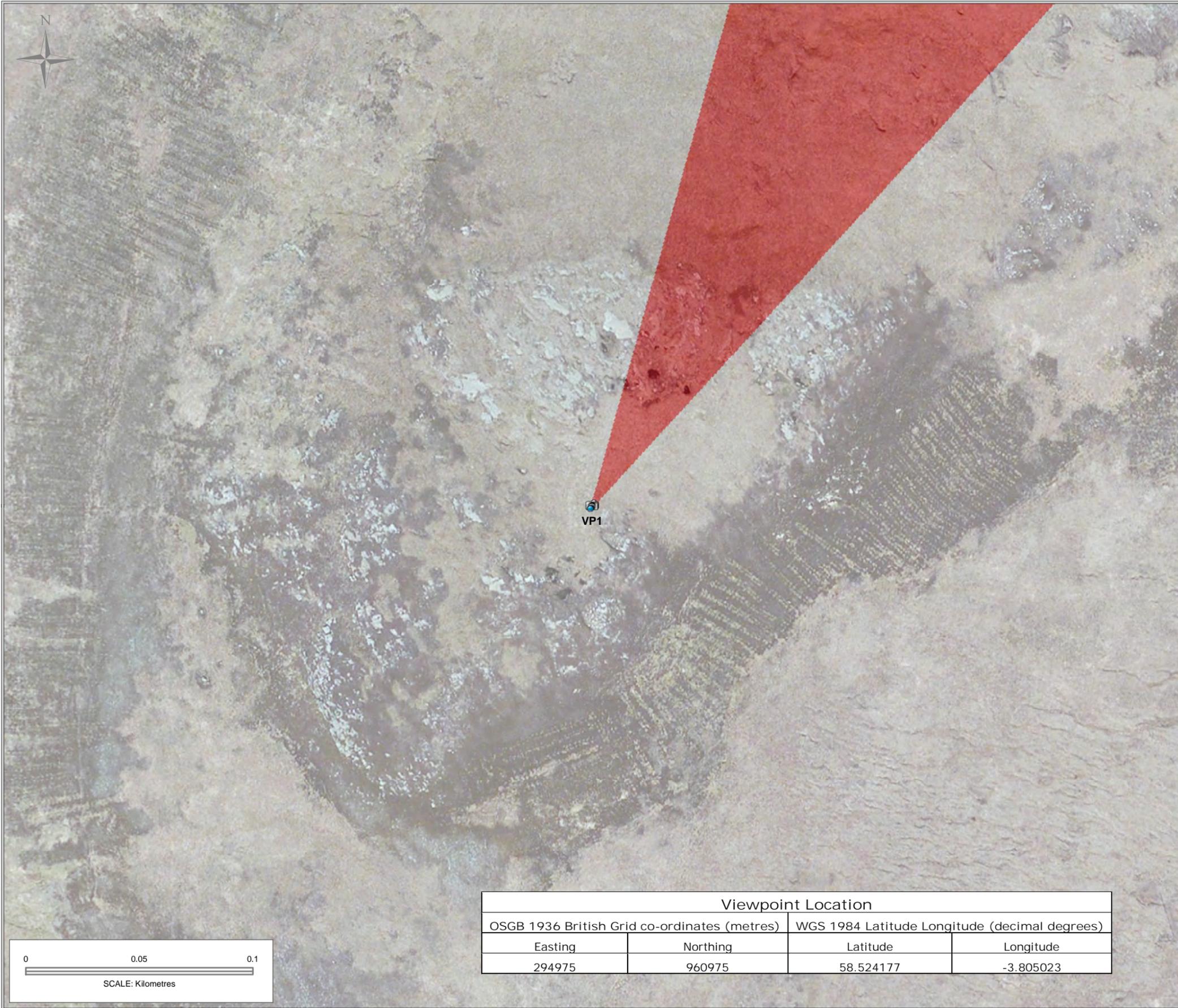
Viewpoint 10: Dounreay Road End

Grid Reference	299096, 966282	Horizontal Field of View	53.5° planar projection	Camera	Canon EOS 5D Mark III
Viewpoint Height	22 m AOD	Principal Distance	813 mm	Lens	Canon EF 50 mm 1:1.4
Direction of View	286.35°			Camera Height	1.5 m AGL
Distance to Substation	867 m			Date and Time	20/01/2016 13:01



Produced by:





Legend

- Viewpoint location

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User

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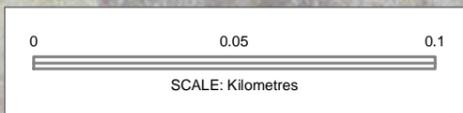
Ordnance Survey 01000040827

Project: P686 | Date: 12/08/2016 | Author: DC | Checked: DS

Coordinate System: British National Grid  
 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Scale @ A3: 1:1,760



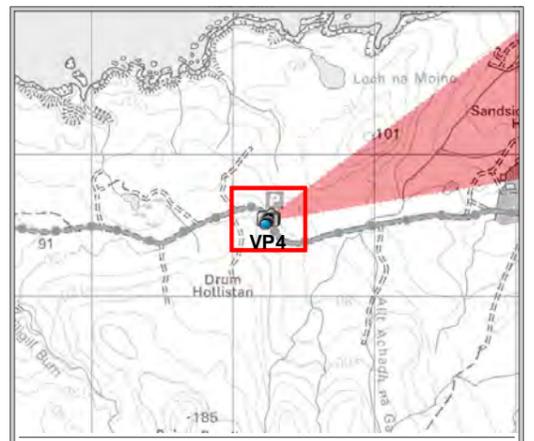
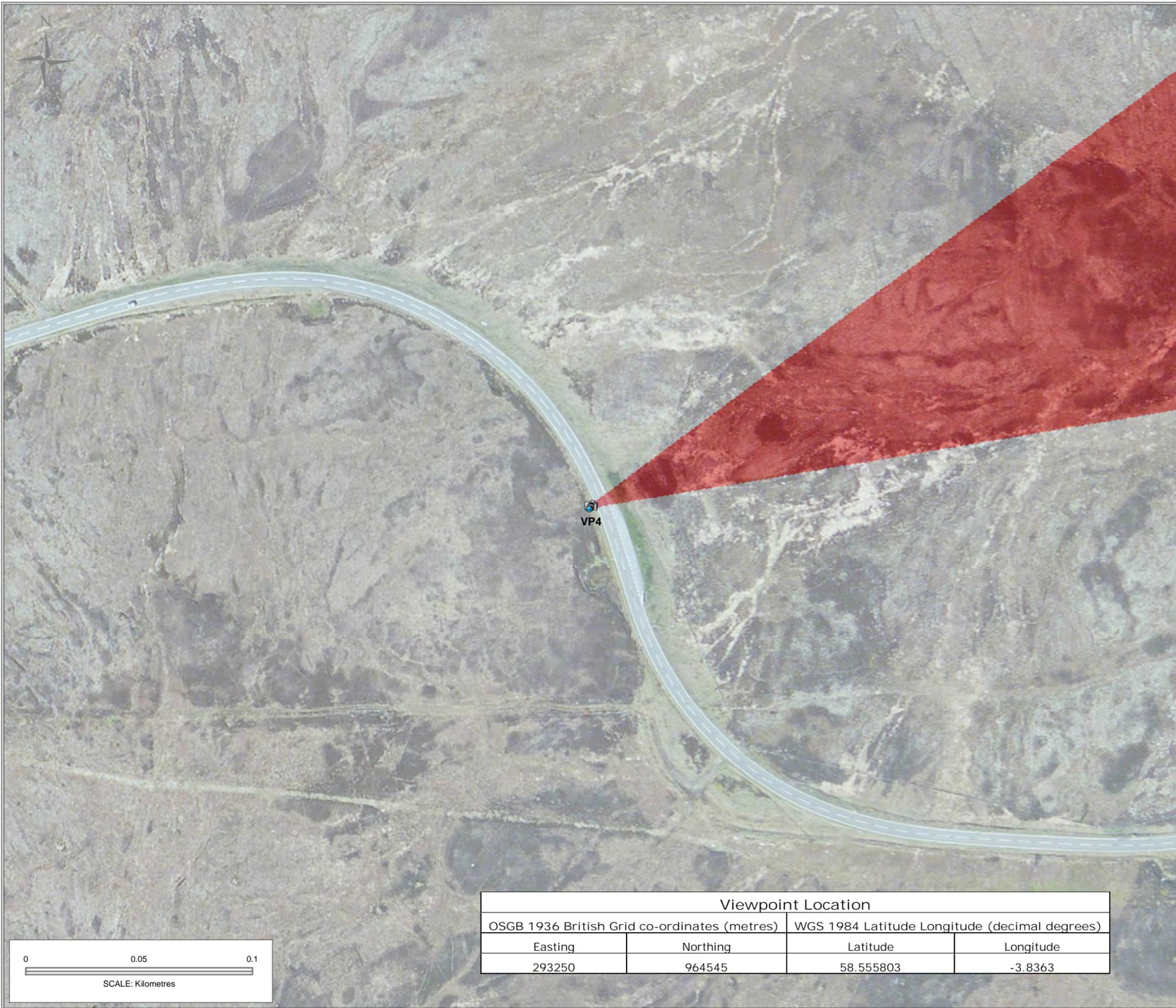
Viewpoint Location			
OSGB 1936 British Grid co-ordinates (metres)		WGS 1984 Latitude Longitude (decimal degrees)	
Easting	Northing	Latitude	Longitude
294975	960975	58.524177	-3.805023





**Viewpoint 1: Ben Ratha**

**This image is intended only for use at the viewpoint.**



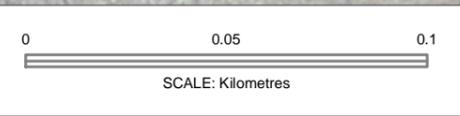
Legend  
 Viewpoint location

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User

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Project: P686 | Date: 12/08/2016 | Author: DC | Checked: DS

Coordinate System: British National Grid  
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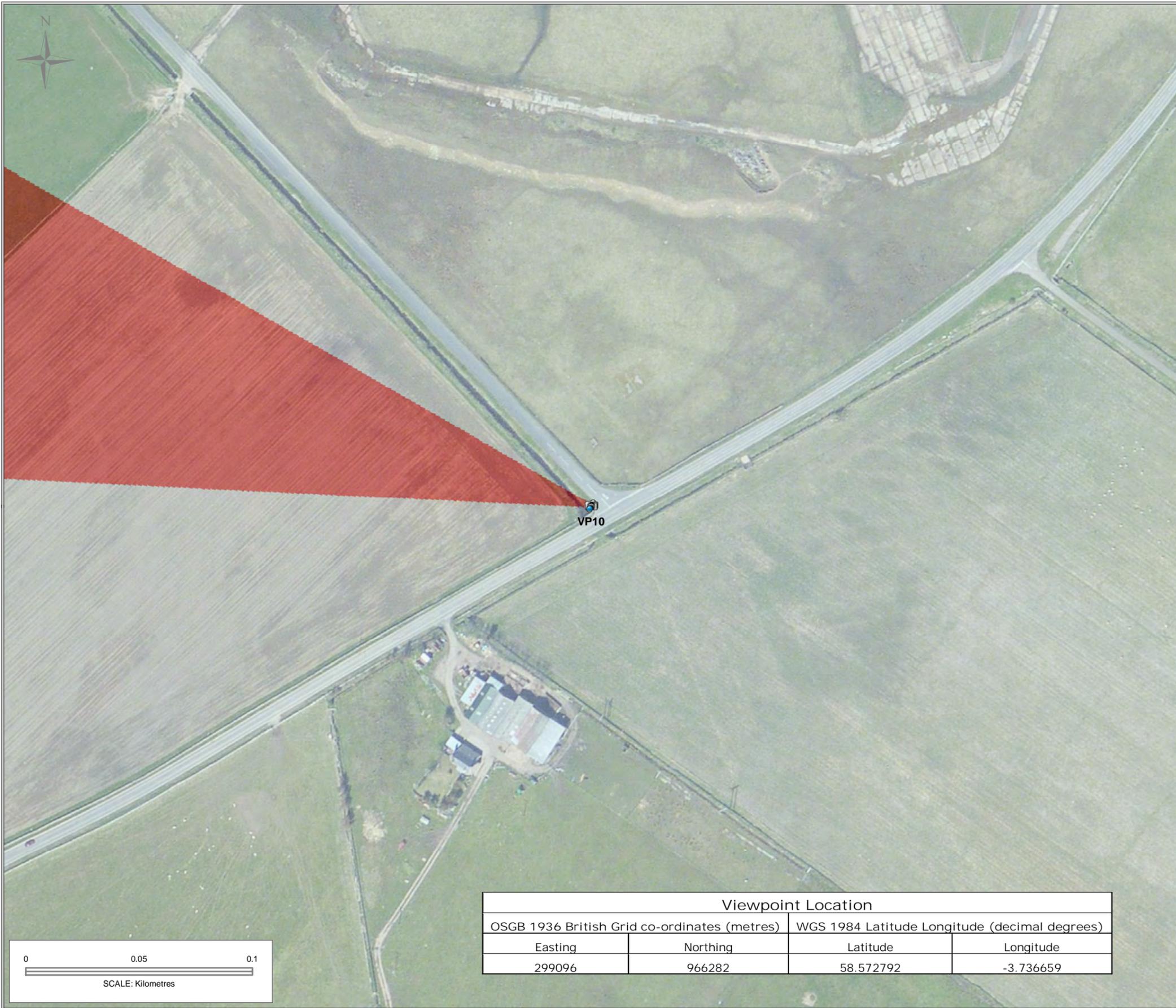


Viewpoint Location			
OSGB 1936 British Grid co-ordinates (metres)		WGS 1984 Latitude Longitude (decimal degrees)	
Easting	Northing	Latitude	Longitude
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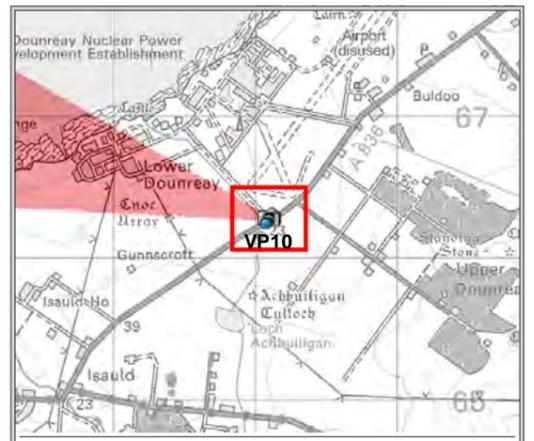


**Viewpoint 4: Drum Holliston Car Park**

**This image is intended only for use at the viewpoint.**



Viewpoint Location			
OSGB 1936 British Grid co-ordinates (metres)		WGS 1984 Latitude Longitude (decimal degrees)	
Easting	Northing	Latitude	Longitude
299096	966282	58.572792	-3.736659



Legend  
 Viewpoint location

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 Project: P686 | Date: 11/08/2016 | Author: DC | Checked: DS

Coordinate System: British National Grid  
 Projection: Transverse Mercator  
 Datum: OSGB 1936  
 Scale @ A3: 1:1,760





**Viewpoint 10: Dounreay Road End**

**This image is intended only for use at the viewpoint.**